

Escape Rooms & Information Design



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ESCAPE ROOMS & INFORMATION DESIGN

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A Special Project

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Masters of Arts in

Information Design

Department of Design

Central Connecticut State University

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NARRATIVE

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**ABSTRACT**

Escape Rooms & Information Design

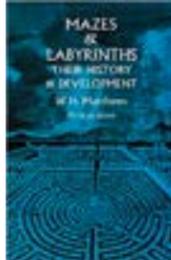
The goal of my Capstone project is to conduct research and create a well-designed escape room experience that shares the history, art, and culture of this rich information-design practice. An escape room is an intersection of a game and information-design in which a team of players collaborate to discover clues, solve puzzles, and accomplish tasks in one or more rooms in order to accomplish a specific goal in a limited amount of time. The goal is often to escape from the site of the game. Escape rooms are a bi-product of the evolution of the themes of discovery and escape. They contain a variety of puzzles and challenges that, when solved, unlock access to new areas in the game. The historical fascination with escape game themes has a long and interesting history. Escape elements have been incorporated into labyrinths, early tabletop games, and video games and are now becoming the main premise of the modern-day escape rooms. Modern escape rooms are expanding into new arenas as a recent phenomenon. By studying how they are designed, and how they are received by the public, I will be able to share the cultural importance of the practice to the culture of present-day society and the designer. This will provide insight into how the practice will change and adapt in the future.

I will follow up my research by designing, constructing, and conducting an escape room experience. I will determine my potential target audience and prepare an experience that excites and informs the imagination. Most escape rooms last 45-60 minutes, but mine may last longer in order to enhance the recreational and educational benefits of the experience. I will design and construct the objects and information that will set the flavor of the game. Additionally, I will create an interactive ebook that can be presented online.

REVIEW OF LITERATURE

Reference Books:

Mazes and Labyrinths: Their History and Development , by W. H. Matthews

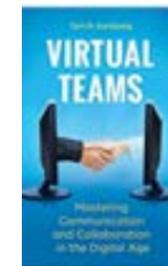


Ever since Herodotus stood in awe before the Great Labyrinth of Egypt and its 3,000 rooms, men have been fascinated by labyrinthine puzzles, constructions, and mazes. This book explores the subject in full, with a complete illustrated account of labyrinths and mazes of all kinds, from earliest times to the present.

There are labyrinths that consist entirely of rooms and columns, like the Egyptian Labyrinth itself. There are the labyrinths of ancient history and of myth, such as the celebrated Cretan maze in which Theseus slew the Minotaur. There are labyrinths constructed of caverns, those built to protect tombs, and those designed to guard treasures. Labyrinthine patterns have been used in gardens (such as the famous Hampton Court maze), embossed on coins, employed as emblems of royalty, made to represent allegories, built of stones, embedded into the pavements of early churches, and made into toys. We learn about all of them — all that is known, for mystery seems an inescapable part of the story of the labyrinth. With devoted scholarship and a nice appreciation for what he terms “the lure of the labyrinth,” the author takes us through accounts

of the ancient mazes, the “meanders” of Greek and Roman times, theories on the meaning of church labyrinths, the “mizmaze,” turf mazes and their origins, the floral labyrinth, the hedge maze, examples in stones and carved on rocks, links between labyrinths and magic, maze etymology, hints on maze design and principles of solution, the labyrinth in literature, the labyrinth in strange places, mirror mazes, and even a verbal labyrinth. All important or exceptional examples

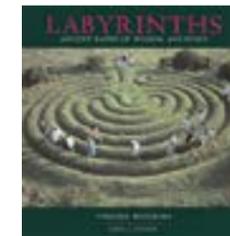
Virtual Teams: Mastering Communication and Collaboration in the Digital Age, by Terri R. Kurtzberg



Electronic communication is now embedded in our daily experience, as is work involving off-site collaborators. Virtual communication has become an essential job skill that is critical to individual and group success, yet most people just muddle through it without giving it any thought. Drawing on decades of scientific research in the fields of psychology, organizational behavior, and sociology, this book explains how to master the art and science of communicating virtually.

get a team “off on the right foot,” and what steps to take in order to make good collaborative decisions as well as other key topics for virtual teamwork, such as best practices for working in the cross-cultural environment.

Labyrinths Ancient Paths of Wisdom and Peace by Virginia Westbury



A maze, a prison, a sacred precinct, a place of peace...for thousands of years the human mind has puzzled over the enigma of the labyrinth. At first glance, it strikes us as one of the stranger products of human imagining—a winding path leading through a series of seemingly endless twists and turns, into a center and out again. Where does it come from? What is its purpose?

Today, the labyrinth’s spiritual connotations are absorbing much of our attention in the West. In the United States, Europe, the United Kingdom, and Australia it is being walked mainly for meditation and a sense of inner peace. This fascinating and beautifully illustrated book explores the history, the mysteries, and the locations of these “paths of peace.” It provides first-hand accounts of walkers’ experiences and shows why the labyrinth appears to have become a kind of “universal spiritual tool” once again. Virginia Westbury, journalist and

award-winning documentary maker, has written the first global account of the modern labyrinth movement, complete with a guide to where the world's finest models can be found. She also provides a comprehensive account of labyrinth history and an intriguing look at the modern phenomenon of interest in the labyrinth.

Digital Branding: A Complete Step-by-Step Guide to Strategy, Tactics, Tools and Measurement by Daniel Roles (Kogan Page Ltd) (ISBN 978 0 7494 8168)



Provides step-by-step, practical guidance on how to build a brand online and quantify it through tangible results. It draws together each of the core marketing avenues such as content marketing, social media, search engine optimization and web analytics, to deliver a robust framework for brand planning, identity, channel selection and measuring the effectiveness of campaigns. Contains a complete overhaul of tools and techniques for straightforward application, plus new high profile case studies including

Accenture, Tesco and Imperial College London. Important updates are made on social media guidelines and policy, how to tackle advancements in mobile marketing and mobile payments, as well as augmented and virtual reality. The book features a toolkit of free and paid tools, including a valuable checklist, outlining the digital branding process from start to finish, and measurement devices for multiple channels and purposes. Written by a respected CIM fellow and course leader, this succinct handbook is ideal for any marketer or brand strategist to enhance their online brand identity.

Digital Transformation: Survive and Thrive in an Era of Mass Extinction Hardcover – July 9, 2019



From visionary Silicon Valley entrepreneur Tom Siebel comes a penetrating examination of the new technologies that are disrupting business and government—and how organizations can harness them to transform into digital enterprises.

The confluence of four technologies—elastic cloud computing, big data, artificial intelligence, and the internet of things —writes Siebel, is fundamentally changing how business and government will operate in the

21st century.

Siebel masterfully guides readers through a fascinating discussion of the game-changing technologies driving digital transformation and provides a roadmap to seize them as a strategic opportunity. He shows how leading enterprises such as Enel, 3M, Royal Dutch Shell, the U.S. Department of Defense, and others are applying AI and IoT with stunning results.

Digital Transformation is the guidebook every business and government leader needs to survive and thrive in the new digital age.

REVIEW OF LITERATURE *cont.***Websites:****www.binance.vision/security/history-of-cryptography.**

This website is about how cryptography has changed since the first cyphers to the present day and how they were used. It covers important cyphers how they worked, and methods that were developed to crack, decipher, or decrypt them. Notable ciphers that were examined include the Caesar cipher, symbol replacement, and the polyalphabetic cipher. One notable way that was developed to crack ciphers is frequency analysis. This will be important in my paper and in my ongoing game development because ciphers and codes are used within escape rooms. Understanding how they are used will show why they are used in escape rooms and provide ideas on how they are best used.

<https://lockpapersissors.co/escape-room-design-blueprint>.

This is a break-down of how to create a physical escape room yourself. It walks you through the steps of planning out the room, from creating a story to how to start building it. Each step is broken down into small manageable steps so as to make sure that the story and the clues work together, and so that it is possible for someone to create an enjoyable, entertaining, and playable experience. This is relevant to my project as it provides a guideline for creating my own escape room game and also provides a break-down of how escape rooms are created; I will use my research to analyze how my experiences have matched up or deviated from the outline.

<https://labyrinthociety.org/about-labyrinths>

A labyrinth is a meandering path, often unicursal, with a singular path leading to a center. Labyrinths are an ancient archetype dating back 4,000 years or more, used symbolically, as a walking meditation, choreographed dance, or site of rituals and ceremony, among other things. Labyrinths are tools for personal, psychological and spiritual transformation, also thought to enhance right-brain activity. Labyrinths evoke metaphor, sacred geometry, spiritual pilgrimage, religious practice, mindfulness, environmental art, and community building.

REVIEW OF LITERATURE *cont.***Articles:****WeAreTeachers Staff. “So You Want to Build a Classroom Escape Room...”****<https://www.weareteachers.com/build-a-classroom-escape-room-lesson/>**

This article covers the way that teachers can create an escape room in the classroom with their students. It walks through all the steps and shows how it can be used with what they have already learned. This will be useful as it shows a way that escape rooms have been diversifying in order to fit different scenarios and to help see how the practice could go forward from there and how it provides new opportunities in the classroom.

Cain, Jim & Adam Clare. “Escape Rooms”**<http://teamworkandteamplay.com/resources/resource-escaperooms.pdf>**

In this article the modern escape room is analyzed and broken down to examine what an escape room is, how it is designed and what skills it utilizes when it is played. It starts out defining that an escape room is a room where participants solve puzzles to escape the room. Stating that escape rooms are a result of the evolution of game design the article proceeds to break down the different aspects of the game from the format of game play to the different kinds of puzzles in the rooms. The authors highlight how the room and puzzle design can create an immersive experience impacting the players thoughts and reactions to the game. Finally, the authors discuss how the room is designed so players use different skills through their experience, so they are thinking creatively and critically. This article explains how modern escape rooms are set up, why they are designed the way they are and how they influence players thoughts. This will provide insight into how the game is carefully designed to provide the best experience for players. By doing so this will help break down the necessary elements of the game and understand what has changed and what can be improved upon.

REVIEW OF LITERATURE *cont.*

Articles:

The Editors of Encyclopaedia Britannica . “Cipher.”

<https://www.britannica.com/topic/cipher>

This breaks down the two basic cipher codes that exist. These are substitution and transposition. It covers the difference between the two and how to use them. It also gives a brief description of why ciphers are used and offers examples of some ancient uses of ciphers. This will be useful in talking about how ciphers pose a challenge and present an element of excitement in escape rooms.

Suellentrop, Chris. “In Escape Rooms, Video Games Meet Real Life.” *The New York Times*, <https://www.nytimes.com/2014/06/04/arts/video-games/in-escape-rooms-video-games-meet-real-life.html>

This article discusses the differences and similarities of videogame escape rooms and how different escape rooms succeed in different ways. There are examples of rooms and clues and how they enhance the experience and how videogames were the guide for modern escape rooms. This will be useful in tracing what elements had been included and what was unable to be carried over between the two as the practice evolved in a physical location.

Peeking Behind the Locked Door: A Survey of Escape Room Facilities, by Scott Nicholson, Professor, Game design Development, Wilfrid Laurier University, Brantford, Ontario, Canada

This paper presents the results from a survey answered by 175 escape room facilities from around the world about their facilities. The paper highlights different themes, demographics of players, room features, and other design patterns popular in escape rooms at the start of 2015. Given the rapid growth and evolution of escape rooms, this paper serves to document the current state of this phenomenon.



INTRODUCTION

Escape Room Board Game

My goal is to have an escape room board game that combines the traditional escape room elements and feeling with an engaging story that resonates with players. On top of that this game is going to be replayable with new puzzles and challenges each time the game is played. This game will revolve around the story of Merlin hiding the crown to prevent Mordred from getting it when he tried to usurp Arthur. In each room as the puzzles are solved information about the game world and characters of Arthur's court will be revealed. These will weave a narrative that tells the story of the fall of Camelot making the story come to life. This will achieve a balance between having a more informative story but mainly is about puzzle-solving.

As a deck of cards can be exhausted and the story can grow old, the game will be just a starting point for future games. The game board will be a generic castle image that will serve as the game board for future expansion packs. Expansion packs will include new puzzle cards, and all needed materials to play the game. The puzzles in one pack will be based around one storyline and the card decks will allow for 3 to 5 games. These storylines will be different but each is set in a castle. For example, one new booster pack could have the storyline of exploring a haunted castle, escaping Dracula's lair, or rescuing a fairy tale princess or prince. As these all take place in a castle the generic castle game board can be used for each pack. By keeping the board game generic, it makes it possible to reuse the

game and only purchase new cards. If the setting was to change then a new game board could be released with a completely different series of booster packs. This provides an astronomical number of games and related material that could be produced. If players wanted another storyline or finish with the pack, they have they could buy another pack and recycle the cards.

When creating the game, the idea struck me that it has the capability of becoming a game that could be sold in stores. Escape games have created a niche market. This shows there is a large base of people who are interested in these kinds of games. Looking on Amazon there are many different brands of escape rooms board games but all of them are only playable once. This game when finished will not only be able to be played multiple times but can provide new stories through booster packs for extending the life of the game. I strongly believe that companies in the escape room game market would be interested in this game because it would provide a long-lived product that generates new sales with each expansion. Many games today have expansion packs to increase the ways the game can be played. This is no different from that and provides many opportunities for companies to create a series of related games. From my own experience, I would rather buy a game that I can replay and buy expansion packs then buy a whole new game.

Speaking with Tyler Nelson a former employee of Hasbro the idea of marketing the game was broached as a tentative question of whether he thought it was possible and trying to ascertain what would need to be done. It boiled down to there were two options. The first option is to create a Kickstarter and take on the creation, marketing, and sales of the game. The other option and more appealing one is to create a pitch where the concept of the game is outlined, why companies would be interested in it, the market research that indicates the game would succeed and what it could sell for and having a prototype to showcase.¹

I am not the only one that there are two Kickstarters one is for a live escape room and the other one is a board game scheduled to be released in 2020. The live escape room is being created by Hatch Escapes and due to Covid-19 had been delayed.² This Kickstarter made it past the stretch goal of thirty-five thousand dollars with two hundred and eighteen people

¹ Nelson, Tyler. Phone conversation with Author. August 28, 2020.

² "HI. WE'RE HATCH ESCAPES. WE DO ESCAPE ROOMS A LITTLE DIFFERENTLY." *HATCH escapes*. Date Accessed November 29, 2020. <https://www.hatchescapes.com/>

pledging a just over thirty-six thousand dollars.³ The other Kickstarter is for a game called Collabescape a replayable escape room board game where there are two separate stories that both have a hard mode.⁴ Watching the short video teaser about Collabescape revealed that “This game has a unique puzzle design that can be used again and again with different answers. The puzzles are not meant to be complex, they are quick solves, however to win the game you must collaborate.”⁵ The Kickstarter for Collabescape has since been taken down but it had been fully funded by the supporters of the project. With the overwhelming support of projects that are aiming to be replayable, it indicates that people are invested in the escape room community and are looking for a new experience that they can repeat again and again.

Two hundred eighteen people wanted to contribute money to make these projects a reality. The generosity of these individuals fully funded these projects indicating companies can expect a market for games willing to pay in advance to experience the games.

Even when the games are released, I am confident that my game will create an experience that is unique to any other game. My game design will allow for many different storylines to be woven around one game board providing new experiences with each booster pack fully immersive stories. Collabescape said that their game would have quick solves but my game will still provide a challenge each time the game is played.

Before approaching anyone to pitch the game I would get assistance from Tyler Nelson in searching out manufacturers to create a prototype. I would be looking for companies that would be able to create the box, graphics, and materials for the game so it could be assembled for display. By having a tangible product to show companies it would be possible to show all the capabilities of the game and be easier to visualize the game on the shelf. This also serves the purpose of allowing interested parties in testing the game and interacting with it to get the full impression of the game.

³ Hatch Escapes. “The Ladder: A Choice-Driven, Fully Replayable Escape Room”. *Kickstarter*. September 24, 2020. <https://www.kickstarter.com/projects/hatchescapes/the-ladder-the-worlds-first-truly-replayable-escape-room?ref=discovery&term=escape%20room>

⁴ Insync Games. “A COOPERATIVE BOARD GAME INSPIRED BY ESCAPE ROOMS.” *Collabescape*. Date Accessed November 27, 2020. <https://www.collabescape.co.uk/>

⁵ UK Games Expo Ltd. “Insync Games”. *UK GAMES EXPO*. Date Accessed November 29, 2020. <https://www.ukgamesexpo.co.uk/virtually-expo/expo-hall/1756/?fbclid=IwAR2ijOm2AhjJuxTJapbtSYZbHYO9YQgu9MghQX5wDIEeu6XpR8pF7goAXaI>



1

ARTHURIAN LEGENDS

**THE EVOLUTION OF THE ARTHURIAN LEGENDS**

To those who have not read any of the Arthurian legends, the initial things that come to mind when mentioned are the just King Arthur wielding the sword Excalibur and the wise sorcerer Merlin. These are followed by the knights of the round table, Queen Guinevere, and maybe Morgan Le Fey. These elements have been carried over from the 'first' Arthurian

1 Évrard d' Espinques. *King Arthur's knights, gathered at the Round Table to celebrate the Pentecost*. 1475. 588 × 600 pixels. photographic reproduction. https://commons.wikimedia.org/wiki/File:Holy-grail-round-table-bnf-ms_fr-116F-f610v-15th-detail.jpg

Legends to present-day common knowledge as these characters and elements are always present in modern-day retellings. They appear in movies, television, and literary adaptations in some form. It may seem as if these adaptations reinterpret the original legends, written by one person a long time ago. However, that is far from the truth. The elements of the story that are so widely known today were added throughout the centuries by different writers. In this chapter, the evolution of the Arthurian Legends will be examined by looking at influential writers that expanded and changed the tales to determine how culture had influenced what was added. To do so means going back to the first mention of King Arthur.

The legends of King Arthur started not from the recounts of a historical figure named Arthur but from Celtic poems and tales that merely mentioned that name Arthur in passing. One title credited with being one of the earliest references to Arthur is the poem *Y Gododdin*, written by Aneirin.² This poem, dating to the 13th century, is believed to contain much older text. It contains elegies for the Gododdin men who fought in a battle around the year 600. It is speculated the battle occurred where present-day Catterick³, a small town in Yorkshire, England⁴ is. While these poems and tales mention Arthur, they are not the first Arthurian Legends. They only bring up his name as a side note, unlike Arthurian Legends, where Arthur or his knights are the main focus of the tales. *Y Gododdin* provides an account of the battle between the Britons and the invading Saxons using Arthur to compare the bravery and heroics of the warriors in battle. Scholars take this as an indication Arthur was a famous figure as his name is used as a comparison to portray top-class warriors.⁵ It is similar to the way poets will use Romeo's name to indicate someone is romantic. Everyone is familiar with the play *Romeo and Juliet* even if they have not read it. It has become apart of mainstream culture due to the number of adaptations and

2 Norris J. Lacy. *Arthurian Legend*. 2009, PDF, www.devoir-de-philosophie.com/pdf_free/244929.pdf

3 Siân Echard. *Y Gododdin*, faculty.arts.ubc.ca/sechard/492godo.htm.

4 Get The Data Publishing Limited. "Catterick." *Catterick on a Map*, 2020, www.getthedata.com/catterick/where-is-catterick.

5 Echard, "Y Gododdin"

references through various media. Arthur's name may have had the same effect back in history. His name may have been passed around like an urban legend that grew to the point everyone knew it and what it stood for. The comparison in the poem is showing that the poet saw Arthur as heroic and one of the best warriors.

The poem is also important because it provides more than just an indication of Arthur's qualities as a warrior. Reading through a small section of the poem it is easy to see where the inspiration for the battles that the knights fight comes from.

“Diademed, to the fore, a wolf's fury,
Amber beads he wore, collars, his meed
Was costly amber. For cups of wine
He drove back the attack, drenched in blood.
Though men of Gwynedd and Gogledd came
As Ysgyrran's son counseled,
Shields were broken to bits”.⁶

The poem tells the stories of the men who would fight bravely despite and wounds they suffered and if their shields would break. In a more modern retelling of the Arthurian Legends by Roger Lancelyn, no tale was complete unless there was a joust or fight between two knights. The fights were glossed over, described in very loose details. Readers read that one party was smiting the enemy so hard their shield broke, that is all. Readers get the impression of the fight but have to fill in the details themselves. This poem verse has a similar effect. It uses phrases that tell what is going on to evokes images in the mind of the reader but lets them fill in the rest of the information.

⁶ “THE GODODDIN”. Celtic Literature Collection. Date Accessed October 20, 2020.
<http://www.maryjones.us/ctexts/a01b.html>.

Arthur is brought up again in another document that predates the creation of the legend. He appears; “in the ‘History of the Britons’, written in AD 830 by Nennius, where he is depicted as a heroic general and a Christian warrior”⁷ setting the precedent of the heavy-handed Christianity influences that are added later. By making him a Christian warrior, it is tying the character of Arthur and its future evolutions to Christian doctrine and ideologies. It was due to the lack of records Celtic poems, myths, and documents such as ‘Y Gododdin’ served as references for the first Arthurian stories making them influential in setting the religious tones of the legends.

It was 1130 CE when Geoffrey of Monmouth compiled his research into a book called *The History of the Kings of Britain*. This book would start the evolution of the Arthurian legends. In that book, he wrote a section upon King Arthur among other rulers. It should be noted that the material he was drawing from predated him by six centuries.⁸ This time gap and lack of official records raise the issue of cultural influence on two sides.

The first side that the story is influenced culturally by the use of Myths and poems. Myths are a teaching mechanism. There is no guarantee that any part of that story is factual. While based on real people or events, there is a lot of room for creative license. The writers might portray warriors as more courageous or more outnumbered than when they were, so it tells a better story. These decisions are made based on the storyteller's position introducing cultural bias. They can favor one side or another in the story, not telling it accurately. Another way cultural influence can seep in is through the terminology that is used. Different cultures may have varying definitions for attributes like bravery or wisdom. These words can be used in legends or poems but not be defined. It means that the perception of these attributes can vary based upon location, losing the original connotation.

⁷ Ben Johnson. “Camelot, Court of King Arthur” *HISTORIC UK The History and Heritage Accommodation Guide*, date accessed October 20, 2020, <https://www.historic-uk.com/CultureUK/Camelot-Court-of-King-Arthur/>.

⁸ TED-Ed. “Is there any truth to the King Arthur legends? - Alan Lupack”. YouTube. September 11, 2018. <https://www.youtube.com/watch?v=RBsY88Lir-A>.

Here is where the second layer of cultural influence comes in. Geoffrey of Monmouth, who read and interpreted the poems, myths, and other documents, would be using what he read as a basis for his work. As there were no official records from the time, he was unable to cross-check the events and descriptions against factual accounts. As this came six centuries before, so no one would be alive to tell about the times. It means that he is going off of his base of knowledge. He would have to take the texts he uses and try to interoperate what the writers are trying to convey. Therefore, he may interoperate something differently than intended. Due to a lack of factual information, there is no way to contextualize the documents.

Geoffrey's tales would set the tone for all the versions that would come afterward. Therefore he will be covered in depth while others will have glanced over. Geoffrey introduces many of the characters that still appear in the legends today such as Sir Kay, Sir Gawain, Mordred, and Guinevere. He also includes the treachery of Mordred and Guinevere becoming a part of a holy order.⁹ These stories would also be key in expanding the lore as they were the first legends to tell about the life of Arthur from birth to being laid to rest in Avalon.¹⁰ This material would set the tone and basis for all the stories that would come after as they would include these elements with only minor variations such as character names and relations or adding new conflicts or details. These similarities indicate and help trace back to the origin of the legends. The differences only served to enrich the lore of Arthur and the realm he ruled.

In these stories, Geoffrey wrote about battles similar to historical ones such as the one told in poems like 'Y Gododdin'. The Saxons invaded Britain after the Romans left in 410 CE. However, the details of the battles are uncertain due to the lack of documentation from the time. However, it was far from a historical account as he spruced up the story with a sorcerer and a

⁹ Joshua J. Mark. "The Literary Development of the Arthurian Legend". *Ancient History Encyclopedia*, May 22, 2017. <https://www.ancient.eu/article/1069/the-literary-development-of-the-arthurian-legend/>.

¹⁰ Michael Wood. "King Arthur, 'Once and Future King'". *BBC*. February 17, 2011. http://www.bbc.co.uk/history/ancient/anglo_saxons/arthur_01.shtml.

magical sword.¹¹ Indicating some of the elements that are main facets of Arthurian legends are based on historical events. One such aspect is the chaotic land that Arthur would one day rule. The land is in turmoil due to the invaders trying to take over. It mirrors history as the Saxons invaded to take the land for themselves. The idea that Arthur brings peace to a chaotic land because he drives out the invaders appears in every retelling as a way to show he is a great king. However, other key elements that remain unchanged go through a few name changes over time.

Excalibur started as Caliburn in Monmouth's stories. It is believed that this name stems from the sword Caladbolg that is featured prominently in Irish legend.¹² The use of a famous sword in Irish legend hints toward cultural influence from legends and myths outside of England. Instead of trying to create a new name the writer wanted to use a sword name that had some meaning tied to it to boost its importance. It utilizes the awe already created by a culturally significant piece from mythology and trying to superpose that onto this new legend that would soon take on a life of its own.

Geoffrey's tales were just the beginning. After some time, the tales became popular in France. During that time two men would make very important contributions to the lore. First to take up the legend and expand it was a man named Robert Wace. Wace a French poet, translated them into French but did not just stop there. He is credited as the man who introduced the very famous round table where the knights would all have the same standing.¹³ The round table has become one of the most iconic elements of Arthurian Legends as it still is present in almost all the modern retellings. It has lasted through many centuries of writers expanding and altering the Arthurian lore. The continuing inclusion of this element speaks to a widespread cultural fascination with equality. The table allowed individuals of the same class to be given the same

¹¹ TED-Ed, "Is there any truth to the King Arthur legends? - Alan Lupack"

¹² The Editors of Encyclopaedia Britannica, "Excalibur", *Britannica*, March 10, 2020. <https://www.britannica.com/topic/Excalibur-Arthurian-legend>.

¹³ Mark. "The Literary Development of the Arthurian Legend"

reverence instead of struggling to be at the top. Today this detail is seen as a symbol of how Arthur was interested in having a kingdom that was free of conflict. The idea of perfect equality is this fantastical notion as it does not exist in the world. A table representing such an ideal lends the tales an almost mystical quality. It is not a stretch to think that it had the same effect when it first appeared as it has persisted for many centuries as an important aspect of Arthur's court.

On top of that, Wace altered the lore by changing the name of the sword Caliburn to Chaliburn. This new name would change to the well-known name Excalibur when translated to English.¹⁴ While it is a small difference over time, the name Excalibur would become an iconic name that persists through numerous retellings. The sword has remained intact. It has never changed into another artifact, unlike other objects in the legend, which will be touched upon later. A sword is a universal symbol of prowess. Therefore it would be an important symbol in stories about a great king. The choice to use a sword speaks to how it picked a weapon that readers would identify as a symbolic element. The cultural influence is evident in this choice as a sword is an iconic weapon. The writers would associate the sword as a symbol of power and strength that would be easily understood.

The next Frenchman to expand upon the Arthurian Legends is Chrétien de Troyes, and, for several reasons, he would change the overtone of the legends drastically. He was a court writer, but, unlike other poets and troubadours who focused on making them chivalric romances, he made the tales about spiritual quests. While doing this, he introduced the Holy Grail into the legend.¹⁵ The Holy Grail is the target of many knights but, only the worthy can find the holy cup. The Holy Grail is the "cup that Jesus Christ drank from at the Last Supper and that Joseph of Arimathea used to collect Jesus's blood at his crucifixion".¹⁶ The theme of spiritual quests and a

¹⁴ Ibid

¹⁵ Wood. "King Arthur, 'Once and Future King'"

¹⁶ HISTORY.COM EDITORS, "Holy Grail" *HISTORY*, June 7, 2019, <https://www.history.com/topics/middle-ages/holy-grail#:~:text=The%20Holy%20Grail%20is%20traditionally,mystery%20and%20facination%20for%20centuries.>

religious artifact that is only able to be attained by the worthy show that the predominant cultural influence is Christianity. The chalice is valuable due to being touched by Jesus and being present at his crucifixion, a very notable moment in the bible. Arthur is a Christian warrior and king from the very beginning. This new twist made the focus of the lore on spirituality instead of power, therefore making sense that the chalice became a fixture. As it is so closely tied becomes a symbol of spiritual perfection. This idea is reinforced as the cup is only attainable by those who were spiritually worthy. Coming from a culture centered around Christianity, it shows why there a heavy-handed reference to the predominant religion through the inclusion of religious elements. It may not have so blatant if it had come from somewhere Christianity is not practiced as it would have likely not been well received.

Troyes also brings in another element that also revolves around the theme of a spiritual quest. He introduces Lancelot in the poem *Lancelot or the Knight of the Cart*, where he attempts to rescue Lady Guinevere. What is especially important is that Troyes brings to light the affair between Lancelot and Guinevere.¹⁷ This affair goes against God's commandments, therefore



Abbey Room Murals: The Quest and Achievement of the Holy Grail ¹⁸

¹⁷ Mark. "The Literary Development of the Arthurian Legend"

¹⁸ Edwin Austin Abbey. *Abbey Room Murals: The Quest and Achievement of the Holy Grail*. 1895-1902. Oil Paint. Boston Public Library's Book Delivery Room. 700 Boylston Street Boston, MA 02116.

https://www.flickr.com/photos/boston_public_library/albums/72157647672175522/

tainting his spirituality. It is also the reason Lancelot can not claim the grail. The quest is a spiritual one because as he starts the search for the grail he finds out he is not worthy to receive it due to this affair. More importantly, he learns how he can repent. Again, Christianity is making an appearance through reference to doctrine.

Robert de Boron came onto the scene when he completed the story of Percival's Grail quest by Troyes. In that story, Boron would decide to change the anvil to a rock. He explains in the story the Christian symbolism behind the new pairing as being a representation of Arthur being the defender of the faith and the chosen king by God.¹⁹ All of these additions to the legends so far have served to create more and more recognizable elements that future retellings would take on. More importantly, it further steeps the lore with Christianity. This element is small but still significant in noticing how Christianity is still influencing the choices made when evolving the lore. This is not by chance. It is important to note that the lore was being bounced from country to country that had Christianity as a predominant religion. It is this predominance that would cause the legend to have religious elements in it.



*Voyage of King Arthur and Morgan Le Fay to the Isle of Avalon*²⁰

with/15258034891/

19 Ibid

20 Frank William Warwick Topham. *Voyage of King Arthur and Morgan Le Fay to the Isle of Avalon*. 1888.

Here reaches the point that all of the iconic elements have been added. However, there is an important contributor to the legends of King Arthur. Sir Thomas Malory published *Le Mort D'Arthur* in 1485. It was an expanded and edited version of the Post Vulgate Cycle from 1240-1250

CE. The Post Vulgate Cycle is the first piece of prose that told the story of the Galahad's Grail quest and Lancelot's affair along with the story of Arthur's reign. While not adding anything notable, it was significant because it was part of the initiative of William Caxton to make literature available by using a printing press.²¹ It allowed the legends to become readily available to the general public, not just a select few. Through the wider distribution of the tales, it set the ground for its rising popularity keeping it alive and adapted even through today. This was culturally influenced as it was the innovation of the printing press and the motion to use it to make literature available to more than just the nobles or upper-class that would make the legends so recognized. That recognition would be why they are still known and adapted to this day.

By tracing through the different people who influenced the tale it is easy to see how a tale can grow and change. In the beginning, there were only a few knights and hardly any knowledge about Arthur beyond that he was a great king. Over time Arthur's story became more fleshed out and he was given a past and the knights that everyone recognizes today. It is also very apparent how cultural backgrounds can change a story greatly or in this case deepen the religious elements and context. In the beginning, the story did have Christianity threaded through it but not to the extent it does today.

ROGER LANCELYN GREEN- KING ARTHUR AND HIS KNIGHTS OF THE ROUND TABLE²²

In the author's note, Roger Lancelyn Green²³ states that he has taken many of the well-known Arthurian legends and ordered them to fit in a cohesive timeline. Most of the tales are from Sir

oil on canvas. 106.7 cm X 152.4 cm. Private collection. https://commons.wikimedia.org/wiki/File:Frank_William_Warwick_Topham_Voyage_of_King_Arthur_and_Morgan_Le_Fay_to_the_Isle_of_Avalon_1888.jpg

21 Ibid

22 Roger Lancelyn Green. *King Arthur and His Knights of the Round Table*. London, England: Penguin Group, 1994.

23 ibid

Thomas Mallory's collection and old French romantic tales. Green added a few other stories from other sources supplementing Mallory's book. He felt it was needed in order to tell a complete story.²⁴

By using the collection, the author is drawing upon a source that is the finale of the evolution of King Arthur Legends. It includes all the elements that have been established by all of the previous versions that came before it. It offers the author the most complete and up-to-date telling of the story of King Arthur and his knights. It contains everything from Arthur's birth to his death, the affair between Lancelot and Guinevere, and the iconic sword in the stone. All these details have accumulated through every retelling of the Arthurian legends. The use of other sources alongside Mallory provides the reassurance that it is more than a reprinting of Mallory's collection. It is a more comprehensive version.

It is interesting how the Green states to have placed the legends in a lineup that tells a more linear tale. They center around certain pivotal moments in the Arthurian legends. However, other than that, they do not provide an element of time. There is the occasional reference to some past event, that is all. Green places the stories into four different books. They cover the early years of Arthur and the Round table, the middle years of the round table, the grail quest, and the fall of Camelot. However, there were questions raised at points as to the time frame of the events. One of these instances takes place in book one when the Lady of the Lake is beheaded, but she then appears in the next story. Whether resurrected or there is a new Lady of the Lake appointed, it is never made clear. It indicates that the tales are supposed to have a timeless quality by not using specific dates but major events to tell time within a narrative makes it seem endless.

The first half of book one covers the events that lead up to the creation of the round table. It is revealed Merlin hid away the infant Arthur with a foster family so he would not die alongside his father King Uther Pendragon. Merlin then creates a test by placing a sword in the

²⁴ibid

stone to reveal the true king of Britain. Spoiler alert only Arthur would be able to. After Arthur is crowned, the sword he pulled from the stone breaks in a duel. Merlin then guides him to the Lady of the Lake. From that encounter, he comes away with Excalibur and knowledge of what the future holds for him. Merlin reveals several pieces of information to Arthur. He tells him that he will die on the Plain of Camlann by the hand of an evil knight, that a woman has designs to steal Excalibur from him, marrying Guinevere was a poor choice as it would later lead to conflict with Lancelot, and that the grail would come to Camelot²⁵.

This section of the book serves a few purposes. The first is that it provides a background for Arthur making him more lifelike instead of a flat character. It creates the context for the legends and makes Arthur more human and relatable. The second purpose of this section is



that it provides a foreshadowing of the events that will occur in the tales that follow it. It sets readers up to know that this tale does not have a typical happy ending. It also sets up the idea that the events were preventable. The legends purposely feature flawed characters. Merlin tells Arthur and the knights how to avoid or mitigate a foretold fate. However, there are numerous instances of Arthur and other knights not following his directions. As a result, the bad events Merlin warns them about

Illustration of Queen Morgana le Fey²⁶

²⁵ ibid

²⁶ Howard Pyle. *Queen Morgana le Fey*. 1903. Scanned illustration. 799 X 898 .1903 edition of The Story of King Arthur and His Knights. <https://commons.wikimedia.org/w/index.php?title=Spe>

come to pass. The second half occurs after the round table is created. Merlin creates a round table so that there is no discord sewn by knights trying to jockey for a more prestigious place. Merlin also forms the oath of chivalry and charges the knights to follow it. Not long after that, he leaves with Nimue to be placed in an enchanted sleep. It is said he should awaken when a new circle of knights forms. After Merlin disappears, Morgana le Fey, also known as Morgana, makes her evil intentions known by using her magic ensnaring Arthur and Sir Accolon of Gaul. Her goal was to make them fight in the hopes Arthur would die in battle. Morgan Le Fey flees when the truth comes to light, and she manages to dispose of Excalibur's sheath in a lake.²⁷

In this half of book one it is revealed that Morgan Le Fey is the evil woman who wants to get Excalibur for her own. It is hardly a surprise because that is one of the most well-known aspects of the myth. It appears again and again through literary or movie adaptations of the legends. Due to that, most people know without reading the stories that Morgan Le Fey is out for the throne or sword. In some versions, she is the mother of Mordred based on her character merging with that of Morgause²⁸. It is not surprising that they are merged as they are both half-sisters of Arthur. It is easy for authors to merge them because Morgause often does not have a substantial role in the legends.²⁹

Book two is a collection of stories about different knights and their quests.³⁰ In these adventures, the knight's virtue is tested. If the knights go against their word or do not uphold either

cial:Search&limit=20&offset=20&ns0=1&ns6=1&ns12=1&ns14=1&ns100=1&ns106=1&search=King+Arthur&advancedSearch-current={}/#/media/File:Arthur-Pyle_Queen_Morgana_le_Fey.JPG

27 *ibid*

28 King Arthur's Knights. "Who was Morgan le Fey". King Arthur and the Knights of the Round Table. 2019. Date accessed November 25, 2020. <https://kingarthursknights.com/arthurian-characters/morgan-le-fay/>

29 King Arthur's Knights. "Who was Morgause". King Arthur and the Knights of the Round Table. 2019. Date accessed November 25, 2020. <https://kingarthursknights.com/arthurian-characters/morgause/>

30 Green, King Arthur and His Knights of the Round Table

Christian virtue or the code of chivalry, then there are consequences. Often the knight will struggle to move forward until something prompts them to remember their faith or code of chivalry. By basing their actions on what religion or code dictates, they can then complete the quest. As a result, the knight comes away learning more about themselves and how they should act to be more aligned with the Christian ideals. It shows how heavy-handed the religious elements are within these legends.

Book three is about the adventures of Sir Lancelot, Bors, Percivale, Galahad, and Gawain as they were searching for the holy grail. In these tales, the knights are tested to make sure that they can resist temptation and are worthy of laying eyes on the grail. During these stories, Lancelot learns that he may not see or partake of the grail due to his sins. The chief one is that he has coveted Queen Guinevere and has slept with her. Gawain was able to see the grail but unable to drink from it. It is because while he had been able to resist the temptation to sin, he was not the Grail Knight. When Bors, Percivale, and Galahad reach the end, the three can see the grail, but only Galahad may drink from it. When the quest is complete Galahad, dies, Percival weds the grail maiden who watched over the grail, and Sir Bors returns to tell King Arthur the tale of the quest. Galahad was the destined grail knight, and his arrival sets the journey in motion when a test, set up by Merlin, identifies him as the best knight in the world.³¹

In this book, the characters struggle to remain above sin and temptation. However, many are flawed and succumb to it briefly. These failings are pointed out during the quest because seven knights set out, but only a few can see the grail. It speaks to how human these characters are portrayed because most of them briefly deviate from the path dictated by religion and the code of chivalry. Only one man, that being Galahad, had never faltered. By the legends showing one man succeeding in remaining virtuous, it indicates it is possible to do the same. By having only one knight be worthy, it gives people something to aspire to but indicating it is hard to

31 *ibid*

achieve. By having so many knights fail, it portrays that if a person slips up and sins or gives into temptation briefly that it is human nature.

The final book is about the end of the round table and of King Arthur's knights. After failing the quest, Sir Lancelot tried to avoid Guinevere because of the sinful love between them. That worked for a time but, then Guinevere was captured by the knight Melliagraunce, and Lancelot rescues her. After they return to Camelot, they meet privately in her garden. The knights Agravain and Mordred spy on Lancelot and Guinevere and then tell Arthur about the betrayal. Following this, Lancelot is attacked by a group of knights following Mordred and Agravain. He escapes and leaves Camelot as discord erupts between King Arthur's knights. Some side with Arthur and others Lancelot. After several confrontations between Lancelot and Arthur that further drives a wedge between them Lancelot, leaves for France. It prompts Mordred to start his take over of Briton. King Arthur and Mordred meet on the battlefield, where they deal with each other a killing blow. Mordred fatally stabbed with a spear pushes himself along its length. Doing so, he strikes a death blow to Arthur with his sword. Before Arthur journeys to Avalon, he bids his last remaining knight throw the sword Excalibur into the lake that it came from. Arthur goes to Avalon for healing. However, he now resides in a cave asleep with his knights until there is a need for him again.³²

Here is where the tale wraps up. In the tales, all the foreshadowed events come to pass. Arthur dies from a blow from Mordred and the marriage to Guinevere is what allowed Mordred to take advantage of a bad situation and try to take It just reinforces how all the events that Merlin forewarned about occurred due to the choices Arthur made. In these instances, Arthur went against his council and gave into baser emotions such as rage, arrogance, and attraction. It is a symbolic representation of God's council through the commandments and bible as Merlin who seems to be able to see ahead tries to guide Arthur to make choices that will help him as God oversees and guides people to a better path.

³² ibid

2

HISTORICAL BACKGROUND



LABYRINTHS

The words 'labyrinth' and 'maze' are often used interchangeably when in truth they are two different creations. A maze has multiple intersecting pathways and some result in dead ends. A labyrinth has one continuous path that loops in on itself until it reaches the center so the user must turn around and retrace their steps to reach the outside again. Having that distinction, the difference in complexity indicates the different purposes that these creations have been used

¹ marsroverdriver. *The hedge maze at Traquair House*. September 11, 2008. 800 x 600 Photograph, Flickr. <https://www.flickr.com/photos/12173006@N08/2937635448>

for. Labyrinths have a design that prevents the need for the user being aware of one's surroundings as the physical construction limits the movement to one direction. There are different names for labyrinths depending upon how many times it loops around before reaching the center, but they all share the qualities of having paths that are equidistant from one another and these paths are usually marked by lines instead of physical walls.²

Labyrinths appear in many different cultures around the world appearing as early as the Neolithic Age. A specific time cannot be pinpointed as a definitive origin, since labyrinths developed in different places at different times³. Once they appeared, labyrinths were depicted on walls, coins and other artifacts along other figures and themes with appearing in Greek Mythology. These representations and images have been used in many different regions such as Egypt, Italy, Russia, Turkey, and America and many other areas.

Historically the use of labyrinths around the world has changed over time with shifting cultures. The labyrinths may have initially started out as a method of trapping malicious spirits and tricksters within the twists and turns of their pathways, while in other contexts they were used for ritual dances or even as a path



*Traveler in art labyrinth on Coastal Trail*⁴

² The Labyrinth Society . "Learn about Labyrinths." *The Labyrinth Society: The Labyrinth Society: Learn about Labyrinths*, 2020, labyrinthology.org/about-labyrinths.

³ Cristian Violatti. "Neolithic Period." *Ancient History Encyclopedia*. Ancient History Encyclopedia, 02 Apr 2018. Web. 11 Apr 2020. <https://www.ancient.eu/Neolithic/>

⁴ Mauricio Thomsen. *Traveler in art labyrinth on Coastal Trail*. May 30, 2016. Photograph. 2888px x 3857px. San Francisco, United States. <https://www.pexels.com/photo/traveler-in-art-labyrinth-on-coastal-trail-5726325/>

to connect to a sacred ancestor. It is no surprise that as time progressed the labyrinth continued to take on religious significance, since religious worship was a main staple of human culture no matter where it was. Labyrinths were "symbolic forms of pilgrimage... people... walk the path, ascending toward salvation or enlightenment. Many people could not afford to travel to holy sites and lands, so labyrinths and prayer substituted for such travel".⁵ Overall, a common theme represented by the configuration of a labyrinth— perhaps transcending history - is the idea of an internal and contemplative journey and transformation.

In Greek mythology there was a very famous 'labyrinth'. Joshua Marks⁶ retells the myth of Minos, the King of Crete, who had Daedalus a renowned architect build a maze to house



the Minotaur, a beast that was part man and part bull. This creature was a result of Poseidon's wrath for Minos's failure to sacrifice a bull; the sacrifice of a bull appealed to the gods, and was a symbol to curry the favor of the gods. Poseidon made Minos's wife fall in love with the bull and, their consort gave birth to the Minotaur. As the beast ate human flesh the king taxed Athens by making the city send fourteen of their youths to be fed to the creature every year. Theseus was

*The Minotaur*⁷

⁵ LabyrinthPark.gr . "History of Labyrinth." *Labyrinth*, 2020, www.labyrinthpark.gr/en/history-of-labyrinth.

⁶ Joshua J. Mark. "Labyrinth." *Ancient History Encyclopedia*. Ancient History Encyclopedia, 16 Apr 2018. Web. 02 Apr 2020.

⁷ *Minotaur*. Date Accessed December 1, 2020. Digital Image. 285 X 379. Fandom. <https://monster.fandom.com/wiki/Minotaur>

one of the young men sent to Crete to be sacrificed to the Minotaur and he was determined to end the monster once and for all. His father Aegeus the King of Athens, was distraught at sending his son away, in a ship with black sails, telling him that if he were to succeed, and return, to switch the sails to white. Theseus set out, and once on Crete, was able to gain the affection of Ariadne, the daughter of Minos. She gave him a ball of thread so that he might retrace his steps in the labyrinth after he having killed the beast, thereby leaving himself a path. He killed the beast but when he returned home, he forgot to change the black sails to white. Aegeus upon seeing that the sails of Theseus' vessel were still black, threw himself into the sea, killing himself in despair. This is why the sea is called the Aegean Sea. At his father's tragic death Theseus became king of Athens.⁸

Despite being referred to as a labyrinth, the Cretan architecture may not have been a labyrinth at all as Theseus had needed, according to the myth, to use a thread to retrace his steps. This indicates it was likely there was more than just a single path to follow. In fact, it sug-



Silver coin⁹

gests a number of overlapping pathways. Yet the representations of the Cretan labyrinth that appear on coins and other graphic representations and image indicate a single pathway. There has yet to be a consensus, as sources disagree on whether the Cretan maze or a labyrinth appeared as a single pathway as seen on the coins or as multiple intersecting paths. Either way, it follows the same theme

⁸ ibid

⁹ Silver tetradrachm. 2nd-1st century BCE. Silver. Alpha Bank Numismatics Collection. Kerkyra, Corfu. <https://www.ancient.eu/image/3184/labyrinth-knossos-silver-tetradrachm/>

of labyrinths being a personal journey. The journey represented starting out as a boy and traveling to the heart of the maze with his worries and doubts, where, in the center of the maze he faces them and reemerges a man, with those burdens left behind, having succeeded in his task.

Another account of a famous labyrinth is found in Egypt, going off of a description from Herodotus about an, "entire building, surrounded by a single wall, [that] contained 12 courts and 3,000 chambers, 1,500 above and 1,500 below ground." Herodotus explains that he was only allowed partial access as the underground areas were sacred burial sites.¹⁰ There is an indication that the layout was set up to guide Herodotus through the areas above ground and that the whole area was designated for funeral purposes. This is linked a symbolic reference for the honoring of the life of the deceased as people walk through a labyrinth that has a tomb situated at the end.

According to Julie Bounford¹¹ all around the world and throughout history there are instances of people inscribing depictions of labyrinths on walls in cave paintings, and on pillars and other architectural element, in areas all over the world: Greece, Egypt, Turkey, etc. Bounford also delves into how the symbolism of Greek labyrinths are about the journeys of life and rebirth. She also notes that the Hopi and Pima along with other Native American tribes use the labyrinth as a symbol of birth from mother earth the creator of all life. These representations have been found in various craft and artisanal work.¹² One of the Native American labyrinths is called "the man in the maze". Appearing in many different forms, these representations symbolize life and the choices that we make that lead us to the center where death and eternal

¹⁰ The Editors of Encyclopaedia Britannica. "Labyrinth." *Encyclopædia Britannica*, Encyclopædia Britannica, Inc., 7 Feb. 2014, www.britannica.com/technology/labyrinth-architecture.

¹¹ Julie E Bounford, . The Curious History of Mazes: 4,000 Years of Fascinating Twists and Turns. Wellfleet Press, 2018, Google Books, books.google.com/books?id=ZIBuDwAAQBAJ&pg=PA11&pg=PA11&dq=labyrinths+history+in+turkey&source=bl&ots=GsvAbjhmMJ&sig=ACfU3U0d7bDmx7aZ79VMgIGvOiBV2gpc9Q&hl=en&sa=X&ved=2ahUKEwjfwc3e-ODoAhWZxc0KHTUgCcc4ChDoATAEegQICxAv#v=onepage&q=labyrinths%20history%20in%20turkey&f=false.

¹² Ibid

life are bound up within the design. On a similar note there are also many examples of carved labyrinths found in Ireland and throughout the British Isles; there is also the Jericho labyrinth, inscribed on an Italian manuscript, which, as mentioned above, holds that religious context is allegorical, and may serve as a method for contemplation.¹³ The labyrinth creates a disorienting effect as it is a series of concentric loops moving inwards. This disorientation allows the person's mind to move past the present situation and instead go inwards. This can provide a chance to reflect on one's thoughts or connect to a deity in prayer. The path follows a pattern that spirals inwards so there is no need to focus on the path in front.

For me the question becomes, how does all of this relate to Escape rooms? Labyrinths are symbolically about escape, tethered or bound up with notions of entrapment, incarceration, and escape. Whether it is to lay down some burdens for a while by trying to leave them at the end of a labyrinth or to contemplate life's deeper problems, or achieve some connection with a religious figure, deity or entity. Mazes and labyrinths create a separation from the world and allow for possibilities of self-reflection. Escape rooms also have one path through them. They create an environment that focuses the mind in a way that is highly structured just as the pathways are structured to lead the user through it.



Aerial Photography of Maze Bush ¹⁴

¹³ Geordie McElroy. "10 Mysterious Ancient Labyrinths." Listverse, 11 June 2018, listverse.com/2017/02/26/10-mysterious-ancient-labyrinths/.

¹⁴ Fisk, Tom. *Aerial Photography of Maze Bush*. February 14, 2019. Photograph. 5215px x 6023px. Su karesmi, Indonesia. <https://www.pexels.com/photo/aerial-photography-of-maze-bush-1904204/>

This structure allows for the mind of the player to be focused solely on the room instead of the world outside. There is no glimpse of the world outside in order to create an atmosphere that allows the participant to focus on themselves and the room before them instead of the world outside themselves.

MAZES:

Mazes are different from labyrinths. Labyrinths have a single path leading to the center and are used for reflective purposes. Mazes, however, are designed to confuse and disorient. Mazes " [are] filled with dead ends. [Sometimes] there are puzzles [to] help you find your way and alleviate frustration, but the idea is to get lost a few times before... finding your way".¹⁵ Mazes are a popular form of entertainment because there is the possibility of getting lost. With labyrinths, the person walking it is not distracted by choice and can focus inward on themselves. Alternatively, mazes offer different paths and dead ends. It serves to bring awareness to the immediate surroundings by providing a problem-solving experience. There can be puzzles to guide the way or it is trial and error by trying different pathways.

It is fitting that the word maze, which "dates from the 13th century ... comes from the Middle English word *mæs*, denoting delirium or delusion".¹⁶ In the twisting pathways, it is easy to become disoriented as every path looks the same, and they may end suddenly, crisscross, or lead in a loop. When taking different pathways, it is easy to lose track of where you are. It is then inducing the delusion of separation from reality and knowing where you are. If it is hard to pinpoint where you are within a maze, it creates a sense of separation from the outside world as that information is irrelevant in the maze.

¹⁵ National Building Museum. "A BRIEF HISTORY OF MAZES". June 24, 2014. <https://www.nbm.org/brief-history-mazes/>

¹⁶ *ibid*

Hedge mazes like what we see today were created in the middle ages with the purpose to amuse royalty and distract them from every day.¹⁷ They have never served a higher spiritual purpose, unlike labyrinths. Hampton Court's hedge maze is the oldest in the United Kingdom that still exists today. Designed by George London and Henry Wise, it is the only one that survived out of the three created for Hampton Court. In these mazes, there were benches set up, and in the protected space between the hedges, gentlemen were able to entertain ladies in private.¹⁸ The use of mazes to escape indicates that they provided an area that seemed to the occupant cut off from the rest of the world. This privacy is due to the hedges blocking the view from both the outside and inside of the maze. The use of mazes for private meetings indicates that it was viewed as a private space. That is due to mazes creating a dissociated space from the rest of the world. This feeling of being protected is sustained by someone only being able to see their immediate surroundings. If one does not know where they are in the maze as all one can see is the hedges around them, then the consciousness is limited to that space. It causes the feeling of being isolated and cut off from the rest of the world. This is what makes it an activity that lets participants escape from the everyday. It forces them to focus on the here and now or the person they are meeting in the maze.

There are mazes all over the world that date from centuries ago up to the present. There is a cypress hedge maze in Barcelona, Spain, that dates back to 1791. In Italy has a circular hedge maze dating to 1720. In China, a more recent maze opened in 2017 and set the record for the largest hedge maze at around 383,000 square feet.¹⁹ These are three of the many mazes built to entertain those who walk the pathways. Over the years, new elements have been added, such as actors to scare people as they go through or podiums to get stamps to show that you

17 Natasha Geiling. "The Winding History of the Maze". *Smithsonian Magazine*. July 31, 2014. <https://www.smithsonianmag.com/travel/winding-history-maze-180951998/>

18 Historic Royal Palaces. "The Maze" Historic Royal Palaces. Date accessed November 25, 2020. <https://www.hrp.org.uk/hampton-court-palace/whats-on/the-maze/#gs.lu9ca6>

19 go-today. "10 Enchanting Mazes Across the Globe". *gotoday*. October 9, 2019. <https://blog.go-to-day.com/see-do/mazes/>

found all the different stops. This was to make them more engaging. However, the purpose has not changed over the centuries. The goal is still to find your way to a designated point as a way for someone to escape reality.

Mazes are like escape rooms because they are puzzles. There are clues provided so participants can figure out how to retrieve the key or code that will unlock the door and let you escape. The design of the escape room is to make it a space separate from the rest of the world. The room is decorated to fit the theme of the story making it an immersive experience. What makes it so effective is that there is a closed-door so it keeps the outside world from disrupting the experience. That serves the same purpose as the maze walls. They make the participant focus on the immediate surroundings and forget the outside world. It shows how mazes were the precursor to escape room as they share the singular path that must be found, amid dead ends or false clues that leads to the end. They also share the same sole purpose of entertainment. An escape room is not a spiritual journey, it is about working together to problem-solve.

3

ROLE PLAYING GAMES



WHAT IS ROLE-PLAYING

Role-playing games are all around us, and many people participate in them daily. Dungeons and Dragons is one of the most notable role-playing games out there and often appears in popular media such as the show Stranger Things. But there are so many more that exist, and they are not all tabletop games.

¹ Wizards of the Coast. Cover image on Dungeons and Dragons Website. Date Accessed November 28, 2020. 1920 x 600. Digital Art. [dnd.wizards.com. https://dnd.wizards.com/dungeons-and-dragons/what-is-dd](https://dnd.wizards.com/dungeons-and-dragons/what-is-dd)

What is a role-playing-game? There is no satisfactory answer as its definition is “a game in which players assume the roles of fantasy characters”.² However, this word does not show up in many dictionaries making the definition suspect. Breaking the term down does not give a better result. It is a game where the player takes over a role and controls all aspects of a character. As that could apply to just about any game or video game, this is not very helpful. One gamer on YouTube spoke about what her definition is. She narrowed it down to games where players have a character and can control or influence its identity and quantities. There are two ways to accomplish this. The first is developing a personality or identity. The player chooses how the character interacts with the game world and other characters influencing how the avatar is perceived, therefore creating a personality. As a result, it may open different side quests based on those choices. The second way a player can influence character development is by building up skills through leveling up, gaining experience, and using that to customize the skills. Doing this individualizes characters. Choices about how characters level up means that they will tackle scenarios differently. An avatar, with high levels of precision and are low in strength, would try to



Role Playing Dice ³

² HarperCollins Publishers. “Definition of ‘role-playing game’”. Collins Dictionary. Date Accessed November 26, 2020. <https://www.collinsdictionary.com/dictionary/english/role-playing-game>

³ Sarah Nelson. Photograph by author. September 2020.

take out an opponent from a distance instead of an all-out brawl. Role-playing allows the game-play to alter based on decisions made as it is not limited to one story or course of action in the game.⁴ That is a better definition as it restricts what qualifies as a Role-Playing game by defining the ways a game allows for playing a role. Games designed for the freedom to customize a unique character allows the player to embody the role. It creates a different experience than stepping into a pre-created character and trying to adapt to it. It is the difference between Role Playing and Cosplaying. When cosplaying the character is like a shell. The person must adapt to what is already created by another person. In roleplaying, there is the ability to grow and expand the character as a person wills. While the definition is classifying videogames, the definition applies to all RPG games out there.

There are three different kinds of Role-Playing Games. These are tabletop, LARP, and Digital games. Tabletop games are what the name suggests, games played around a table with a group of people. LARPing stands for live-action role-playing. It is where participants get dressed up as characters and use their surroundings and imagination to simulate being in a game world. Finally, there are digital games. These are video games and phone apps games that are mostly single player.⁵ All of these games have the same concept. The player can shed their identity and assume another to experience a different life or event. It may be through imagination coupled with verbal descriptions often found with tabletop games. Or there may be visuals such as people dressing up or the images on a screen with LARPing and videogames. No matter the form, new worlds, and people are created, as a way to escape the everyday.

What makes them games? With any game, there is a goal to achieve, rules set in place to dictate how a player can act, how they can achieve victory, and there is conflict, whether internal or external. In all kinds of RPG events or games, there are these elements. In vid-

⁴ Cannot be Tamed. "What is an RPG?". *YouTube*. November 11, 2016. <https://www.youtube.com/watch?v=p9LW1Zb0yUw>

⁵ Satu Heliö. "Role-Playing: A Narrative Experience and a Mindset". 65-74. PDF. Date accessed November 26, 2020. <http://www.ropecon.fi/brap/ch6.pdf>

eogames, there is a goal that the player must complete to win the game. The obstacles are the fights that the player must win to progress. These may be boss fights- which is a monster or monsters that must be beaten in the game before the player can progress. The rules are the programming of the game as they prevent a player from getting certain items or from going past a certain point on the map before it is unlocked. In Larping or Tabletop events, completing the goal is a group effort from anyone playing. The conflict can be both internal and external.⁶ The characters can face difficult decisions based upon their beliefs and choices they must make based on the events of the game. The external conflict is the challenges they face such as opponents trying to stop the group's progress. In tabletop games, the rules state how to play the game, such as how to attack something, how to calculate damage, how many spells or hit points a character can have, and much more. However, the rules do not restrict what a player can do in the game. That behavior is more dictated by game etiquette. In LARPing, guidelines made by the game masters dictate what is allowed in gameplay. They are very extensive, covering how the magic system works in the game, the ways to count hit points, what disqualifies players, and more. These rules create a standardized playing system so everyone involved can



Men in Costume ⁷

understand when people are out of the game. This way, no one is arguing about who is in, out, or what is allowed or not. It also keeps players safe by preventing people from acting in a way that will injure another player, such as requiring padded weaponry.

⁶ *ibid*

⁷ Rene Asmussen. *Man's Holding Swords Clip Art*. January 02, 2016. Photograph. 10000px x 5652px. Pexels. <https://www.pexels.com/photo/war-battle-middlage-25755/>

CREATING A STORY?

With most of these games, there is the impression that a story is playing out. It is the character's development through the game, obstacles faced, the narrative elements that create this impression. The characters have backstories, a narrative told to players setting up the game premise, the characters interact with others creating a dialogue between them. All of these aspects share qualities with a story. However, it is arguable whether they tell a story.⁸ Tales contain a beginning, middle, and end, and these games do as well. When they are retold to someone or seen through the cut scenes of a video game, the events unfold in a chronological time frame when the information is shared. The games also have conflict and dialogue along with the other story like qualities. It appears that it would make it a story.

However, it stated that a story needs a narrator, and, in these games, there is no narrator. The game master in tabletop games sets up the scenario, but the actions of the players dictate what happens.⁹ It said that "the game master and the players reconstruct the story by playing the game... Still, we must note that there is no actual story ... though there are events, characters, and structures of narrativity giving the players the basis for interpreting it as a narrative"¹⁰. Switching gears to the other kinds of games, the cutscenes of a video game do provide a sort of background able to be interpreted as a storyline, but they are there to prompt action and add context to the game. They introduce characters or situations, and when they end, the player then gains control of the figure and game. From that point, it is up to the player what they do as they try to complete objectives. It is because it is just action and no narration that it does not qualify as a story.

Arguably, RPGs make a story through a retelling of the events. By retelling the events of the game, the story gains a narration. The events of the game, determined by a player's actions,

⁸ Ibid

⁹ Ibid

¹⁰ Ibid (68)

create the storyline, not just interpreted as one. Combined with the other story like qualities of the RPG games indicates that they can become stories after the game ends.

TABLETOP:

The DM leans forward, ready to begin. His tone is mild, but there is excitement in his eyes as he starts setting up the first night of the new campaign.

"You all meet up at the local tavern intent on catching up on how the last year has been. Inside, the tavern is bustling with patrons all engaged in either their drink and food or in rowdy conversation. Most of the party sits at a back table away from the hubbub, swapping stories over drinks. Over time Alea..." he glances over at the girl playing the feisty human ranger. There a multicolored dice piled before her ready to use. He then returns his attention to the group, "you notice a solitary cloaked figure watching the group. Most of his face hidden by a deep hood, his identity obscured. What do you do?"

Dungeons and Dragons or D&D is one of the most iconic RPG tabletop games out there. It is where players can create a character for themselves. They choose the race, whether Elvish, human, half-orc, Dwarvish or something else entirely. They then customize that character by assigning skill points to different



D&D models set up for play.¹¹

¹¹Cliff Bustrillos. *Why D&D Is a Popular Form of Communal Therapy*. Photograph. 1600 x 890. Erraticus. <https://erraticus.co/2019/07/10/dungeons-dragons-popular-communal-therapy/>

areas such as charisma, intelligence, stamina, dexterity, strength, and wisdom. Players create personalities and backstories for these characters and act as those characters during gameplay. Gameplay consists of the characters exploring a world- created from diagrams and the verbal description the Dungeon master gives them- trying to accomplish a task set before them. Often, players explore dungeons, but the games can take place in any setting the DM wants to use. When a character is attempting to do something, someone rolls dice to see if it is successful or failed. The Dungeon master describes the world and events of the story. He also controls the actions of the opponents and monsters that the party fight in the game.

In the scenario above, the person playing Alea can choose to tell the group, confront the stranger, or observe from afar. If they check out the stranger, the player rolls a dice, and the number that comes up determines what they see. A low roll such as a 1 through 5 means that the character sees general surface details. Higher rolls like 15 through 20 means they see and infer more. The character notes details like the person's cloak is made of a high-quality fabric, which meaning they are rich. They may also notice they are shifting nervously in their seat. During the setup, players have a chance to converse with each other as their characters. They may talk about what they have done over the or new magical items they found or acquired. That allows for players to embody and interact with characters.

With a good DM, it feels like you are taking on the role of a character in a storybook. The world comes alive from just a verbal description letting players interact in a world created in a shared imagination. It invites players to immerse themselves in the world because players become a part of an adventure they would not be able to have otherwise and become a character that they have wanted to be. Players become attached to their characters as they shape and develop it to the point the role takes on a life of its own. The characters develop through the experiences had in the game world, and the player chooses which skills to increase as the character levels up. A campaign is a series of challenges to overcome, all done to complete one goal. It can take many months to complete if it is a long story. During that time, a character may start

very timid due to how the player built them. That can change through the game as interacting with different people and situations can make the player feel as though the character became more self-assured and confident. During the game, it shows through the character talking to other creatures or players instead of waiting for someone else to do it. The skills make a character unique and determine what they are good at doing. They may gain the skill of persuasion, making them capable of convincing someone into doing something for the party. These skills and experiences determine how a player wants to develop the identity of the character as they role-play. As they think about how the character thinks and feels, it impacts how they construct and alter it. It gives the players an emotional connection to the character because it makes them feel as if they are living the life of the person. Due to that, the choices made by the player feel like they have consequences, therefore they are carefully thought out.

LARPING:

LARP stands for Live-action Role-play. It is where players gather and dress up as a character to



participate in an immersive game. Here a game master dictates the rules, genre, period, and magic system for the game. There are three kinds ofLARPs. The first is demonstrative or boffer LARP. In this kind, groups hack at each other till one remains standing. They use boffers also known as foam

Costumes can be either ornate or very simple.¹²

¹² Roy Reyna. *Woman Holding Leaves*. October 20, 2019. Photograph. 5833px x 7291px. Austin, United States. <https://www.pexels.com/photo/woman-holding-leaves-3118541/>

weapons. The second is Salon Larping, where it focuses on player interactions with each other. Usually, the Game master creates all the characters and gives them out to the participants. The final kind is Live Steel, which is the same premise as the demonstrative but instead uses rattan weaponry and real armor. However, many of them combine different methods.¹³ By combining them, it offers players a chance to have a taste of action and character development as found in D&D but living it instead of imagining it.

Similar to D&D, the characters develop through experiences they have, and the player chooses how that will alter the character's personality. LARPing provides a way for players to step into the role they are playing by wandering around, talking to people, trying to solve the goal of the game, or doing whatever they want in the game world. It makes the player feel as if they have become their character because they have complete autonomy of their actions, and whatever they do impact the players around them or the game. The people around them are also in character and dressed up to look like their characters, so their actions will get a response that sustains the shared imaginary game world. That gives players a stronger connection to the role they are playing because it is a more immersive world surrounding them. They are physically playing the role instead of seeing it from a distance from a screen or a verbal description.

Characters develop based upon what happens in the game. If the game's goal is to solve a mystery, then their experiences will teach them different skills and change their way of thinking. For example, if a witness says something that the character takes at face value because they are trusting at the beginning. They may hear conflicting accounts as time progresses. That would teach them to be more skeptical of what others tell them.

VIDEO GAME:

Video games RPGs have a couple of differences between them and the other forms of RPG games. They are defined as an "electronic game genre in which players advance through a sto-

13 CrashCourse. "LARP: Crash Course Games #26". *Youtube*. November 11, 2016. <https://www.youtube.com/watch?v=SUYb29YV47w>

ry quest, and often many side quests, for which their character or party of characters gain experience that improves various attributes and abilities".¹⁴ They differ from the other forms because, aside from the difference in mediums, they allow players the ability to play by themselves, and they do not require the same use of imagination. Video games are programmed to set up the story of the game and push the narrative along through cutscenes and in-game characters. It takes away the need for other players or a game master. It also creates a very immersive world as instead of imagining what the surroundings look like, the player sees it on the screen. The other games require other players and the use of imagination to let the players step into a role and participate in the narrative event.

These were the next step for role-playing games. It comes as no surprise they were inspired by their predecessor Dungeons and Dragons.¹⁵ They share the same goal of experiencing another world or life. Video games allow players access to the joys of Role-playing games from home and on their own while improving on it the experience. Instead of having to rely on imagination, there were visuals to create a different but just as immersive experience. Instead of relying on imagination the narrative and game events played out in front of the player. Video games, when they first came out, labeled the skills charisma, dexterity, strength, and so on to customize the characters. That clearly from its predecessor D&D. They also would use similar fantasy creatures used in the tabletop game. Now the games have developed to cover all different genres, not just fantasy.¹⁶ As the games developed they kept some of the basics and improved on the foundation to create the games played today. The idea of choosing skills and classes and boosting skills as players level up to customize a character remains but appears in a variety of ways. These set the foundation for an RPG game but do not solely define it as one.

¹⁴ Hosch, William L. "Role-playing video game". *Britannica*. July 30, 2019. <https://www.britannica.com/topic/role-playing-video-game/additional-info#history>

¹⁵ William Jones. "Japanese role-playing games Vs. Western role-playing games: Their similarities, unique qualities and how they establish individuality". PDF. Date accessed November 26, 2020. <https://2015williamjones.files.wordpress.com/2018/01/will-jones-dissertation-final.pdf>

¹⁶ Hosch. "Role-playing video game".

Many modern games labeled as an RPG do not make the player feel like they are filling the role of the character on the screen. A gamer uses the *Borderlands* series as an example. Labeled as an RPG shooter, she felt that players could not develop the character in the way an RPG should. Players can choose a class and what skills to develop as with many RPG games, but it did not make her feel like she was playing a role. That is because no matter what avatar she chose, the game has the same combat mechanics.¹⁷ She was not able to feel like she was embodying the different characters. Instead, she felt it was about trying to level up, causing her to be detached about the character and its identity. To be an RPG game there has to be a way for players to make the gaming experience unique to a character and, by doing that, they can assume the role of the Avatar they have.

There are games where a player feels like they are embodying a character. That is because they can make choices that will impact the story creating a personality. *Skyrim* offers this because there is freedom of choice in the game. The main storyline starts with the player's character about to be executed for illegally crossing the border into *Skyrim*. During the execution, a dragon appears and attacks. Using the distraction the avatar escapes. Through the events of the game, the player learns they are the Dragonborn and can absorb the souls of the dragon gaining powers. The main goal is to hunt down dragons and unlock different abilities. But there are many other side quests for the player to go on through the game.¹⁸

Your choices change the storyline in little ways as they impact the narrative and the way the NPCs, or non-player characters that appear in the game, react to the player. An example of this is when the avatar ends up in prison. There the player meets a character called Madanach, the leader of a revolt. There is the choice to kill him and escape or help him and prove your loyalty before escaping. No matter what happens the player ends up in the same location but

¹⁷ Cannot be Tamed. "What is an RPG?"

¹⁸ Jones. "Japanese role-playing games Vs. Western role-playing games"

each choice will open different parts of the game. If the player kills him and escapes through tunnels, a character named, Thonar silver blood appears, and knowing the player's character killed Madanach, tells the character he had him/her pardoned by the Jarl, signaling the end of the quest. The second route is much longer. The player completes quests for Madanach proving their loyalty. Then you and a group of other prisoners' escape. That will deposit the player at the same spot as the other choice would have, but with a group of inmates, and instead of being pardoned, Thonar Silverblood appears with guards. There is a fight to escape, and after the fight, the quest is complete.¹⁹ These choices allow for a player to decide how they want to play the role of a character. While it does not change the storyline drastically, it lets players make choices that impact some of the narratives and feel like they are developing an identity and personality because they have the freedom to choose. They are not forced into one course of action. That means if the player wants to play an honorable character, then they choose to help Madanach instead of killing him. If the player is more results-oriented, then they would kill Madanach to escape faster. As these choices create different results in the game, it makes the actions carry more weight.

Why do choices matter? In video games that assign a character to the player, such as Cloud in *Final Fantasy*, some interpassivity occurs, and the player does not fully control the identity of the character. In cut scenes, the character is programmed to act a certain way. The player must accept that and incorporate it into what identity they created for the role. Choices allow for complete autonomy of action, so it results in responsibility avatar's actions creating an emotional investment.²⁰ There is more of a connection because every action has a consequence like daily life. That will make it feel like the player is living another life through the avatar but one where they can be someone else.

¹⁹ TheEpicNate315. "Skyrim: Top 5 Toughest Choices You'll Have to Make in The Elder Scrolls 5: Skyrim". *YouTube*. October 29, 2019. https://www.youtube.com/watch?v=SjtrYLp_CSg

²⁰ Matt Hebert. "Choice in Video Games". *Augmenting Realities*. Date accessed November 26, 2020. https://sites.duke.edu/lit80s_02_f2013_augrealities/choice-in-video-games/

RPGs AND ESCAPE ROOMS:

Escape rooms are like RPGs games. They have rules of how to go through the game—usually do not pull on certain items, do not pull anything apart, and do not break anything in the room. They have a narrative element starting the game to set the scene and give you the goal of completing the game. The game also allows players to assume a role. Participants play as themselves as they are placed in a facsimile of a situation. As a result, they take on the role that the situation dictates. If the escape room is about trying to solve puzzles to steal the crown jewels the player takes on the role of a robber even though they are playing themselves. Just like RPG's, there are choices presented in the game. They are as simple as what to look at first and what to do with the information collected. Every choice either gives the players more information or wastes time, making the players more emotionally invested in the game. The time pressure makes the role feel more real as if the players are going to be caught trying to steal the jewels. RPGs had a lot of influence increasing a game that is emotionally appealing to people like the mechanics for each escape game are similar but the ability to step in a new role and try to solve a challenge creates an exciting opportunity for each one just like an RPG.

4

CIPHERS AND CODES



Codes and ciphers have been used all through out history and even in modern times. They are used to protect sensitive or personal information from prying eyes and to communicate covertly with others who are made aware of how the code or cipher works. The practice of writing codes and ciphers to obscure a message's meaning is known as Cryptography.²

While the terms codes and ciphers refer to ways to protect that information and may be used

¹ *Cryptex #1*. Date Accessed November 28, 2020. 2770 x 1464px. Photograph. Wallpapers Vista. <https://vistapointe.net/cryptex.html>

² Binance.com. "History of Cryptography". *Binance Academy*. <https://academy.binance.com/en/articles/history-of-cryptography>

interchangeably, they are two different things. Codes have an assigned meaning to a word, sentence, or phrase that are often longer than the code word used to save time. Alternatively, ciphers are an algorithm that deal with encoding or decoding bits and parts of a message instead of meaning.³ Simply put ciphers encode the letters and numbers of a message with no regard to what it says. It is like putting together a puzzle piece by piece until a picture is formed. Codes on the other hand convey meaning through a word or phrase. It is like those spy stories where code names are used. Those privy to the person's real name and code name knows that the code name is referring to a certain person when it is mentioned. This chapter will look at different ways these practices were used through history and how they have been used in the escape rooms today.

Ciphers have been used as far back Ancient Egypt and Mesopotamia. In Egypt it was used in tombs to make the writing more visually appealing. However, 3,500 years ago in Mesopotamia came the first use of the cipher to hide information and the reason it was done was so someone could hide their recipe for pottery glaze.⁴ What better way to keep information private than having it written in a way that appears to be nonsensical text and only you know how to read it. Since that time the ciphers have evolved to find the most practical way of protecting information. Ciphers are still used today with bank systems, emails user's or customer's information.⁵ They are a part of the internet, phones, televisions, and ATMs to provide security for its users.⁶ They will not be mentioned as they do not have anything to do with escape rooms. This is because they are so large and complex that computers are needed to solve them. The clas-

³ Khan Academy. "Ciphers vs. codes". *Khan Academy*. Date Accessed November 26, 2020. <https://www.khanacademy.org/computing/computer-science/cryptography/ciphers/a/ciphers-vs-codes>

⁴ Binance.com. "History of Cryptography"

⁵ Ben Finio. "Cipher". *Scientific American*. October 6, 2016. <https://www.scientificamerican.com/article/crack-the-code-make-a-caesar-cipher/>

⁶ "Ciphers". *Practical cryptography*. Date Accessed November 27, 2020. <http://practicalcryptography.com/ciphers/>

sical ciphers which are found in escape rooms can be solved by hand.⁷ As no known escape rooms provide computers, and many do not even let you use your cell phone it has to be possible for players to solve and do so quickly.

There are two kinds of ciphers, substitution and transposition. Substitution ciphers involve substituting letters of a message with different elements or groups of elements such as symbols, numbers, or letters but the message is not scrambled. In a transposition cipher the letters of the message are scrambled and rearranged. This renders the message unreadable unless the receiver knows the rule of how the message was scrambled. The two may be combined by doing using a cascading system.⁸ This is when first one system is used to obscure the message. Then the other system is used to make the message even harder to decipher. These came into practice much later in history.

Ciphers grew, changed, or were put aside over time as they were used to protect information they were changed. Some of it was due to being too easy to crack or to impractical to use. One of the most common reasons ciphers were used was military communication during war time. For nearly as long as people have been fighting there has been a need for secret communication as if the enemy learned what they were communicating then they would be defeated quickly. From spies smuggling intel to armies to relaying orders or receiving reports information passes between people and that leaves it vulnerable to be intercepted. The first example of ciphers being used to encode military messages is seen in Ancient Greece is when the military would use long strips of parchment to wrap around be wrapped around batons and write messages so that when wrapped the letters lined up to spell out the message. If unwrapped it was a mass of jumbled letters. The batons had to be the same size for the code to work.⁹ This is a transposition cipher and to get the plain text- or the original message, the receiver had to

⁷ Ibid

⁸ The Editors of Encyclopaedia Britannica. "Cipher". *Britannica*. April 29, 2016. <https://www.britannica.com/topic/cipher>

⁹ Ibid

have the key- the way to decipher the cipher. This allowed messages to go between armies to let the work as a cohesive unit in secrecy. If the information was intercepted, then the enemy could use it to their advantage to take down the army.

SUBSTITUTION CIPHERS:

Ceaser while he was conquering countries used the Ceaser cipher, to give orders to his generals.¹⁰ Like the Ancient Greeks this was to maintain an element of secrecy about the actions of his troops. If the enemy does not know what is going to happen then there is no way for the enemy to prepare a defense or circumvent the army's actions. The Ceaser Cipher is a monoalphabetic system the alphabet that codes the plain text is moved down a certain number of letters down and the end of the alphabet is moved to the beginning. If the alphabet is moved three letters down under the plain text line, D becomes A and E becomes B and X becomes A and so on.¹¹

“Plain: ABCDEFGHIJKLMNOPQRSTUVWXYZ

Cipher: XYZABCDEFGHIJKLMNPOQRSTUVWXYZ”¹²

This is a monoalphabetic cipher it “relies on a fixed replacement structure. That is, the substitution is fixed for each letter of the alphabet.”¹³ This means the pairing of the letters will be consistent throughout the message. The issue with that, is it is possible to figure out with time and trial and error. There are 25 combinations with the Ceaser cipher and the person trying to crack the code would just have to systematically go through the alphabet words reveal themselves. This system along with other substitution ciphers were most commonly used throughout the middle ages. Al-Kindi, an Arab mathematician developed a system around 800 AD called

¹⁰ NRICH team. “The Secret World of Codes and Code Breaking”. *NRICH*. December 2004. <https://nrich.maths.org/2197>

¹¹ Finio. “Cipher”

¹² Ibid

¹³ Daniel Rodriguez Clark. “Monoalphabetic Substitution Ciphers”. *Crypto Corner*. Date Accessed November 27, 2020. <https://crypto.interactive-maths.com/monoalphabetic-substitution-ciphers.html>

frequency analysis. This system would render these ciphers ineffectual as this made them weak to decryption.¹⁴ Any private information that would benefit or harm someone if it was used by someone else there is a party that would want to decode the information. This system made it much faster for people to decipher the information as it gave them a mathematical way to try to narrow down the possibilities of what the code might be.

Frequency analysis provides a lot of information about a cipher and may lead to someone cracking it. Some letters are used more frequently than others such as E, T and A. E is the most common followed by T then A.¹⁵ It is not surprising that E is so widely used as it appears in so many words. The frequency of these letters appearing in the English language has been measured and recorded. If the individual counts every character and compares the amount of times the same symbols show up, then it can be reasoned out what letters they may be and if it is a monoalphabetic cipher.¹⁶ This can help the figure out part if not all of the ciphered text. If it just uses a Ceaser cipher, then it indicates how the letters are paired up. If there are too many letter words, it limits what the possibilities could be right there.

Due to this development a new cipher system was created to provide more security. The Trimethius' tableau, an example of a polyalphabetic cipher, is created by using a 26 x 26 grid. In the grid the top row is the alphabet in plain text. In each row under that the alphabet is written out with the letters shifted one more space forward for each row. In the message the first letter is encoded using the first row and with each letter the next row is used.¹⁷ I diagramed the table out on the next page.

¹⁴ Binance.com. “History of Cryptography”.

¹⁵ NRICH team. “The Secret World of Codes and Code Breaking”.

¹⁶ Strickland, Jonathan. “How Code Breakers Work”. *Howstuffworks*. October, 25 2007. <https://science.howstuffworks.com/code-breaker.htm>

¹⁷ Ibid

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A
C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B
D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C
E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D
F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E
G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F
H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G
I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H
J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I
K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J
L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K
M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L
N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M
O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N
P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y

This solution circumvents the issue of the frequency cipher as the letter I would become an L if it was the fourth letter in a message or it would become an H if it was the 26th. There would not be a way to concretely determine how many times a letter was used in a message if it keeps changing how it is represented. However, with that security comes a down fall. It is apparent that there are so many rows and columns that it is too time consuming and too easy to make a mistake. During the civil war it was found to time consuming to do a whole message so only terms were ciphered. One mistake and the whole message can become nonsensical.¹⁸ If the goal is to keep the message safe and time is not of the essence then this is a good system to use. It is labor intensive so the shorter the message the better. It was not well suited for war due to how it is time consuming it was to use and how human error could prevent communication. This system was the basis for the Vigenère Cipher. It uses the same table and just made

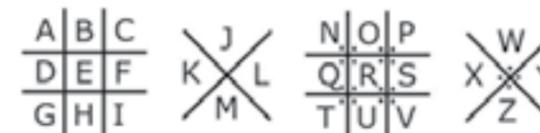
18 Jones, Terry L. "The Codes of War" *The New York Times*. March 14, 2013. <https://opinionator.blogs.nytimes.com/2013/03/14/the-codes-of-war/>

slight modifications by adding steps such as a key word. That would be repeated over and over until the message was complete to indicate what rows of the table would be used when deciphering the message.¹⁹ In this example the key word is code. The message in plain text is: Meeting at nine.

Key	C	O	D	E	C	O	D	E	C	O	D	E	C
Text	M	E	E	T	I	N	G	A	T	N	I	N	E
Cipher	O	S	H	X	K	B	J	E	V	B	L	R	G

Meeting at nine becomes: OSHXKBJ EV BLRG

Without the key word it becomes more difficult to crack as it prevents frequency analysis from being used and brute forcing it is much more difficult than monoalphabetic puzzles. There



*Pigpen cipher*²⁰

are too many different combinations of letters to try and it does not always guarantee that the letters that appear in the code represent the same letter from earlier in the mes-

sage. As seen in the example above the three Es in the code are represented by an S, H and G. With a monoalphabetic cipher they would have the same letter replacing them.

Other substitution ciphers were developed that were far quicker to create and use. One such example is what is called a diagrammatic cipher. It uses symbols to replace the plain text and the symbols are created in the key by placing letters in two tic tac toe boards and two Xs. The shapes that are used to replace the letters are taken from the lines that are formed around the letters.²¹ The second set of grids have a dot over each section which is included in the cipher to differentiate which of boards is being used in the message. This provides a much

20 *Pigpen Cipher*. Date Accessed November 28, 2020. 400 X 98. Digital Image. CodeBreaking. <http://www.counton.org/explorer/codebreaking/pigpen-cipher.php>

21 Ron Hipschman. "The Secret Language". *The Exploratorium*. Date Accessed November 27, 2020. <https://www.exploratorium.edu/ronh/secret/secret.html>

faster way to encipher a message. There are less possibilities to wade through. However, this again leaves the message vulnerable to frequency analysis. The book cipher, used during the civil war to communicate with President Jefferson Davis, would use two copies of a dictionary each party had. Plain text was substituted for the numbers corresponding to the page number, column number and word number of a word in the dictionary.²² This means that it would be hard for someone to decipher what the message was talking about as the code can work with any predetermined book that both people have. If someone trying to break the code uses the wrong book, then the code will give them the wrong words. At first this seems like a practical way to create a code and is more time efficient than some other methods out there. However, the dictionary is really the only book with every word in it. This means it limited the possibilities of books to use during war time. Simple words like it, the, and or, to name just a few can be found in any book. Not all words in the English language would be in any other book. This makes the system weak as it limits possibilities for what books are used for any book cipher code.

One final example of a substitution cipher, although those examples are barely scratching the surface, is Francis Bacon's cipher. He used a cipher where two fonts would be used to type out an innocuous message. The code used groups of five letters some of which would be bold, and others would not. The different patterns in those groups of five letters would stand for different letters.²³

This created the opportunity for the message to be passed along in an everyday message that would not garner a second glance. While other codes were very noticeable as they were just a bunch of letters strung together in absolute gibberish this did not worry about the letters used but how they were treated. With the key and knowledge about how the cipher worked the recipient would know to segment the message into groups of five letters.

TRANSPOSITION CIPHERS:

²² Jones. "The Codes of War"

²³ Hipschman. "The Secret Language".

There are different ways people have devised to protect their messages from prying eyes. Some are more secure than others like the substitution ciphers. The simpler ciphers are not very secure and with some brute force would be possible to crack. This is because there are limited possibilities on how to encrypt the text as the process must be repeatable to uncover the message. If the letters were just jumbled randomly it would not be practical as it would take too long to try to decipher it.

One such example is the columnar transposition cipher, which is created by placing the text in a table that is a certain number of columns wide. The message is then written out, one letter to each square by filling in the text row by row. Finally, the person who is using the cipher writes down the letters from each column from top to bottom before moving to the next column.²⁴ The use of a square grid is the basis for many ciphers with the only difference the way the message content is written and coded. For example, the message could be written:

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A T O N E C O M E
S E E M E A T T H
E C A F E I N T O
W N H W P S O A I

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The plain text is: At one come see me at the café in town the letters spread evenly between the row. Dummy text can fill in any gaps left in the square. There are many ways to put that text into a cipher and as long as the recipient knows how to decipher it. The cipher can start at one corner and use the diagonals to jumble the letters. The rows also could be used to create the cipher.²⁵ The issue with these is that it just takes rearranging the letters in different formats until words start to appear by trying out different formats. These do not offer a lot of protection

²⁴ "Traditional Ciphers". *Tutorialspoint*. Date Accessed November 27, 2020. https://www.tutorialspoint.com/cryptography/traditional_ciphers.htm

²⁵ Hipschman. "The Secret Language"

Another cipher based of that one is The Double Transposition Cipher where it is the same premise as the columnar transposition, but it is performed twice. With the first step a key word written above a column of letters in making up the square of text. The letters in the key word are numbered base on alphabetical order. Those columns of text that create reordered base on those numbers. This process is done again with the ciphered text with either the same key word or a different one.²⁶ This makes it more difficult to try to crack as it goes through layers of encryption. If someone has the directions to decode the message, then it is simple but anyone trying to crack it would just get gibberish as all the letters have switches places multiple times due to reordering the columns and putting it though the same process twice.

Another transposition cipher is the rail fence cipher. It has the letters alternate between rows.²⁷ It would look like this:

M E B H N T E C O L T O R
E T E I D H S H O A F U

In plain text it says: meet behind the school at four. Spaces are forgotten about in effort to obscure the message a little more. This may look like gibberish at first glance but if the recipient knows how to decipher it, it is a quick and easy way to pass a message on in secret. The downside as discussed above is that transposition ciphers not very secure. It is very simple to start rearranging letters in different configurations in tables or lines to see if any sense could be made from them.

CODES:

We hear code words every day and may not even realize it. Code words are used in

²⁶ "The Double Transposition Cipher" *Nova Online*. Date Accessed November 27, 2020. <https://www.pbs.org/wgbh/nova/decoding/doubtrans.html>

²⁷ Gustavus J. Simmons "Transposition cipher". *Britannica*. May 10, 2011. <https://www.britannica.com/topic/transposition-cipher>

hospitals, stores, and airplanes to name only a few. But what is a code exactly? It is an assigned meaning to a word, sentence, or phrase that is often longer and more complicated.²⁸

Codes center around communicating information to another party. They are used to either protect the message's content whether to keep the message secret, to convey information quickly, or not to incite panic.

One of the notable codes used in American history is that of The Underground Railroad. It was a system spanning fourteen northern states created to help slaves escape to freedom aided by people to help them and giving the escaped slaves places to rest on the long journey. It was named The Underground Railroad due to its secret operation and the railway terms used as a code. There was a need for secrecy due to a harsh penalty for any of the fugitive slaves caught or the people found aiding them.²⁹ Due to this the code allowed for communication between anyone working with the underground railroad or slaves who used it without blatantly talking about the plans they were making as that would be the fastest way to get caught. This system peak use was from 1820-1865³⁰ during which, until 1864 when repealed, the fugitive slave acts were in place so any runaway slave no matter in what state they were in could be taken returned to the plantation owner they came from.³¹ This was a massive incentive for slaves to slave to escape to outside the united states territory. The Underground Railroad made this possible.

Slaves would use the code in the songs they sung to communicate with other slaves while working on the plantation.³² The code words held meaning to those who understood what

²⁸ Finio. "Cipher"

²⁹ The Editors of Encyclopaedia Britannica. "Underground Railroad". *Britannica*. April 09, 2020. <https://www.britannica.com/topic/Underground-Railroad>

³⁰ Dr. Bryan Walls. "Underground Railroad Terminology". *PBS*. Date Accessed November 27, 2020. <http://www.pbs.org/black-culture/shows/list/underground-railroad/stories-freedom/underground-railroad-terminology/>

³¹ The Editors of Encyclopaedia Britannica. "Fugitive Slave Acts". *Britannica*. July 23, 2020. <https://www.britannica.com/event/Fugitive-Slave-Acts>

³² Harriet Tubman Historical Society "Underground Railroad Secret Codes". *Harriet Tubman Historical*

they represented. The reason the code worked, was because the meaning of the code words was only known to the parties involved and the code was consistent. If there was no agreement on what the code words meant, then there would be no clear communication and the operation would not have worked so well. Finally, due to the code being only known to slaves and those working with The Underground Railroad the ability to communicate and coordinate in secret which allowed for so many slaves hide and not have their whereabouts known. If the code had been cracked by anyone supporting slavery it would have been easy to intercept the slaves. It would have revealed who was offering refuge to slaves and aiding them on their escape. If they had known slave catchers would be able to set up watch to catch the slaves escaping the plantations or turn in those aiding the escaped slaves.

Code words they would use would be Conductor which meant someone who led slaves along the underground railroad, freedom train which stood for the underground railroad, and stockholder which stood for people who donated to the effort.³³ The words had a set meaning that would take time to explain if the code was not short hand that could convey the information quickly and secretly. Trying to talk about these parts of the railroad without obscuring the meaning with code words it would mean more people could overhear and stop the operation.

An example of code words being used to convey more information as efficiently as possible is seen with Morse Code. It may seem hard to believe that all those dots and dashes could make communication efficient, but they did. Morse code was created in 1830 alongside the telegraph which was developed between 1830 and 1840. It allowed people to communicate though electrical signals over long distances due to wires that connected telegraph stations. Morse code is the short and long marks or beeps that made up different patterns to represent numbers and the letters of the alphabet.³⁴ This meant that every word needs to be spelled out and that

³³ *Society*. Date Accessed November 27, 2020. <http://www.harriet-tubman.org/underground-railroad-secret-codes/>

³³ Ibid

³⁴ HISTORY.COM EDITORS. "Morse Code & the Telegraph". HISTORY. June 6, 2019. <https://www.histo>

could take a very long time depending on the length of the message.

While not the traditional code words that one would expect there were abbreviations and brevity developed and were used to represent words and phrases. Most of them look like the abbreviations used today in texting. These abbreviations and brevity codes made it possible to say a lot without as much time or effort. Brevity codes, also known as Q codes due to them being three letter codes that all started with Q were created in 1909 by the British government but soon would be adopted internationally due to it being able to bypass any language barriers. Due to their use there were many Q codes generated and so in 1970 the book Post Office Handbook for Radio Operators had more than a hundred codes listed along with their meaning.³⁵ This allowed anyone working as an operator to know the codes that would help them shorten the message and how to interpret them when receiving messages.

ADR	address	GN	good night	RIG	station equipment
AGN	again	GND	Ground	RPT	repeat
BK	break	GD	Good	RST	Readability, Strength, Tone
BN	been	HL	the telegraphic laugh	SK	end of transmission
BTU	back to you	HR	Here	SR	sorry
CL	closing	HW	Have	SSB	single side band
CUL	see you later	HW	How	TNX-TKS	thanks
DE	from (French)	N	No	TU	thank you
DX	distance	NR	Number	UR	your
ES	and (French)	NW	Now	VY	very
FB	fine business	OM	old man	WX	weather
GA	go ahead	PSE	Please	XYL	wife
GB	good bye	PWR	Power	YL	young lady
GE	good evening	R	received as transmitted	Z	best regards
GM	good morning	RCVR	Receiver	88	love and kisses

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Code words were also used that were to represent longer phrases. Single words can mean a lot for example the word Accidental means "Cannot say when shall be able to leave

[ry.com/topics/inventions/telegraph](http://www.alconaradio.org/topics/inventions/telegraph)

³⁵ *Common Morse Code Abbreviations*. Date Accessed November 28, 2020. Digital Image. Alconaradio. <http://alconaradio.org/pdffiles/CodeAbbreviations.pdf>

by”³⁷. This is again allowing longer messages to be shortened to save time. Efficient communication is important the longer a message is the more room there is for error and it may be important to get a message to someone quickly. If a ship is in danger, there would be no time to have someone send every single letter of a distress call. Shortening the message, a person can efficiently send important information that will alert others to the predicament.

Some code words used today are done so to prevent unnecessary panic in situations where it would be more dangerous to alert people to the situation going on because during the panic people could hurt themselves or others in their rush for the exit. These code words also alert those who need to know, what the situation because they know what the code word stands for. These code words are used to by hospital staff, police and store workers. In hospitals use of Code Silver means there is a situation inside the building that is requiring lock down. The code words Doctor Firestone or Code Red indicate to staff that there is a small fire in the building. In stores the use of a time check indicates to staff there is a bomb threat and they must search the store. The use of code 10 can mean different things depending upon who is saying in and what store. In Walmart it just means there is a dry spill that needs to be cleaned up. If a cashier says it to a credit card company, then the person paying is suspected of paying with a card that is fraudulently attained.³⁸ In most of these situations panicked people would be a serious hindrance to the staff trying to do their jobs. For example, the small fire could quickly be contained by staff and having everyone evacuate the building would cost much more time and be unnecessary when it was not a threat to anyone in the building. It would be a huge ordeal to evacuate the occupants and the guests when it is unnecessary.

The code word also prevents the conversation from tipping off the subject of the conversation that there is anything wrong. With the credit card example if the customer is illegally using a

³⁷ Khan Academy. “Ciphers vs. codes”.

³⁸ Nowak, Claire. “14 Secret Code Words You’re Not Meant to Know”. *Reader’s Digest*. May 27, 2020. <https://www.rd.com/list/secret-code-words-youre-not-meant-to-know/>

credit card they stole they would run before the situation could be dealt with if they were made aware that the cashier was checking that the card belongs to the person. This allows a situation to be handled in the moment by alerting those who know what the code means to the situation.

CIPHER AND CODES IN ESCAPE ROOMS:

You are inside a comfortably furnished study. A door stands between you and the exit. A heavy wooden desk sits to one side of the room, a reading lamp on it. Behind it a leather armchair stands behind it just waiting for someone to sit in it. You might even want to take a moment to just admire the room but the clock showing fifteen minutes spurs you into action. Opening the desk drawers one by one you come across several things. A locked box with a direction lock on it, a book, and a piece of paper with two lines of writing. The first line is a bunch of weird symbols on it. The second line is the alphabet each letter lined up with a symbol. Examining the room reveals four squares of paper hidden under the room’s objects. On each piece is a string of those symbols and a number is written in the corner. You see that the pieces are numbered one through four.

The use of ciphers and codes that have been used though out history have had a large impact on the Escape rooms that are created today. True to their original purpose, escape rooms use ciphers and codes to hide information from the casual viewer. By using a key, the way to decipher a code or cipher, the information becomes legible to the player. The use of these methods in escape room games allows for the information needed for the player to escape to be present in the room but still difficult to gain. This one way the set up provides a challenge that makes these escape room so much fun. From experience there is an exhilaration of solving a cipher to gain the information or code that is needed to move just a bit closer to escaping the room before time runs out.

This example shows one-way escape rooms will use ciphers, to provide the code for unlocking a lock. When the player decodes the four strings of symbols the answers would be the

directions and the order the lock's button needed to be pushed to make it open. Escape rooms will also use them to give directions about how to solve a puzzle or indicate where the players should check next for a piece of the puzzle.

Some of the easier classical ciphers that were talked about previously such as the simple substitution ciphers using symbols to represent letters, the Ceaser cipher, the simple columnar transposition cipher, and a diagrammatic cipher are all candidates for appearing in Escape rooms. This is because they are not difficult or time consuming to solve when one has the answer. This is done for a very specific reason. Escape rooms are designed so they are possible to be completed in the time allotted and not drive the player to frustration and aggravation. This is done by either providing the key to the cipher within the room or clues that will show the player how to construct one themselves. These clues or key must be present otherwise players will spend their time looking for the information and become irritated when it is not able to be found.³⁹ Good escape rooms will not frustrate a player because they are too difficult to solve in the time given. At the same time, they are made to be challenging as there is no enjoyment in something that is too easy. It is in this balance ciphers and codes must be carefully chosen and presented to the player.

Complex ciphers such as the double transposition cipher or the Vigenère Cipher would take too long to complete even if the players were told exactly how to solve it, as they only have 60 minutes to escape and solve the other puzzles. Puzzles like that would take longer than five minutes to solve. Five minutes is the golden rule because any longer and being stuck on the same puzzle reduces the excitement of the game for the players and it creates a bottle neck preventing the game from moving forward as only one player is needed to solve it. Other players would be standing around waiting.⁴⁰ Therefore, simple ciphers like the ones listed above

³⁹ Pedersen, Fred. "101 Best Escape Room Puzzle Ideas". *Now Escape*. March 18, 2016. <https://nowescape.com/blog/101-best-puzzle-ideas-for-escape-rooms/>

⁴⁰ Errol. "13 Rules for Escape Room Puzzle Design". *The Codex*. August 15, 2018. https://thecodex.ca/13-rules-for-escape-room-puzzle-design/#Rule_7_A_Puzzle_Should_Not_Take_

are used. They take very little time to decipher with the key and clues can be given to indicate how to assemble the cipher themselves. This serves two purposes one it guides the players by being strait forward and unambiguous as players will become frustrated by puzzles that make them guess or iterate possible solutions and waist precious time.⁴¹ If they have to guess they may go down the wrong path and remain stuck on the puzzle for the rest of the game. No one would have fun with that. Simple puzzles also allows the players to progress and set them up for other challenges in the room while giving them the feeling of success to drive them forward. Nothing is more frustrating then trying to figure out how to move forward but not have any progress because the players do not have enough information.

Codes follow the same rules of thumb. They must be unambiguous and take no more than five minutes. The difference is that Codes must have a code book provided as a player can not be expected to figure out what the code words mean on their own. That would be impossible in the context of the game. The codes provide an alternative way to hide information in plain sight as they could be apart of a letter found in a room. By finding a code book that is hidden in the room the players would be able to progress. Codes and ciphers make it possible to withhold information until a time when players need it by hiding the code book or key in a locked box they have to open first by solving another puzzle.

More_than_5_minutes_to_Complete

⁴¹ Ibid

5

DESIGNING ESCAPE ROOMS



1

WHAT IS AN ESCAPE ROOM?

An escape room is a game where a group of players are placed in a room or a series of rooms and must escape by achieving a goal. To do this, the players must find clues and solve a series of puzzles or tasks within a set time frame. It is a cooperative live-action game where a group consists of two to ten players. The size of the group participating can vary based on the size of the room and the number of puzzles and tasks in it. Many games require at least two players to participate, so the players have a chance to succeed. That is

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because there is too much for one person to complete in the time allotted. Some rooms require a minimum of three or four players due to that reason.

Inside the room, there are a series of locks on objects such as desk drawers, boxes, doors, cabinets, and more. The answers to the puzzles scattered around the room provide codes or words to unlock the numerous locks. That controls the flow of information throughout the game. Placed inside the box, closet, or drawer will be either be another puzzle or a key needed to access another area of the game. There may also be information provided inside that will help solve another puzzle in that room.

Many escape rooms are themed. These rooms are ornately decorated, with theme-related props. These props are often incorporated into the puzzles making it an immersive and narrative experience. In one escape room, the goal is to search a cabin to find the hidden gemstones of a billionaire. The room furnished like a fishing cabin, had displays of mounted fish, a large tackle box against a wall, and a dining table in the middle of the room. All of these elements contained parts that were a part of a puzzle.

When a player goes into an escape room, whether it is their first time or twentieth, the game master, the person running the game, will state the goal of the game, set the scenario, and go over the rules before starting the players. Then the players are then led into the escape room, and the door is closed, starting the game. The closed-door will remain unlocked in case an emergency arises. The timer starts, and the players are free to explore the room and its contents. Usually, players have sixty minutes to complete the game and 'escape'. Sometimes the game master will give the players a few minutes extra time if they are either very close to completing the room and no one scheduled in the next time slot. This person will guide players by providing hints if they are struggling to move forward.

The goal to escape the room can vary based on the game. No matter the task, there are two kinds of objectives. Either it is unlocking a door, or it is retrieving an object before time runs out. In narrative games, the themes that have a goal of unlocking a door include but are not

limited to escaping a prison cell, a hospital, or laboratory. The other narrative games end when players retrieve a prop. The storylines for these games include finding a cure during the zombie apocalypse, stealing jewels from a millionaire, or finding evidence of a plot to overthrow a queen.

DESIGNING AN ESCAPE ROOM

There are many kinds of escape rooms. There are in-person games where players are physically in a room. There are also mobile and video games which create the space digitally. Finally, there are board games that create the illusion of viewing a room and its contents through paper diagrams and artifacts. Despite the different methods used to build the game, they have similar aspects that need consideration when being designed. There is a formula that leads to a successful product. All guidelines for making a great escape game are for live-action escape rooms. However, many of these apply no matter the format. There are a few exceptions, based on the format of the game, which will be covered later.

The first step to creating an escape game is to choose a theme. It must be carefully chosen, based upon the target audience as it must be interesting for them.² For example, young players would not be interested in playing a game based on medieval England. They would be more interested in a fantasy world or Batman themed escape room. The theme also helps in creating a story for the game as it narrows down what can be done. If the room is fantasy themed the stories must revolve around that world. For example, the story may be that a guild member hid a dragon egg in a castle. By picking a theme limits all the possibilities that exist by sticking to one topic. That way the game creators are not overwhelmed trying to think of all the what-ifs.

The next step is to create a story for the game. The story serves many purposes. It guides the designer through the rest of the process as it provides a framework for the entire

² Lock Paper Scissors Publishing. "Blueprint for Crafting your first DIY Escape Room". *Lock Paper Scissors*. Date Accessed November 27, 2020. <https://lockpaperscissors.co/escape-room-design-blueprint/>

game. While drafting the story, there must be an objective created. That is the reason players feel like they want to solve the room.³ The objective is equally important as the theme because if it does not fit the story, it will not make sense for players.⁴ The theme informs the story, objective, and consequence. Going back to the fantasy theme, the objective may be that the players must find the dragon egg before time runs out. If they do not, the egg will hatch, and the players will be expelled from their guild. Participants will get caught up in the story and trying to solve all the puzzles to get to the egg, making it a more enjoyable experience than just solving puzzles for no apparent reason.

That brings up another reason the story of the game is important to the game. The story becomes a guideline when creating the puzzles. Escape room designers will make lists of artifacts that could appear in the room that would look natural and fit the theme.⁵ These will later



*Phantom Bridge Escape Room*⁷

be tied to the puzzles that are created.⁶ The artifacts must fit the theme so it feels cohesive instead of just being thrown together at random. That means that they utilize props that fit the aesthetic of the room. You would find

⁶ Ibid

⁷ *Princess Introduces Phantom Bridge Escape Room*. July, 22, 2019. Photograph. Travel Press. <https://www.travelpress.com/princess-introduces-phantom-bridge-escape-room/#.X8akfrmSk2w>

props that fit into the fantasy world, such as lists of magical herbs, bottles of unicorn teats, or a wand. They would not have items like computers or cellphones. These artifacts are important as they provide places to hide the information needed for codes to unlock the locks in the room without breaking the immersion.

When creating the story, it must have a beginning, middle, and end. This provides a format for the game. It sets up what the players were doing on a normal day and then details a scenario that happens that leads them into this game. Then it outlines what the players must do to get to the end. Maybe players must get through three different rooms by performing three tasks.⁸ The written outline helps the designers know what will introduce the game, narrow down what will be in each room, and how the artifacts are combined with puzzles. With the fantasy example, in the first room, the players would need to place the objects that belonged to the heads of the guild next to the respective statues. As puzzles are solved, items are found along with notes that state which statue they go with. That allows for a room and how the items will be used to be planned before building it.



*Jenga Blocks.*⁹

The next step is to come up with the puzzles. That is one of the most difficult parts because there is a lot to consider and a lot to avoid. When making the puzzles, the designer must think about how they can direct players without telling them what to do, how to solve

it and make sure it all matches the theme.¹⁰ A clue or a puzzle that appears a cellphone would

⁹ Ketut Subiyanto. *Set of wooden blocks for jenga game*. Photograph. May 17, 2020. 5922px x 3673px.

Pexels. <https://www.pexels.com/photo/set-of-wooden-blocks-for-jenga-game-4473494/>

¹⁰ Errol. "13 Rules for Escape Room Puzzle Design"

not work thematically in the proposed scenario. That means the cell phone would have to be replaced with a notebook or a scrap of paper. One way they may direct the players is by providing context clues through proximity or providing directions through riddles and hints around the room. There may be signs or messages that indicate an object in the room should be interacted with, but it can not explicitly tell a player what to do. For example, players decode a message prompting them to look at a map on the wall. That message may show a diagram of the map with a corner highlighted. The players will go directly to that map to figure out what they are missing. In this way, players have the information they need to progress to the next puzzle, but they must figure out how to interpret the directions.

Another difficult aspect of designing a game is that the creator of the puzzles must ask himself/herself, are the puzzles possible to solve, and are they fair?¹¹ The good news is there is a checklist to make sure they are. When evaluating the puzzles is all the necessary information supplied. That means players have all the information needed to come up with the answer without having to guess at anything. That may be information as simple as how to format a date if it is the code to a lock. Is it month/ day/ year or is it year/ month/ day?¹² One escape room that I participated in gave me three numbers for a lock. It was aggravating trying to think of all the different combinations and go through them until I came up with the right one. It felt as though it was there to waste time and that the creators just became too lazy to give anyone playing a clue. Every combination I tried, left me more aggravated because it felt like they were asking me to do too much on one of the easiest puzzles in the room. It was also creating a bottleneck in the game, preventing my teammate from working on another puzzle.

A similar rule is that puzzles cannot have more than one answer. This will lead to confusion and sending players down the wrong path. For example, if a puzzle provides an anagram that can read either flesh or shelf, it may either be a code for a lock or indicate the players

¹¹ Ibid

¹² Ibid

should examine any shelves in the room.¹³ The goal of a puzzle is to help players move forward with the game, not to make them lose because they were looking at the wrong thing. Puzzles can be challenging without second-guessing if the letters or numbers are in the correct order. What may seem like a simple puzzle when building it, can take a while for people to figure it out.

Another rule to follow when designing the puzzles is the puzzle can not be deceptive. That can mean many things. While a puzzle must have all the information to solve it, information that hinders or misleads the players must not be present. That means no false clues and no irrelevant puzzles.¹⁴ Puzzles are already hard enough when the clock is ticking away. It would be impossible to win if you can't quite figure out which puzzles or clues are real or fake. If there are more puzzle pieces than a player needs, then it makes them feel like they are doing something wrong. As a result, players will not trust anything in that room, and they will curse at the creators. An example of excess information is having multiple ways to solve a single puzzle. It creates too many questions about what is important and what is repeat information.

Live-action escape rooms are extremely interactive, so any creators must keep in mind that anything in the room not bolted down will be moved and touched. Keeping that in mind when evaluating the puzzle, the designers must make sure that even if a piece is moved or used, it can be reset and won. If a piece is important do not make it possible to lose, so there is no way to progress further. Ways to set a puzzle up so it is resettable is to have an arrow pointing the way an object must face or have an outline of the object that should remain in a certain spot. No one will remember how an object was placed in the rush to examine everything in the room.¹⁵ Providing these simple guides allows for everything can be explored and handled and not cause them to lose the game due to not knowing how an object goes. Nothing would be more frustrating them losing a game because you move one important object to look under it. It also prevents players from being hesitant about touching or moving things. That hesitation

13 Ibid

14 Ibid

15 Ibid

would break the immersion of the game and waste time. Feeling uncertain about how to do something and not being able to ask for help would prevent the game from being enjoyable.

Finally, puzzles should not take more than five minutes to solve. If it is a complicated and tedious puzzle, it should have explicit directions on how to go about solving the puzzle.¹⁶ Players would not want to put 20 numbers in a table twice if they got it wrong the first time. Nothing is more frustrating than spending a ton of time trying to do something then realizing you did it wrong. By providing directions on how to do something, the creator is not giving away the answer but saving a ton of aggravation and preventing dissatisfied or irritated players from giving bad reviews.

Despite all of that, there are a lot of fun things to consider when designing the puzzles. It is a chance for designers to think out of the box. In escape rooms, there will be people who have never done one before or those who are veteran players. The veterans want puzzles they



Puzzle Paper.¹⁸

have never seen before¹⁷ as the same thing gets old after a while. Players are looking for new challenges to try their wits on. The fun part of designing puzzles is coming up with a blend of puzzles that none of them have seen before and so they leave thinking that was amazing. There is always going to be overlap with the different ways the

17 Pedersen. "101 Best Escape Room Puzzle Ideas".

18 Matthias Zomer. *Person Writing on Puzzle & Win Paper*. Photograph. November 08, 2016. 4468px x 2513px. Pexels. <https://www.pexels.com/photo/person-writing-on-puzzle-win-paper-233221/>

puzzles are designed. However, it just provides a foundation where puzzles can improve on what came before. That is not discouraging the use of some of the typical puzzles, but those should not be the only ones. Here is where the kind of escape room will determine what is possible to use. It is important to consider whether it is physical, digital, a boxed game as what is possible is restricted by the medium.

The most popular kind of puzzle is one that hides the pieces around the room, making the player search. Such as hiding a scrap of paper under a couch cushion. The second are puzzles that require teamwork. They require one person to act under the direction of their partner as they are unable to see the results of their actions.¹⁹ A clever example of this appeared in an H.P. Lovecraft themed escape room. One player had to get into a coffin and shut the lid to read the key to a code only visible when there was no light. They would then tell the other players what letters the symbols matched.

Searching for hidden clues is possible to do in physical and video game escape rooms as the person or avatar can search the space. However, that not possible with a board game as the playing surface is a two-dimensional image. That means that the creator of the game must come up with another way to provide the information by using a puzzle that fits the medium used. If the information that was supposed to be hidden is the key to solving a cipher, then instead of concealing the information the game board can include it as a small part of the image. It could appear on one wall of the room diagram, looking like someone scratched in M=3 to indicate the key for a cipher that will help solve one of the puzzles.

With puzzles that require teamwork, it applies to only in-person escape rooms because in video games as they are for solo players. The example of the coffin cipher is not possible to recreate in a boxed escape room. Everything has to fit on cards, so it is impossible to set up a puzzle that cannot be done by one person.

Physical escape rooms and virtual escape rooms can have many of the same puzzles

¹⁹ Ibid

as the avatar can interact with the world around them in the same way as life. The exception is for the three other senses that cannot be used in a virtual world such as touch, smell, and taste. While around one to five percent of escape rooms use puzzles that utilize the four other senses aside from sight, they are used.²⁰ In one escape room I participated in, the soundtrack used different instruments that correlated to instruments hung on the wall of a previous room. The instruments had numbers, so when we had the pattern down, we were able to pinpoint what the code was. Sound is possible to use in a videogame as the game soundtrack can provide that clue. However, the person is unable to feel, smell, or taste anything in the virtual world.

Physical, virtual, and boxed escape games can present many similar kinds of puzzles. However, when designing a boxed game, it must be considered how the player will be presented with the puzzle and the information they need to solve it. Unlike physical and virtual escape rooms where the whole room can be used and designed to link puzzles through their placement or when players get access to them, everything had to fit in one box. As a result, the creator must create ways to control how the player interacts with the information from first opening the box to how they transition between the puzzles. Rules are a great way to do that, but it must be logical and intuitive. Otherwise, the players will become frustrated and spend all their time trying to read the directions about what they do next. By having simple and repetitive gameplay, it becomes easier for players to understand how to play and focus more on the game itself. For example, the players are instructed to open the first envelope and solve all the clues. Then when they succeed in getting the right code from those puzzles, they can move on and repeat the process.

If the boxed escape room has stages, the puzzles must be separated so the players do not become confused about what they are solving and when they are supposed to so the narrative can work. Unlike an escape room where doors and locks prevent players from getting ahead of themselves, the boxed games must consider how information is hidden and linked

²⁰ Ibid

to puzzles in specific stages. Rules can be used to indicate what information can be seen and what cannot when first starting the game. However, the game must be intuitive beyond written rules. One way a boxed escape game has accomplished this by separating the clues into three envelopes each marked with a number 1-3 indicating what 'room' it represented. On the envelope, it reminded players not to open it until the previous 'room' is completed successfully.

Another challenge about a boxed game is the puzzles must adapt to a more condensed format when it's not a physical or virtual set up due to being designed to be stored in a box. In these boxed games, the puzzles and all the information to solve them appear on cards. That means any puzzles such as putting together an object, mazes, and shape manipulation²¹ must become flat versions of themselves. Also if something needs to be assembled, there must be indications that the parts must be cut out and assembled.

After assembling a bare-bones game. The game must be beta tested. That is when people play through the game to see what works and what needs tweaks before releasing the games. When the game is played the designers can see where the players have issues understanding how to proceed through the game, solving puzzles, or if the players start playing the game in a completely different way than expected.²² That will indicate to the game creators where they had made elements ambiguous or unclear. If players become frustrated or give up partway through the game, it indicates that it may be too difficult or unclear. By playing with a group who never experienced the game, it will provide a good idea of how players will react to it in their own homes, what players enjoy and if the game is possible to complete.

²¹ Ibid

²² Errol. "13 Rules for Escape Room Puzzle Design"

6

MODERN ESCAPE ROOMS



THEME OF ESCAPE

It was 2007 in Kyoto, Japan when the first room was created by SCRAP, a publishing company.² The founder of the company Takao Kato developed the idea of a live-action

¹ *Dubrovnik Escape Room*. Date Accessed November 28, 2020. 750 x 450 Photograph. The Dubrovnik Times. <https://www.thedubrovniktimes.com/news/dubrovnik/item/8888-necessity-is-the-mother-of-invention-welcome-to-game-of-thrones-inspired-virtual-escape-room>

² NM Escape Room. "A Little History—How Did Escape Room Scenarios Originate?" *New Mexico Escape Room*. Date Accessed November 27, 2020. <https://nmescaperoom.com/a-little-history-how-did-escape-room-scenarios-originate/>

game scenario after the first escape room videogame, *The Crimson Room*, was made in 2004.³ His idea was born after he overheard a girl express interest in playing online escape rooms.⁴ As a result, Kato saw an opportunity to bring a never-before-seen experience to the people of Kyoto. Due to the great reception from the public, the games started appearing in different countries. This kind of game was popular because it was expanding upon the theme of escape by utilizing it in a new and immersive way.

Some people gravitate towards the escape themed videogames because they offer a different experience from combat-heavy games or racing games. That is because it tests their thinking skills, not their reflexes. All escape games require players to solve puzzles and deduce how to use objects to get from one stage of the game to the next.⁵ That excites players because of the unique challenges, goals, and storylines that engage them. The live escape rooms utilize and expand upon the theme of escape by making a game that is hands-on, interactive, and immersive.

In live-action games, the players interact with their surroundings instead of through an avatar on a screen. As a result, it creates immersive gameplay. The goal and story feel more authentic and compelling in this situation. Players feel like they are searching a real cabin for hidden jewels, and if they do not escape in time, the homeowner will appear and catch them in the act. This sense of immersion comes from the game interacting with the players' five senses as they examine the room around them. The theme of escape is engaging to players because the player desires to see if they can escape proving they are smart enough to figure out all the puzzles and clues. The proof is evident based on the demand for escape room games. Today

³ Lock Academy "A BRIEF HISTORY OF LIVE ESCAPE GAMES : VIDEO GAMES WITH REAL MISSIONS". *Lock Academy*. Date Accessed November 27, 2020. <https://lockacademy.com/en/history-and-origin-of-escape-games/>

⁴ Kato, Takao "Thoughts on Real Escape Game". *REAL ESCAPE GAME*. Date Accessed November 27, 2020. <https://realescapegame.com/thoughts-reg/>

⁵ Leclair, Dave. "7 Cerebral Video Games to Play If You Like Escape Rooms". *whatNerd*. April 23, 2019. <https://whatnerd.com/video-games-if-into-escape-rooms/>

forty-nine countries have escape rooms in them. Many of those countries have an amount in the double or triple digits. For example, Poland had one hundred and thirty-five escape rooms, Israel has seventy-seven, and Bulgaria has twenty-four.⁶ That indicates that the experience intrigues people, so they try out the game. It also means that many become repeat players and search out other games near them. If they did not, then there would not be such high demand. The theme excites people so much that they want to play again and again. While the theme is a large part of why people play, the game has appeal because so well designed.

The game has always been well designed. That is evidenced by how gameplay has not changed from the first game. It is created to be easy to understand, fun, and versatile. The rules of the game are simple and easy to grasp. Use the clues to solve the puzzles, do not break anything or destroy the room, the game is over when time runs out, and for boxed escape games, do not look ahead at the other materials. These are the rules for every escape game as they tell the players how to interact with the room. The rest of the game is very intuitive as it is relying on the deductions of the party playing to propel the game forward. The good thing about simple directions is they are easy to remember and follow. After hearing them, players do not have to ask for clarification about how to interact with the room. That allows for freedom moment as they are not hindered, wondering what is allowed.

The game's immersive design makes it a fun experience as it utilizes the players and their surroundings. SCRAP's Live escape games were group activities held in bars and clubs. Just like the escape rooms of today, they had messages written on the walls, hidden objects, and puzzles that need to be solved within sixty minutes to win the game.⁷ The clues surrounding the players would pique their interest because they start to wonder what they mean. The puz-

⁶ "Choose country". *World of Escapes*. Date Accessed November 27, 2020. <https://worldofescapes.com/countries>

⁷ Corkill, Edan. "Real Escape Game brings its creator's wonderment to life". *The Japan Times*. December 20, 2009. <https://www.japantimes.co.jp/life/2009/12/20/to-be-sorted/real-escape-game-brings-its-creators-wonderment-to-life/#.XvTX8W5FxC>

zles on the wall also serve to make players more aware of their surroundings. That makes them feel like they are in the midst of an adventure as they are deciphering clues.

The games often have a story behind them, such as finding the hidden cure for the zombie apocalypse. The creators designed the room to look like a lab. They placed bottles of mysterious substances on the wall and a desk with scientific instruments. Players would find a black-light flashlight in the room, and when shone on the bottles, it revealed numbers to unlock a door. This interactive and visual gameplay made discovering hidden clues exciting and rewarding. It felt as though it was a real laboratory that someone hid clues in because they did not want the antidote falling into the wrong hands. This story lent itself to making it a fun and immersive experience, as it lends context to the room, making it feel like a movie scene that came to life.

Overall gameplay has changed slightly. Once sharing the space with another business, live escape rooms now have floors or office space reserved for their use. As they are not sharing the space, the rooms can have a more elaborate setup. That may mean they have wall to wall decorations, hidden doors in the walls, and magnetic locks built into the room. Those fea-



Zombie room 1986.⁸

tures would not be possible in a temporary set up, like a bar. A permanent and independent location allows for more elaborate puzzles to be created as the company can do construction to alter the room or incorporate technology into the walls.

⁸ Escape Hotel Hollywood. *Zombie Room 1986*. Photograph. December 23, 2019 1600 x 1200. Discover Los Angeles. <https://www.discoverlosangeles.com/things-to-do/break-out-of-the-best-escape-rooms-in-los-angeles>

In one of the first games done by Kato, the answers had to be written down on a sheet of paper. In a newspaper article, the author recounts his experience in an early escape room. There were eighteen players separated into four groups to play the game. Each group was working to solve the puzzles on their own, and only a few groups were able to succeed before time ran out. It was set up as a classroom where a 'teacher' oversaw the room. The players would hand their answers to this person to see if they were correct and get a clue or object related to the next puzzle.⁹ Today there are a few public rooms set up so anyone who wants to can join in, but many are private rooms. That is when a group can book a room so they are the only ones in there. That is different from the original room as it allows for a choice of different gaming experiences. Some people enjoy working with strangers while others prefer just working with a small group of familiar people. Another difference is the rooms that exist today facilitate teamwork between all participants. Instead of submitting answers as individual groups, all players must agree on an answer.

Another difference is that modern rooms use both combination, direction, and word locks to verify all answers. That provides a smoother transition through gameplay. Players can use the locks to check answers as often and as much as they want. That takes out the need to write down an answer and wait for the actor to check it. Using locks, one player can check within seconds if the answer is correct while other players examine the room for more puzzles.

Finally, the escape room game has evolved into a boxed version. That allows the escape room to make its way into consumers' homes. These have a similar design to the live escape games as they have the same gameplay and puzzle material. However, it is not presented in the same way. Instead of having a physical room to examine, there are images of a room. Instead of finding puzzle pieces, all the clues are all on paper, enclosed in an envelope or sleeve. For example, a cut-out made to look like a phone charger may have a code or string of symbols on it that when deciphered will prompt the player to open another envelope and see a printout

⁹ Ibid

of a phone's text messages. With this set up the rules and gameplay do not change much. The only difference is not having room to interact with and a limitation of the tasks the players can perform. They may not be able to search the room for clues, but they can still figure out how to put them together in the same manner. Overall the change in the medium does not severely affect gameplay, its ability to pass on the information needed to solve the puzzles, or its enjoyability.

When playing any kind of escape game, it becomes apparent that rooms are a one-time game. A participant learns where all the items are and how the clues solve the puzzles. Trying to play the same escape room a second time takes away the need for problem-solving, rendering them pointless. The games take an hour to play. That means it is possible to go through several over a year or even a month. After the local live escape rooms have been exhausted, it becomes a challenge to find a game close by. While there is a decent selection online, it raises the same issue as the number is finite. To get around that issue, game masters would have to have new never-before-seen puzzles waiting for any return players, and that is impractical. In-person escape rooms cannot create multiple puzzles and switch them out easily as puzzles are built into elements in the room. Trying to change the décor and layout of the room on short notice is impossible. The games are fifteen minutes apart, not allowing for the moving of any furniture or items. It also introduces the possibility of human error when setting up the room.

With board games, they are designed and released. That means they cannot be changed or expanded after release. The images have specific clues attached to them, and making another game from it means creating new pieces. These board games often have elements that are marked up or destroyed during play. Some pieces are cut out or folded to get the number or letter that is a part of the solution. That means the game can not be given to someone else. The way companies get around this is by having a variety of games in one box. This way players experience a new game every time. However, that does not count a replayable as they are completely different rooms with different themes. It is no different than purchasing different games as they have no cohesive element linking them together.

The games do not have a high turnover rate as the company will have them running for over a couple of years. An escape room organization in Chicago has three rooms open as of 2020 and has three more planned for the future.¹⁰ They do not appear to be shutting down the other rooms, merely expanding the selection. The explanation for just expanding instead of turning over the rooms is that it takes a long time to design and test the games. By leaving the old rooms open, it allows new customers to try it even if it takes a few months or years for them to find it. The longer it runs, the more people will discover it and play it. It also serves as a promotion. If the players like it, then they will return to play the other rooms the company has open. They would also recommend the rooms they have tried to their friends. Therefore, it is logical to have multiple games running at once to keep customers coming back.

With the first live escape game, it was the only one that existed. As a result, the players would have to wait for the next one that was held by Live Escape Games. It shows that once the rooms took off the companies did not want to leave customers waiting as they may not check back when a new game opened, so the franchise evolved to have multiple games to choose from.

TOURISM MARKET

Time and time again, people have watched fads rise and fall from memes, to clothing, to music to activities. The popularity of an item or activity is a fickle thing. Sometimes an object or activity is popular for a time before it fades back into obscurity. Often it is because it becomes mainstream but never changes. That means it ceases to become interesting, as there is nothing new to discover. However, there are other instances where its popularity opens a whole new market, and it becomes a part of mainstream culture. That is because it has room to expand and grow, adding aspects that have never been seen before. Escape rooms fall into this category. ¹⁰ "FAQ" means "Frequently Asked Questions". *Lock Chicago*. Date Accessed November 27, 2020.

<https://www.lockedchicago.com/faq>

egory. They are so successful in the tourism industry due to a cult following that sustains it, a well-crafted product, and changes to remain in the mainstream culture.

For the past few years, escape rooms have gained such popularity that a great many people have participated in one room if not multiple. The market has expanded as a result of this popularity due to the increased demand for new rooms. As the games are not repeatable new rooms are needed for those who want to continue to play. The industry experienced a boom as “there were only 22 escape rooms in the U.S. in 2014. By the summer of 2017, [it was] calculated [to be] just under 2,000 escape room facilities”.¹¹ The United States provides a glimpse of how quickly a market can grow and expand in just a few years due to an eager market and increased demand. The number of escape room facilities around the country was key in growing the base of consumers and the cult following it has. With so many facilities in the United States, it made the experience accessible to people all over the country. That accessibility lends itself to the tourism industry. Players would be able to play in new escape rooms when they traveled to new states on vacation.

It is “indicate[d] that 26% of the demand corresponds to tourists.”¹² It makes sense for two reasons. The first is that the local people who play in the escape room can only play once, but they stay in the area for years if not their entire lives. Tourist populations change and turn over, giving the franchises a refreshed market. The second reason is that people may be more likely to try new experiences on vacation. They may try an escape room for the first time. Tourists are breaking away from their routine and are there to see things they normally do not. An escape room would fit that new experience they would not try otherwise.

Another reason people may participate while they are on vacation is that it is something

11 Mallenbaum, Carly. “Why escape rooms have a lock on the U.S.” *USA Today*. May 7, 2018. <https://www.usatoday.com/story/life/people/2018/04/25/escape-rooms-trend-us/468181002/>

12 Lama, Arsenio Villar. “MILLENNIAL LEISURE AND TOURISM: THE RISE OF ESCAPE ROOMS.” *Cuadernos De Turismo* (41) (Jan 2018): 743-746. <https://ccsu.idm.oclc.org/login?url=https://www-proquest-com.ccsu.idm.oclc.org/docview/2068958273?accountid=9970>. p 745

that is not time-consuming. As it can fit in at any point during the day, it can be a fun group event when there is downtime. It is like miniature golf. People often play it on vacation as it is a group activity when they are between events. It is not a big-time commitment, meaning it can be a spur of the moment decision. Escape rooms fit that description because you are limited to an hour to play. An hour is a very small portion of time compared to tours that can take a few hours.

The bigger businesses are located on the main streets, so they are more likely to be encountered by people walking by.¹³ By being in the main flow of traffic, it is more likely to be noticed and attract tourists. Escape rooms can be a spur of the moment activity or planned out in advance, but it requires knowing about them. For many tourists, they are not actively searching for escape rooms. Therefore people must be made aware of the existence of the escape room to prompt them to research it or give it a try. Tourists window-shop or checking out the local town during their trip. That means they are more likely to come across these rooms when they are located in popular tourist areas. That lends itself to a successful business as they get the sale of the ticket of curious tourists who want to try the experience. They may also get a repeat



customer if the people liked the experience. However, the reason the market expanded so much is that they also get tourists who are seeking out new escape room experiences.

Tourists who have experience with escape rooms will look for new escape

*Large escape rooms are often on mainstreet.*¹⁴

provides new never experienced rooms. Vacation often brings people to places that they would

14 Film Bros. *Photography of Roadway With Parked Cars*. Photograph. January 24, 2018. 3504px x 2182px Nelson, New Zealand <https://www.pexels.com/photo/photography-of-roadway-with-parked-cars-824877/>

not travel to regularly. That opens up escape room experiences that were previously inaccessible. It was reported that the presence of escape rooms impacted the decision-making of escape room fans. They would go to locations that had escape rooms nearby. The trips were for other reasons such as vacation at the beach, but the escape room was a lure for the tourists.¹⁵ If people make decisions between locations to travel to based on the presence of escape rooms, it indicates how these are starting to become a tourist attraction in themselves. To further reinforce how escape rooms influence tourism, a survey done “of users of the Escape Room Lover blog (sample size 1,100), indicates that half include this activity in their travel plans, sometimes (29%) or always (21%)”.¹⁶ Fifty percent of escape room lovers on this one site incorporate this activity into whatever trip they are going on. That means that out of the users surveyed, over five hundred people search for this activity on trips. It shows that these rooms can boost tourism in areas because people are gravitating towards escape rooms as if they were tourist attractions in themselves. That was one blog, so this number could be much larger as not everyone who loves escape rooms would be part of that blog. It indicates that the cult following helps sustain it as a tourist industry.

Kickstarter also provides evidence that the cult following has built and sustained the market. Many different escape room projects appear on the Kickstarter website. The creators of the projects are asking for people to donate money to help launch the project. They may be as small as raising funds to add the finishing touches to a room or as large as building the room from scratch. It is evident from this site that the fan base is there to support the market and the creation of more rooms. Scanning the different projects shows many are fully funded or well beyond their initial goal. With any Kickstarter project, the various donation tiers give you different rewards. However, most of those rewards are in the form of game vouchers or free tickets to the rooms. That shows that people are excited to see these new ideas come to reality to play the

¹⁵ Ibid

¹⁶ Ibid p 475

new room. With these Kickstarter pages, the donors are paying in advance to play the room.

One of the projects that stood out was a project for a King Arthur themed room. To get this project to get off the ground, they had a \$3,500 goal. With the support of thirty-one backers, they raised \$4,279. The group that was raising the money had several tiers for pledges. The highest pledge amount is for \$500 or over. The rewards for this tier were: having a name carved on a round table chair, a private room for the current escape room, and the Camelot room. There were only three spots for that tier, and they were all taken. Two people pledged \$250 or more and nine contributed \$150 or more. Both donation tiers received a private reservation for the existing room and the one being created.¹⁷ That is over two thousand dollars from less than half of the backers. Taking this as an example for many of the projects that go through Kickstarter, it shows how, without this fan base, many projects from small businesses would not get off the ground. These smaller businesses add diversity to the market, and without them, the choices would be far more limited. The reason the fanbase is so supportive because escape rooms are a well-crafted product that keeps evolving.

An escape room is an experience that is like stepping into a story or video game. It sets up a storyline where players can work together and use the clues located in the room to solve puzzles to try to save the world or steal jewels in an hour. If they have not solved all the puzzles when time runs out, then they fail. It may seem like this would not be as popular as it is. However, it is described as a mainstream activity that anyone older than six can enjoy as excessive smarts is not required. The target audience is identified to be anyone who likes immersing themselves in a movie.¹⁸ Escape rooms put players in a position where it feels like they are amid a make or break moment of a movie. This will appeal to anyone who enjoys a thrill. Unlike a

¹⁷ Puzzle Quest. “Puzzle Quest Escape Room #2 : Excalibur - Saving Camelot”. *Kickstarter*. May 6, 2019. <https://www.kickstarter.com/projects/puzzlequest/puzzle-quest-escape-room-2-excalibur-saving-camelot?ref=discovery&term=Escape%20room>

¹⁸ Tcholakian, Danielle. “Why Is America Obsessed With Escape Rooms?”. *InsideHook*. June 26, 2019. <https://www.insidehook.com/article/arts-entertainment/why-america-is-obsessed-with-escape-rooms>

movie, or story the player is in control of the progress of the game. Decisions the players make will either win or lose the game. That makes it feel like they are apart of an action movie or playing out a story. The room looks like it came from the set of a movie, which makes an immersive and exciting experience that can not be gotten elsewhere.

Another reason it is well designed is that it is accessible to everyone. Even though it is labeled as wholesome and nerdy fun, it does not require excessive smarts.¹⁹ That means anyone at any age can participate. The puzzles only require a basic education but a lot of creative thinking. The gameplay is mostly players trying out different ideas about how to solve a puzzle. For example, players discover that the words not circled in a word search create a sentence telling them what will unlock the laptop in the room. When someone figures out something that moves the whole team closer to success the excitement is contagious. It makes players feel like they are clever and will succeed in escaping the room.

Players have commented on their experience how even though they failed in escaping the room they had a lot of fun and would try it again.²⁰ They have that reaction because an experience is one of a kind. The experience of going through an escape room is not readily available within a screen. It will not translate to a video game as there is none of the sensory input. In a live escape room, players get to touch, see and hear the surrounding room. A video game only provides sight and sound, and even that is artificial. With a video game, there are no consequences. Players can restart the game if they need to, and there is no ticking clock. The game can be picked up and put down at any point, making any time constraints meaningless. That means players can not get the same excitement from a video game as a live escape room create the illusion of staking everything on the line. It was stated that “[y]our mission to save the world from aliens or knock down the Berlin Wall could flop, and it’s these “real” stakes that may

¹⁹ Ibid

²⁰ Vartan, Starre “Escape rooms: Why people flock to these “tourist traps””. *CNN Travel*. August 30, 2017. <https://www.cnn.com/travel/article/escape-rooms-popular/index.html>.

be what keeps people coming back for more”.²¹ You can try it again if you fail by rebooking the room, but there is nothing like that first time when you have no idea what awaits you further in the room. That illusion of risk makes it such a popular tourist and recreational activity.

For escape rooms, the highest “[d]emand is as follows: young customers between 21 and 35 years old (80%), who play mainly with friends (53%), families, couples, and co-workers”.²² The largest demographic is younger adults. It makes sense as this is a demographic that is more likely to go out and try new activities. The younger generation primarily goes on vacation to explore instead of relaxing. This means they are more likely to try new activities they come across like escape room than older demographics. These activities provide a chance for them to bond with friends, family, or a significant other.

In contrast, the older demographics are more likely to be busy raising a family, working, or retired and already have their enjoyed pastimes set up. As a result, they are less likely to go out spend over thirty dollars on an activity that they are not familiar with unless invited by someone else. The younger ages are mostly too young to go by themselves, or if they are old enough, they may have other past times that appeal to them more. While these age groups are not the majority of the users it that does not mean the game is not appealing to them.

The reason that it appeals to so many people is that there are many different storylines and levels of difficulty. Therefore it offers something for everyone. New players can choose easier rooms to test the experience out, while experienced players can pick from the more difficult rooms, so they receive a challenge. On top of that, there are so many different storylines that will attract different audiences. Some are horror-themed, which would appeal to some audiences but may be unsuitable for younger ages or those for the faint of heart. Others are more fantastical or loosely based on popular franchises, which would be fun for younger kids or fans of the franchises. With so many options available, it provides a draw for people to try one

²¹ Ibid

²² Lama. “MILLENNIAL LEISURE AND TOURISM: THE RISE OF ESCAPE ROOMS.” P 745

as a new experience. This wide range of games also allows for people to keep playing as game makers to come up with new ideas to make new rooms.

The franchise continues to develop and expand, helping it maintain its popularity as a mainstream activity. These games are limited only by technology, funds, and imagination making them very versatile. That means that they can adapt to make use of anything from the latest technology to simple mechanisms. It is important because this adaptability lets stories come to life in an exciting and immersive way. In an escape room, it is common to see magnets used so when elements are placed in the correct locations, light bulbs light and locks unlock. Pressure plates are also used so players can open hatches or panels by sitting or kneeling on objects. The use of magnetic locks and pressure sensors create a theatrical experience.

Other rooms have adapted their experiences based on recent technology advancements. A few escape rooms have embraced virtual reality and created completely virtual rooms²³. It is due to this advanced technology that it is possible to expand the market to these new experiences. Without it, virtual games would still be only playable on consoles. That shows that the rooms can incorporate innovations to offer new and exciting experiences.

There is no real way to predict what escape rooms will do in the future as that depends on what kind of technology develops. For example, if hologram technology was mass-produced, then it could become a feature element in escape rooms. It could display a message the players need to see. Or it could overlay a panel of buttons to show which ones must be pressed. The importance of this is technology is that it provides different ways for information to be shared with players. It is not important how it is incorporated, but that it would create new options for game designers to integrate clues into a room.

The versatility of escape rooms is important as it maintains their prevalence in mainstream culture. As they adapt, they create new challenges and new ways of delivering exciting

²³ "ESCAPE ROOM TECHNOLOGY". *Quest Factor*. Date Accessed November 27, 2020. <https://questfactor.us/blog/escape-room-technology/>

stories. If the rooms did not adapt, then they would quickly feel outdated. That would lead to people ceasing to participate. New technology opens the door for new effects boosting the showmanship in the room. For example, in rooms today, it is exciting to see a door pop open just because you knelt on something or placed a token in a specific area. It makes the game engrossing as it gives a jolt of surprise and discovery when they occur. It also makes players feel like they are in a movie as these effects seem only to happen in movies or books. That shows how game designers adapted an ordinary room and put the unexpected in it. Going back to the idea of holograms, if created and implemented, then players may get a pleasurable jolt when they interact with something and discover it projects a hologram for them to watch. It would make them feel like they were living a science fiction adventure. That is why the versatility of the rooms is important. The rooms can adapt and change. They use new technology to improve the showmanship of the room, therefore remaining fresh and exciting.

The games are versatile in another way. Recently there has been a significant change in the ways players can access an escape room. All of the live escape rooms are indoors and, due to COVID-19 indoor gatherings are hard to do. For some time, many rooms shut down due to the spread of Covid. As of November 2020, many are up and running again. However, the escape room industry has had to change the conventional setup to minimize the risk of people spreading the virus. Many escape room companies have started hosting virtual games run by a game master on platforms like zoom. That makes the games more accessible to people. There is no longer the need to travel to get to an escape room. That means that a person on the east coast could play a game hosted in California. Another reason this makes the game accessible is that it allows people to play from home. Many people at this time do not feel comfortable in public buildings. The online hosted escape room allows people to get together virtually and participate in the escape room from the comfort of their home. This increased accessibility is important because it keeps the game relevant in a time where most of the group in-person mainstream activities are not possible.

In conclusion, escape rooms are a big hit in the tourism industry because they have a cult following, are well crafted, and are always evolving into something new and exciting. Escape rooms became popular very rapidly, and while they are only able to be played once the concept is so appealing that people who enjoy it will seek them out. As they are such a big hit with tourists, it indicates they can be very successful in tourist areas. Also, the ability draws tourists to areas could be very important to increasing the tourism industries in places that may be struggling.

PERSONAL EXPERIENCE

My first experience was with a traditional escape room in Connecticut. Going in for the first time, I had no idea what to expect. As soon as my partner and I arrived, the game master went over the rules. The rules informed us that while we searched for clues, we could not break or dismantle anything. We were forewarned that there were three rooms we had to get through and that we might have to go back and forth between them to solve all the puzzles. Finally, we learned the story behind the room. We were searching for the laboratory of a scientist for the cure for a plague sweeping the world. We had an hour to find it and escape, or we would also get sick. It was a fun little story to get us excited to solve the puzzles. I found it effective in getting us in the mindset of the scenario as it provided context for the room and a reason to solve it.

Then we walked into the room. The décor of the room was spectacular. The walls looked like there had been substances splashed on them when the lab was abandoned in a hurry. The lights were dim, giving the room the eerie feeling that comes with being alone in a place where you really should not be. All thoughts of the outside world vanished as soon as I stepped through the door. It felt like nothing mattered except finding the clues before time ran out. The excitement came from discovering clues and connecting them to other elements of the room. It felt like an accomplishment that brought us closer to success. This feeling carried through

the entire game as my partner, and I went through the rooms because each lock we unlocked affirmed we were on the right track.

Throughout the game, players may find that they keep glancing at the clock to see how much time is left. The anxiety and the happiness that comes with the success of opening locks and the shrinking time limit adds to the immersive quality of the game. It makes you feel as if you are really in a lab, and the fate of the world is at stake. This immersion in the game experience is attributed to it being a visual and tactile experience. It is a sensory experience as you are handling items, feeling a rush of adrenaline, and the surroundings create the illusion of being in a laboratory.

From my experience in different escape rooms, it has become apparent that the ones that are well-designed start with some puzzles or ciphers that you can easily find the pieces for if you search. So, while it may not be an easy solution, you are not left feeling frustrated at a lack of progress. It is the inability to find all the puzzle pieces that leads to frustration and the inclination to give up. That happened in one game. There were puzzle pieces hidden around the room, and you had to find them and put them together to get a code. All the pieces had been found, except for one. No matter where I looked, I could not find it. It turns out it was in the pocket of a pair of pants folded up in a set of drawers. The player had to think about searching every article of clothing for a little piece of laminated paper. In every other escape room that I have done, the pieces were much easier to find. They were either hidden under objects or in the pocket of the only jacket in the room. Setups like that made the experience more enjoyable, as you could get into a mindset of problem-solving instead of searching for one elusive piece. Overall, if done well, finding hidden clues is an enjoyable experience. It adds to the immersive experience as it gives a chance to interact with the room's props.

Escape rooms change the way you think and perceive your surroundings when you are in the game. You focus on the details of the room, trying to calculate how they will help you. As a result, you lose track of the world outside the room. You are present in the moment, and all that

matters to you is the room. That is because you feel a sense of excitement and dread as the clock starts to tick down. In my experience, it is that reminder of the looming deadline that keeps the mind from straying off task.

Virtual escape rooms have started becoming popular. After playing a few, it is clear that there is no way to replicate the feeling of a live escape room through a computer. Online libraries have put together games where you are given images of maps, ticket stubs, a desk to study so you can try to put together the answers to solve the 'escape room'. One of these games is "The Case of the Missing Tiger" done by the Cotsen Children's Library²⁴. I found it lacking the same kind of excitement that comes with live escape games.

In the game, you start by looking at an image of a messy desk. There are papers, a phone, and books. Clicking on the books and papers open different links that contain images of clues. This gives you the feeling that you are searching for information on a person's desk like you would in an escape room. However, it is not the same. It is more rewarding to have the tactile experience of rifling through journals, desk drawers, and searching under objects. That shows that the experience is unique to the design and set up of having some kind of tactile element and being able to see everything side by side.



²⁵ Cotsen Children's Library and Trustees of Princeton University. *Sherlock's Desk*. 2020. Digital Image. 1280x 960. Google Sites. <https://sites.google.com/view/themissingtiger/home>

7

GAME DEVELOPMENT



THE PROBLEM

It is frustrating to spend ten dollars or more on a board game that only played once. After playing it must be thrown away because the players know the answers. There is no point playing the game as it holds no surprises or challenges. Often the game will require the destruction of materials so you cannot pass it on. Even if the materials remained intact,

¹ *The Escape Game's puzzle-packed board game includes ciphers and puzzles, as well as Cra nium-style charades tasks.* (The Escape Game). March 31, 2020. Photograph. 862 x 575. The Mercury News. <https://www.mercurynews.com/2020/03/31/best-new-board-games-for-those-coronavirus-lockdown-days-and-evenings/>

it would require repackaging all the pieces. The game is designed so clues are held in reserve until certain events happen. These materials are in separate envelopes marked with the instructions to open after an event occurs. Most people would not repackage the game to pass it on, meaning it goes in the trash.

WHAT TO DO ABOUT IT?

The goal is to create an escape room board game that is replayable. This way a minimal amount of materials are thrown away after playing, and the player gets more for their money. The board game will have a similar game design to the ones out as of 2020 to stay true to its origins. That means that it will have a similar appeal to players that make up the target market of these games. It comes as no surprise that this is not the first replayable escape room created. There are a couple out there that claim to have multiple games to play through in the one game box with different themes. One of these games is from a company called Insync Games located in the UK. They have been working on a replayable escape room.² However, these games are not readily available, and you have to search for them. I am working to create a game that provides a similar experience to being in a live action escape room but has a board that can be adapted for countless storylines.

DESIGNING THE PUZZLES:

Designing the puzzles is time-consuming because one must think about the different ways information is obscured, what is too easy, and what is asking too much of the players. Ideas that are used commonly in escape rooms are a place to start as they provide a few reliable puzzles. These are often physical tasks such as putting together pieces of a puzzle or decoding a message. However, those can only take a player so far. They don't require a player to think outside the box or try to figure out the next step. When they are interspersed with

² Insync Games. "A COOPERATIVE BOARD GAME INSPIRED BY ESCAPE ROOMS." *Collabescape*. Date Accessed November 27, 2020. <https://www.collabescape.co.uk/>

more mentally demanding puzzles, it creates a more enjoyable experience. It can moderate the pace of the game and provide challenges. If the puzzles were all logic-based would create a slowed down and drawn out game that would not be enjoyable. If all the puzzles were physical tasks such as piecing together puzzle pieces, then there would be no point in playing as it is not challenging in the least. Understanding that there had to be a balance between task and logic puzzles sets up the initial framework for the game.

The second step in designing the puzzles for the game was to make lists of all objects that fit the theme of the game.³ As it takes place in Camelot, the artifacts must fit into that theme. The best part of this being a boxed game, the sky is the limit of what could be added. It is not like I am trying to buy props for a physical room. The list that was generated consisted of, but was not limited to, artifacts like armor, shields, tapestries, candles, windows, and carpets. I then started considering how to incorporate them into puzzles. For example, the candles could be a puzzle if they must be in a certain order. That means there would need to be symbols on the candles so they can be placed in order. Going with that means those symbols must appear elsewhere in the room in the correct order so players would know how to place the candles.

The next step would be to assign numbers or letters to these candles so that they form a passcode. That passcode would allow for players to progress through the game. The numbers and letters are assigned at the end as they are not important for the mechanics of the game. The important aspect is if the presentation of the riddle, the same symbols, or a combination of the two are enough to get the player to order the candles correctly.

All the puzzles follow a similar designing process. While the elements and mechanics can differ, the construction process is the same. It is all about providing enough information to make a player connect the dots but not directly handing them the completed puzzle, and by extension the answer.

³ Errol. "13 Rules for Escape Room Puzzle Design"

8

RESEARCH FOR THE GAME

**MERLIN STUDY:**

In stories that tell of the early years of King Arthur and the round table, Merlin plays a huge role in the events that happen. He first smuggles Arthur away from his birth family so he will live to take the throne. He sets up the sword in a stone test on two separate occasions. The first is to reveal that the young Arthur is the rightful king of Briton. In the second instance is

¹ *Old-Merlin series4promo.jpg*. Gwāine Lkz Líke Cènrèd. Date Accessed November 29, 2020. Digital Image. 5616 x 3744. Fandom. https://static.wikia.nocookie.net/merlin1/images/3/33/Old-Merlin_series4promo.jpg/revision/latest?cb=20120211004021

set up for Galahad to draw the sword from the stone, starting the grail quest.² Finally, Merlin acts as an advisor to young Arthur, offering him council, aide, and warnings about the future³.

In every version of the legends, Merlin possesses magic. That makes it feel cliché. As a result of wanting the room to be a little more realistic, I wanted to portray Merlin as an alchemist, someone who experimented with and observed nature. That idea lends itself to creating puzzles that are realistic instead of fantastical.

While alchemy is mainly known for people trying to discover how to turn other substances into gold, the practice goes way beyond that. There were three goals of alchemy when the practice first started to develop. These goals were to take metal and transform it into gold, create an elixir for longer life, and a solvent that could dissolve any materials so they could be used for other purposes.⁴ These three goals provide the basis for a cohesive theme for the room



and puzzles in it. This room will look like Merlin's study. That means the puzzles would need to use objects that would logically appear in the room, or they would feel out of place. Using the goal of creating an elixir for longevity as a springboard, it made sense that one of the puzzles would involve herbs in some way.

*Herbs with a mortar and pestle*⁵

² Mary Jones. "The Sword in the Stone". *Jones Celtic Encyclopedia*. 2004. <https://www.ancienttexts.org/library/celtic/jce/swordstone.html>

³ Green, King Arthur and His Knights of the Round Table

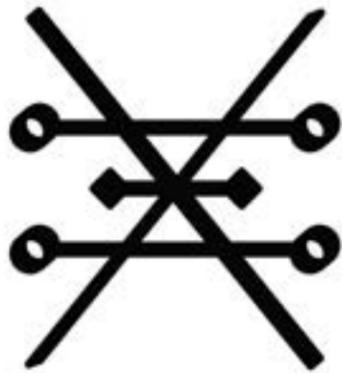
⁵ PhotoMIX Company. *Purple Petaled Flowers in Mortar and Pestle*. May 31, 2016. Photograph. 6016px x 4016px. <https://www.pexels.com/photo/alternative-background-color-cooking-105028/>

For centuries herbs have been used to treat many issues, from treating wounds and easing symptoms to treating illnesses or allergies. The herbs, flowers, and spices used were distilled using techniques tracing back to Ancient Arab alchemists. Hieronymus Brunschwig an alchemist and surgeon in the 1500s used these techniques to cure ailments.⁶ It would be no stretch to conclude that an alchemist would have herbs in their workshop and know of their properties in their search for a longevity potion.

ALCHEMY:

Alchemy is a word that many people recognize but do not know all that it entails. Turning metal to gold comes to mind as that is the most widely known goal as it often appears in literature. However, it has roots far deeper than the pursuit of gold. It is a broad topic but will only be touched upon briefly as it relates to only a small part of the escape room. Here it will give an overview of what it is, its importance, and how it relates to the game.

Starting in Ancient Egypt over four thousand years ago, the practice of alchemy spread



to other countries over the centuries. There were three goals of alchemy when the practice started to develop. These goals were to take metal and transform it into gold, create an elixir for longer life, and a solvent that could dissolve any materials to be used for other purposes.⁷

*The symbol for Copper.*⁸

⁶ Jessica Leigh Hester. "Tinctures, Like an Ancient Alchemist". *Atlas Obscura*. September 7, 2018. <https://www.atlasobscura.com/articles/how-to-make-easy-herbal-infusions>

⁷ "Alchemy". *crossref-it.info*.

⁸ *Copper*. Photograph. Date Accessed December 1, 2020. 1280 x 1280. ScienceStruck. <https://sciencestruck.com/list-of-alchemy-symbols-their-meanings>

Those who took part in alchemy were trying to achieve something that was not attainable at that time. However, the practice but through the centuries provided a lot of value to modern science and other areas. Namely, it helped make advancements in technology for crafting and manufacturing. These included preparing inks, dyes, paints, and cosmetics, along with the purification of medicine and much more.⁹ They were working with many different materials, trying to change them into a different material, so new discoveries were bound to happen. As they worked, they used equipment such as beakers, crucibles, flasks, vials, jars, pestles, and mortars, to name a few objects. While they used the equipment, they would improve it over time to suit it to what they needed. These would later be used by the first chemists.¹⁰ That indicates they were contributing to the development of science through their experimentation. These tools were being refined for a whole host of different uses that would also be used in the practice of chemistry. This refinement made the tools more practical and useful for future generations. Alchemists used equipment like this because they would be heating metals for long periods in their attempts to create the Philosopher's stone, a universal transmutation object, something that could turn anything to gold, not just selective metals. No alchemists agreed on what elements were needed to create the philosopher's stone.¹¹ This indicates what equipment is accurate to the practice and time and will not be out of place in the game. Also, the puzzles can use made-up notes about experiments as clues because they would not appear out of place in a workshop. When designing the room, it will look like there is a lab set up with beakers and vials as alchemists during the middle ages in Europe had access to the equipment. All of this information provides insight into constructing the room and its puzzles accurately. One puzzle will use the beakers, vials, and jars on a workbench to create a code as they will fit into the room's design.

⁹ Ibid

¹⁰ Erich B. Anderson. "Alchemist's Gold & Eternal Life: The Secrets of Medieval Alchemy." *History Answers*. July 26, 2018. <https://www.historyanswers.co.uk/news/tom-cullen-padraic-delaney-and-simon-merrells-talk-knightfall/>

¹¹ CrashCourse. "Alchemy: History of Science # 10". *YouTube*. June 11, 2018. <https://www.youtube.com/watch?v=gxiLuz9kHi0>

But why were people practicing alchemy? There were two sides to the practice. Some alchemists were driven by greed or the need to live forever.¹² Others focused on achieving spiritual perfection within the objects around them, trying to better themselves. They thought that all things had a spirit that was immature compared to gold. Gold was a perfect element because it was thought to contain the same amount of fire, water earth, and air. The process of alchemy was about achieving perfect spirituality inside the person and improving the material around them.¹³ The ultimate challenge for alchemists throughout time was to create the “Philosopher’s Stone – the divine elixir which believed to have the power to change anything to gold and that carried magical properties of imparting immortality to humans”¹⁴. That means it would be the solution to everything the alchemists wanted to achieve. No matter what the material it would change to gold. It would eliminate the need to create different formulas to balance the elements in various materials and change them to gold.

I chose Merlin to become an alchemist in the context of this game as he fits the description of those who pursue alchemy to improve themselves and the material around them. The choice impacted the game’s story. In the story, Merlin orchestrates all of the tasks that stand between players and the crown of Britain. Merlin sets up the tests to make sure the players are worthy of receiving the crown. Throughout the game, knowledge is passed on, enlightening the player. They learn about the events that transpired in the castle. Choosing Merlin as a character is what led to the decision to make the game convey a story and not just a set of puzzles to solve to win.

Finally, alchemists would not easily divulge their philosophies or discoveries. They would use code words that could change meaning depending upon what book it was in. They would

12 Anderson. “Alchemist’s Gold & Eternal Life: The Secrets of Medieval Alchemy.”

13 Benjamin Radford. “What is Alchemy?” *LiveScience*. March 24, 2016. <https://www.livescience.com/39314-alchemy.html>

14 “List of Alchemy Symbols and their Meanings”. *ScienceStruck*. Date Accessed November 28, 2020. <https://sciencestruck.com/list-of-alchemy-symbols-their-meanings>

also encode their philosophies in allegories or stories so the characters and the actions that took place would represent more than they appeared to be on the surface.¹⁵ I would use codes and ciphers throughout the game as it would make sense for ‘Merlin’ to want to obscure information in plain sight. It would be natural for the character to do so, and it fits the game.

HERBAL/ PLANTS MEDICINE:

It is not surprising mankind has been using the plants around them to treat ailments and pain for many centuries. Pain and discomfort are things no one wants to suffer. Without the kinds of modern medicine used today, they had to use what is around them. One of the “oldest written evidence of medicinal plants’ usage for preparation of drugs has been found on a Sumerian clay slab from Nagpur, approximately 5000 years old.”¹⁶ Over time knowledge was accumulated about what plants could treat and what the side effects were.

Medicine makes an appearance in Arthurian legends very sporadically. For example, in the Arthurian story Yvain by Chrétien de Troyes, there is a reference to a magic ointment used to treat the Yvain’s wounds.¹⁷ The use of magic is very liberal within these stories and not to be taken at face value. The ointment most likely was made from herbs, and instead of being prepared by a doctor, as they only treated the very wealthy, it would have been prepared by a wise woman. A wise woman or man was very knowledgeable about healing with herbs. That meant people would go to her/ him for treatment. The only other options open to the poor for treatment were the local priest or barber. They would pull teeth, set bones, or operate. Monks and nuns ran hospitals that treated those who were extremely sick or dying.¹⁸ There would not be many options for the every day person. This meant that people who had some knowlege would be

15 CrashCourse. “Alchemy: History of Science # 10”

16 Biljana Bauer Petrovska. “Historical review of medicinal plants’ usage.” *Pharmacognosy reviews vol. 6,11* (2012): 1-5. doi:10.4103/0973-7847.95849

17 “Yvain”. *Enotes*. Date Accessed November 28, 2020. <https://www.enotes.com/topics/yvain>

18 “What kind of medicines did people use in the Middle Ages?”. *The Knight with the Lion*. Date Accessed November 28, 2020. <https://www.abdn.ac.uk/sll/disciplines/english/lion/medicine.shtml>

the ones that could help the people. With one wise woman or man the knowelge would not die out and be pased on so the futre generations could help the people that came for help. Those who were extremely sick would go to the monasteries because they had, “the skills of healing, cultivation of medicinal plants, and preparation of drugs”.¹⁹ In the monasteries, they grew “sage, anise, mint, Greek seed, savory, tansy”²⁰, just to name a few of the medicinal herbs. The monks and nuns must have been trained by their predesesors to know what would be effective and what would cause more harm than good as many herbs have side effects. Many of the plants used could treat many things, often overlapping with different plants. They would have to choose which plants would be useful and not worsen the patient.

Herbs and other plants had a dual purpose serving as a meal and medicine. Many plants were grown as food, such as wheat, barley, cabbage, garlic, dill, sage, and parsley to name just a small selection.²¹ Many of them were staple food crops or used to season the food. Due to the regular use of these plants and crops, it is of no surprise the people who used them were able to reason out the medical benefits of these plants over the centuries. The dual purpose of plants indicates how the people were making the most of what they could at the time, and the relationship between medicine and daily life was a close one.

Herbs also strayed into the mystical when it came to medicine. Some plants and herbs were ‘imbued’ with magical properties through rituals performed with the plant.²² That further tied herbalism into the religious beliefs of the people showing how herbalism may be seen as a magical art. As Arthurian legends reference magical remedies, it was no stretch to tie it into Merlin. Merlin is magic in the stories, but I am trying to base the game on reality to some degree. To balance that out and stay true to the story I wanted to make it believable that he was not magical but merely a skilled herbalist and alchemist. During that time, it would have given him that

¹⁹ Petrovska. “Historical review of medicinal plants’ usage.”

²⁰ Ibid

²¹ Jerry Stannard. “Medieval Herbalism and Post-Medieval Folk Medicine.” *Pharmacy in History* 55, no. 2/3 (2013): 47-54. Accessed November 28, 2020. <http://www.jstor.org/stable/24631898>.

²² Ibid

appearance of being magic.

I wanted to incorporate a puzzle that used herbs into the game. To do so I would need to provide information on the plants available to the players as the game does not work if it requires outside knowledge. It revealed that many plants that serve more than one purpose. Dandelions were used when treating eye problems, diarrhea, diabetes, and fevers. Chamomile was used as an anti-inflammatory, antibacterial, and antifungal. It also treated bloating, fevers, and nervousness.²³ These are just a couple of the plants that were used back then. As stated they were used for many different treatments. This shows how useful the plants were back then and how they could be seen as magical.

²³ Herblist.net “Healing Herbs and Medicinal Plants List”. Herb List. 2016. Date Accessed November 28, 2020. <http://www.herblist.net/>



DESIGN

PORTFOLIO

SARAH NELSON

LOGICLUE LOGO

Branding: logo

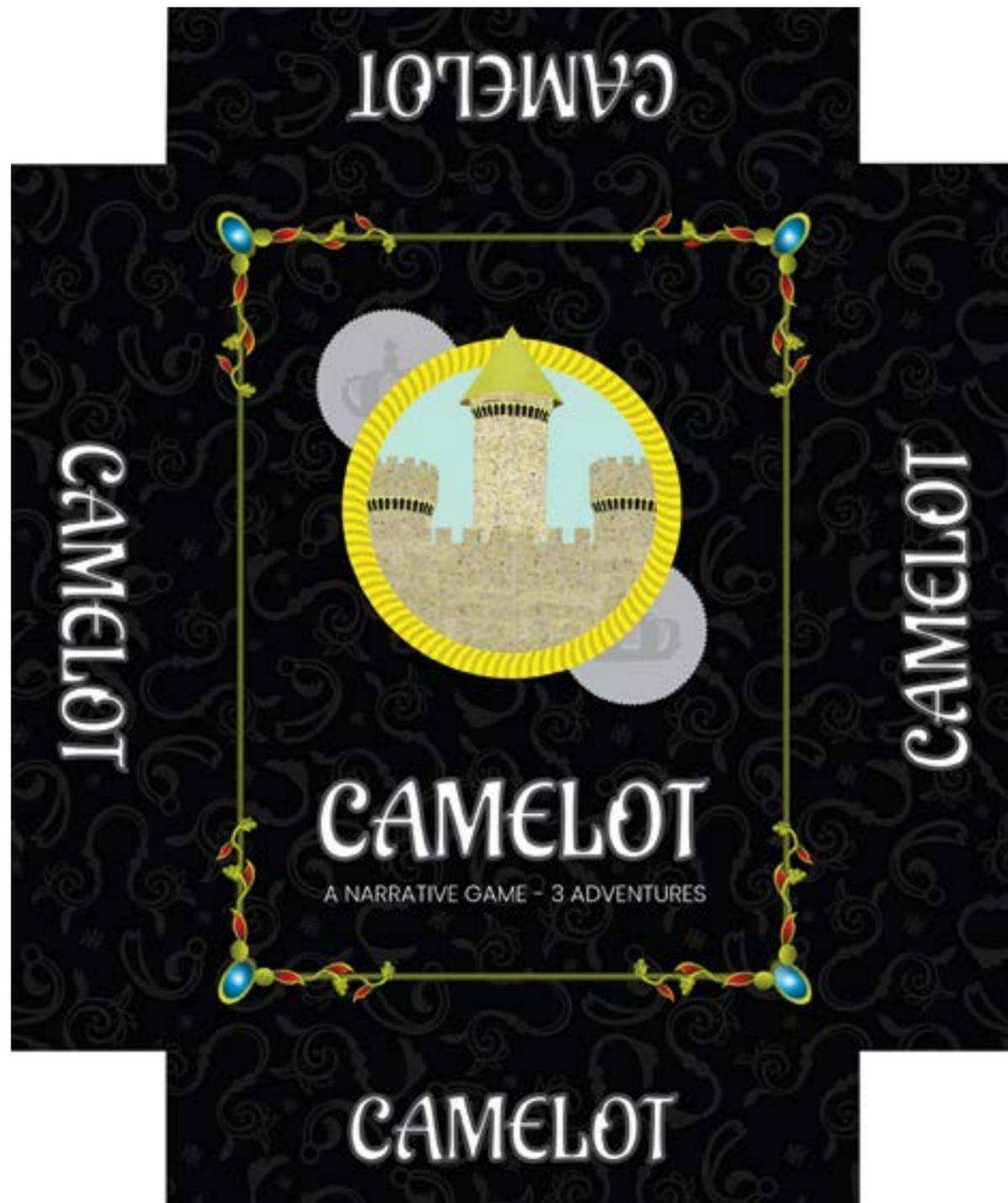
When thinking about escape rooms two words come to mind. Logic and Clues. Players must use logic to take the clue provided to make sense of them and derive passcodes from them. Logic is the thought process of linking ideas together to come to a conclusion. This logo embodies the linking of a question to start the thought process to the final result of a logical answer. The brain represents the thought process that occurs in the room. The lightbulb the logo forms represents the ideas that stem from that process.



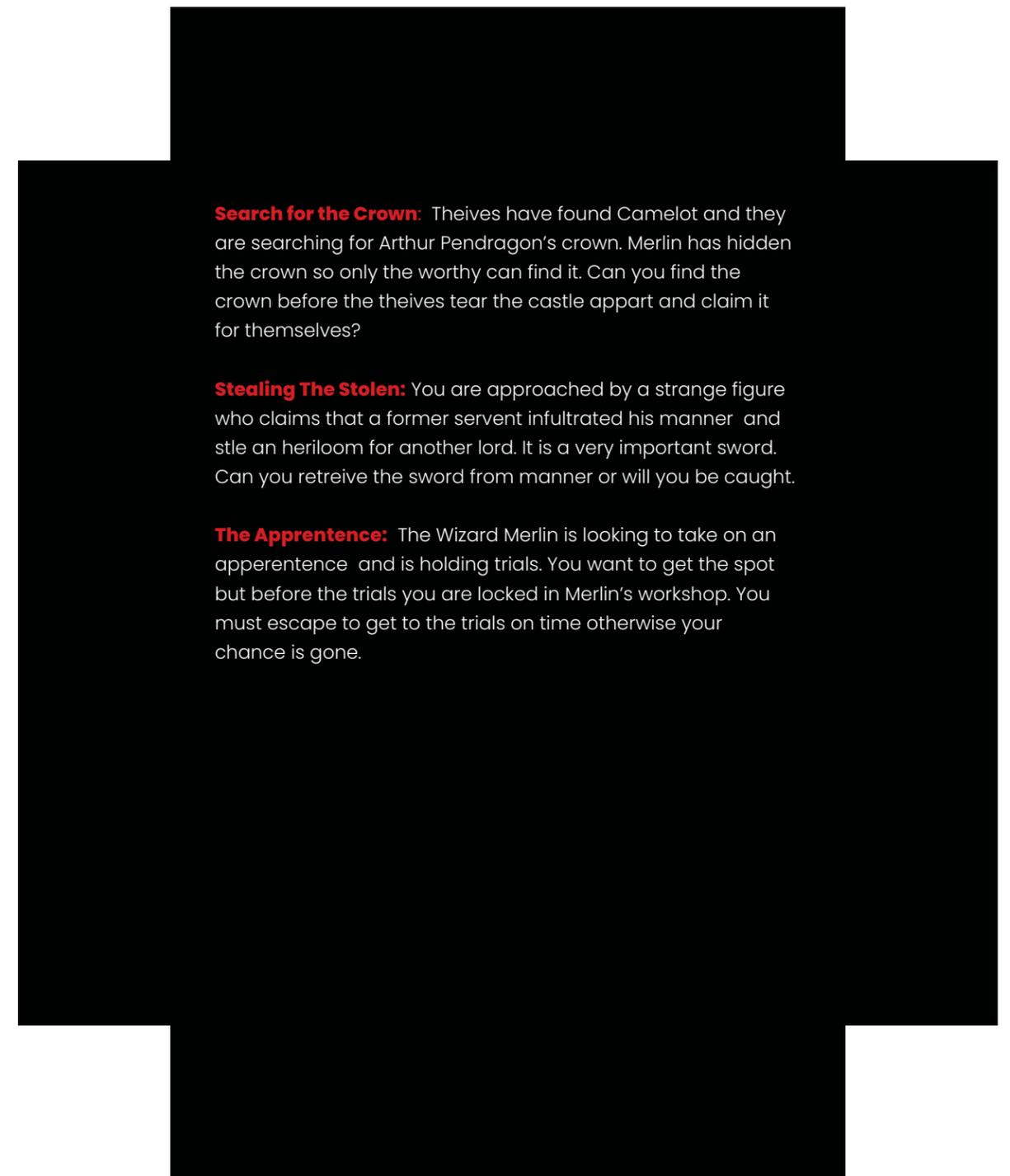
GAME BOX

The game box is designed to tie the game together. The box houses all the elements of the game so it must be cohesive. The pattern that decorates the box is echoed throughout the game by appearing on the decks of cards used.





Top of box



Bottom of box

WRAPPING PAPER

The wrapping paper features a pattern of keys. It serves as a reference for the keys that are an important element of the game play.



BOOK COVER

Narrative Book

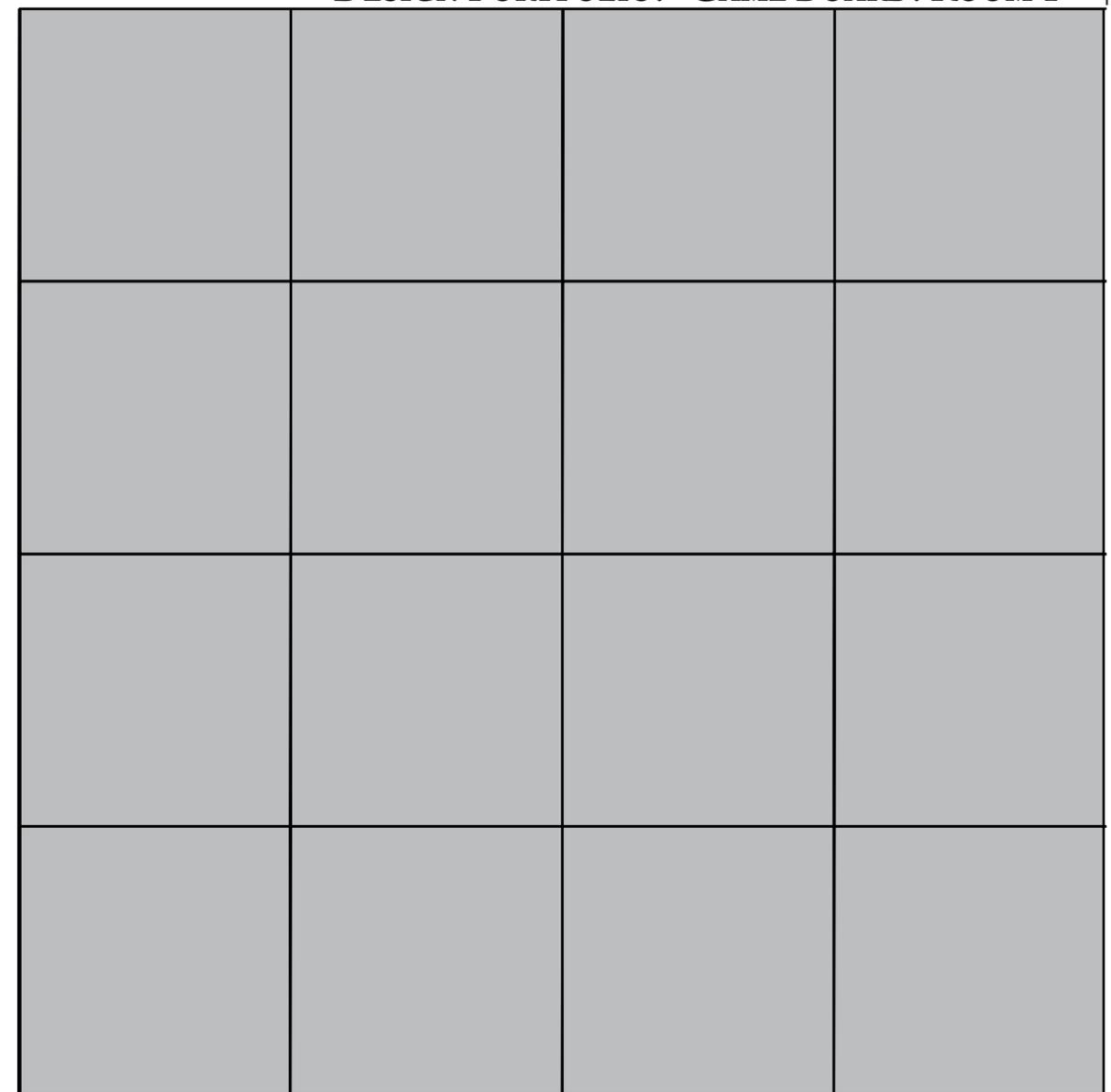
This book provides a narrative experience like dungeons and dragons. It tells players what they are seeing and provides them opportunities to interact with the room. It is set up like a choose your own adventure book.



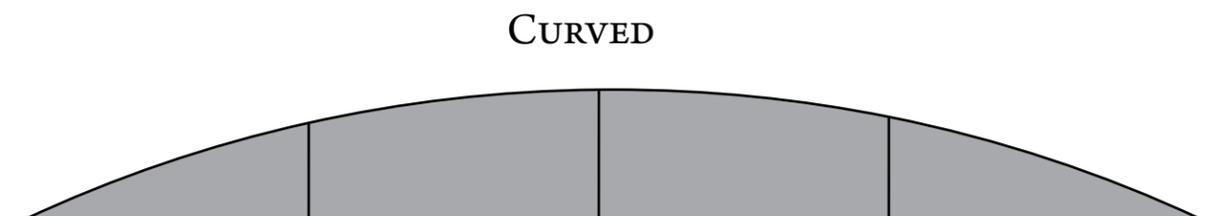
Set up as a choose your own adventure the book tells players what they see when they go into a room. It lets players choose ways to interact with the room such as searching, opening, and picking up items.

GAME BOARD: ROOM 1

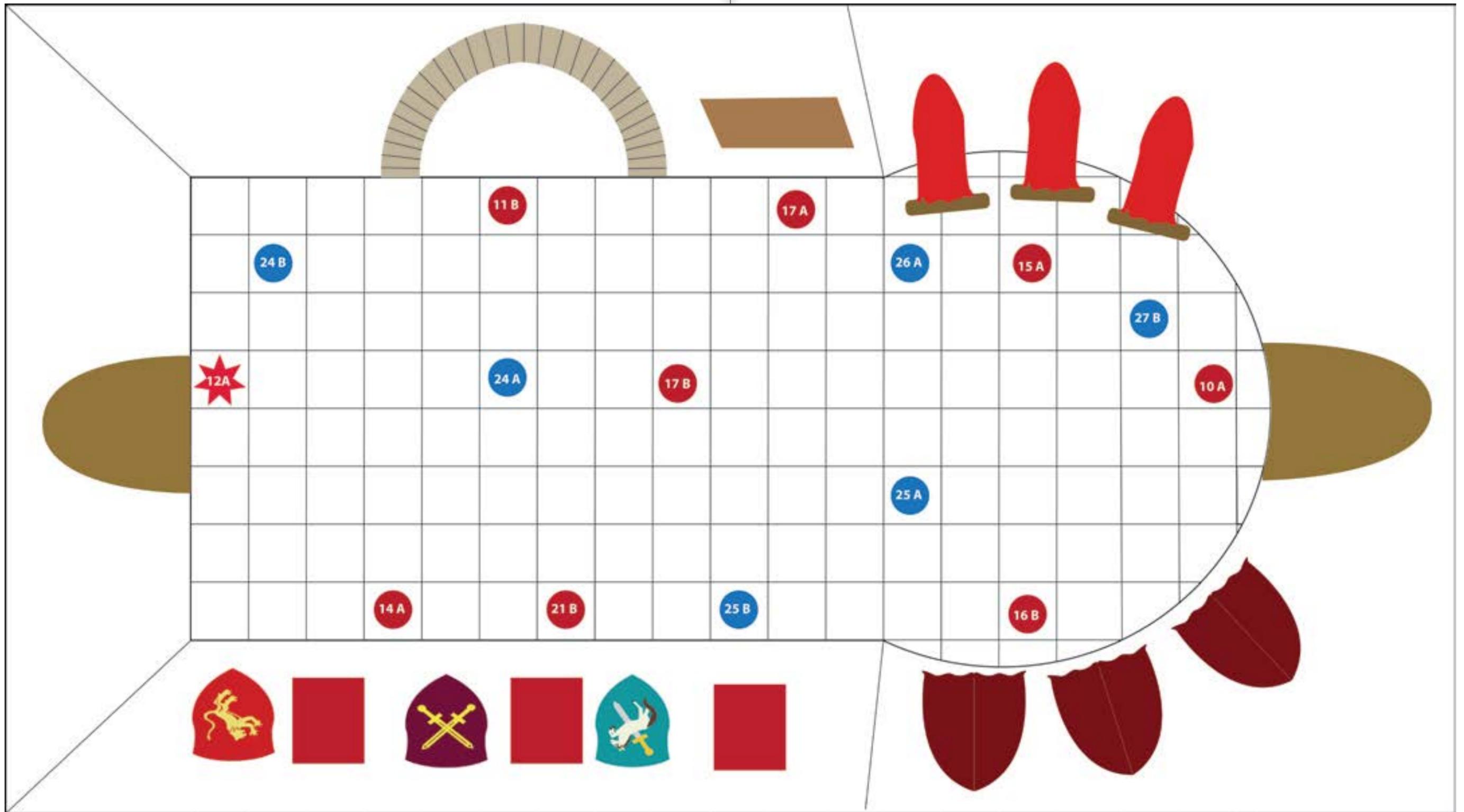
The board must be able to change and adapt if it is to be used for different games. The best way to achieve a customizable board is to build it out of smaller pieces that can be changed and moved. The board will be made out of tiles that are four inches by four inches. There will also be smaller curved pieces for the edges of the game board to further customize the room. There will be a host of colored tokens for each game that will be laid out on the board. These will indicate the pages the players must turn to in the narrative book, included in the game, so they can examine areas of the room. Finally, the board can be customized with artifacts like windows, statues, paintings, and more to provide a visual overview of the room.



MAIN



CURVED

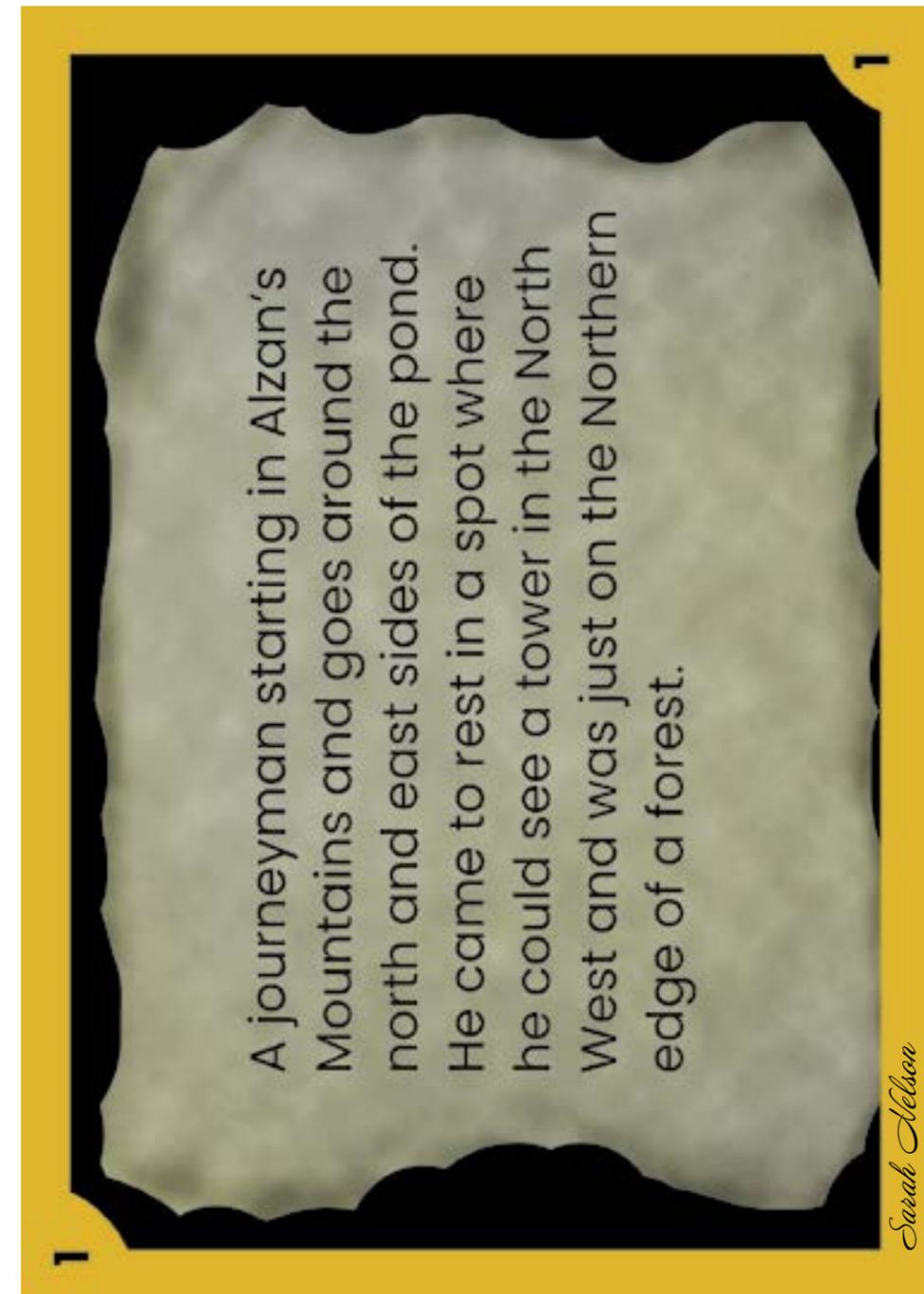


PUZZLE: 1

Clue Materials

Players will need two clue cards to solve puzzle one. The first card shows a roughly drawn map, while the second contains a short story about a traveler. As they read through the story players will realize the locations in the story appear on the map. There is a compass rose on the map allowing players to trace the route that the man took. Each road has a number, and by locating each road the traveler took, a passcode is created.





The map has places that appear in the story. Based on the story the traveler goes from Alzan's Moutins to Sherwood Forrest by using the path labled 9.

Then the traveler goes to stop near Elflight tower using path 6 and 9.

PUZZLE: 2

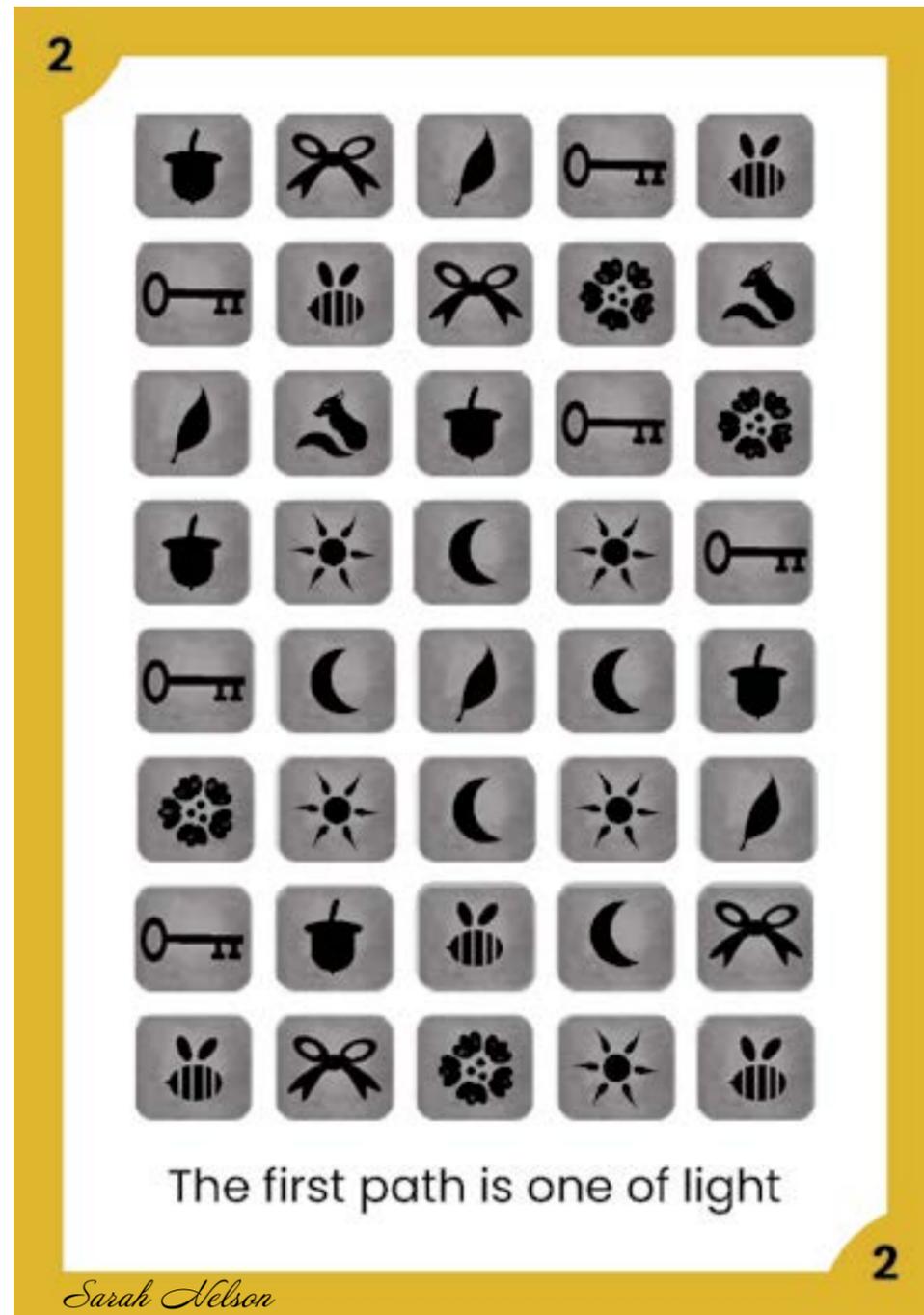
Clue Materials

To solve the second puzzle, players need three clue cards.

On each card, a pathway of stones is shown, with icons on every stone. There also is a hint on them. That hint tells players to follow the paths of light, plants, and animals.

When players connect the icons, three numbers appear in the pathways.

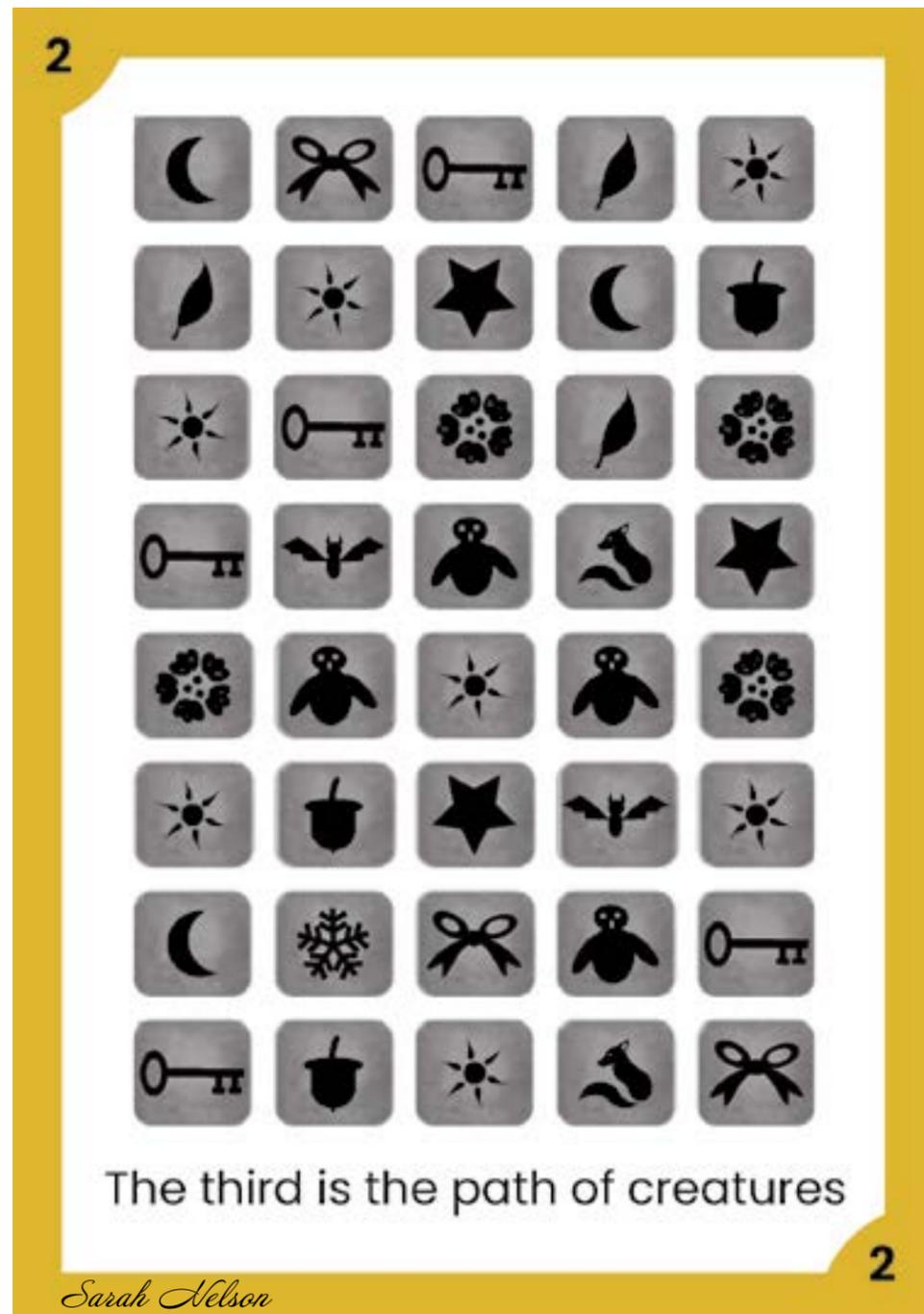




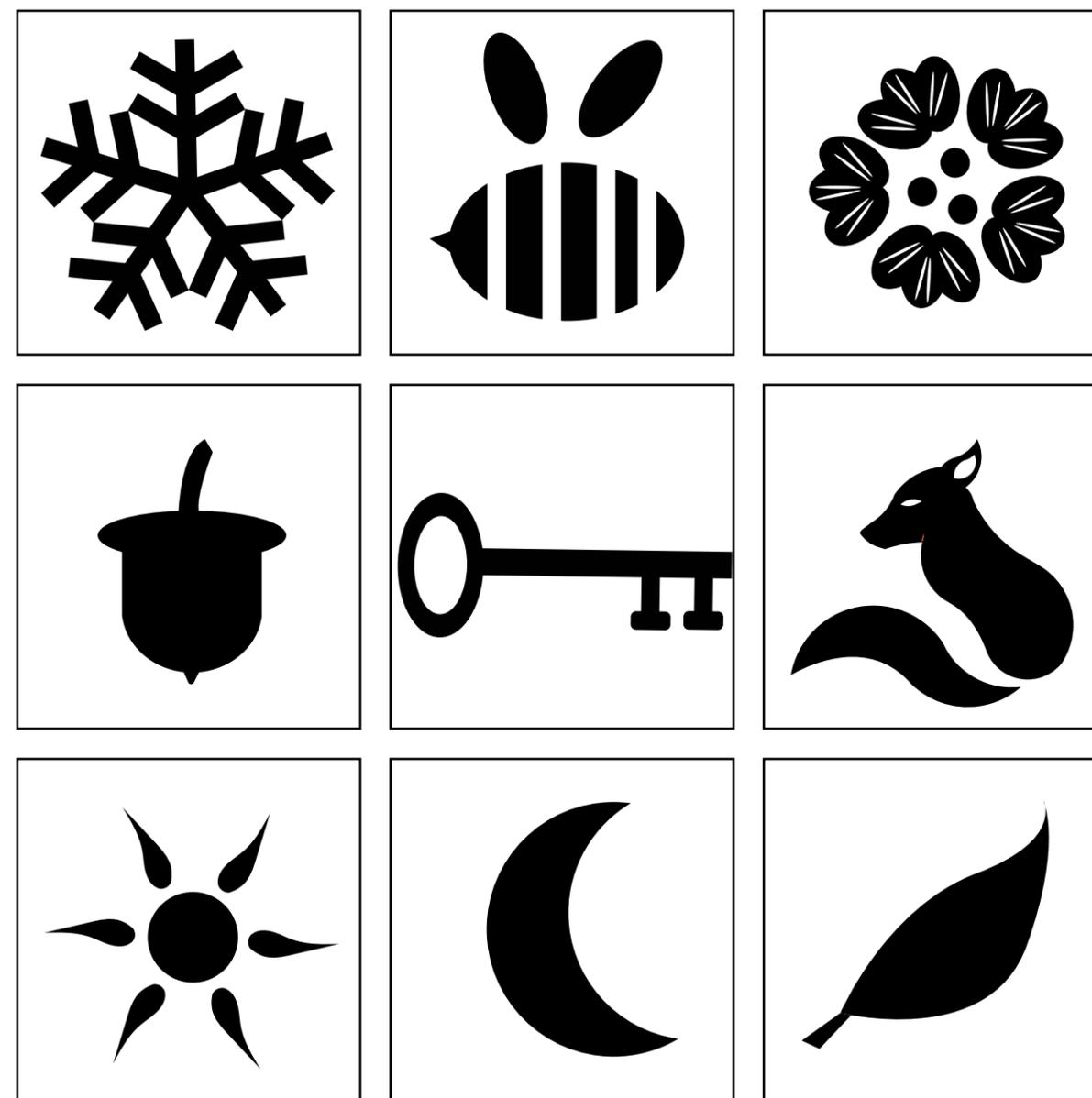
The hint tells that the path is one of light. The only icons that have anything to do with light are the moon and sun. Connecting the icons creates the number 9



The hint tells that this path is one of plants. The icons contain a flower, leaf and an acorn all parts of a plant. Connecting them together the number 2 is created.



The hint tells that this path is one of creatures. The icons shown contain an owl, fox, and bat. Connecting them together the number 7 is created. The entire code is 927.



Sarah Nelson

An upclose look at some of the icons I designed.

PUZZLE: 3

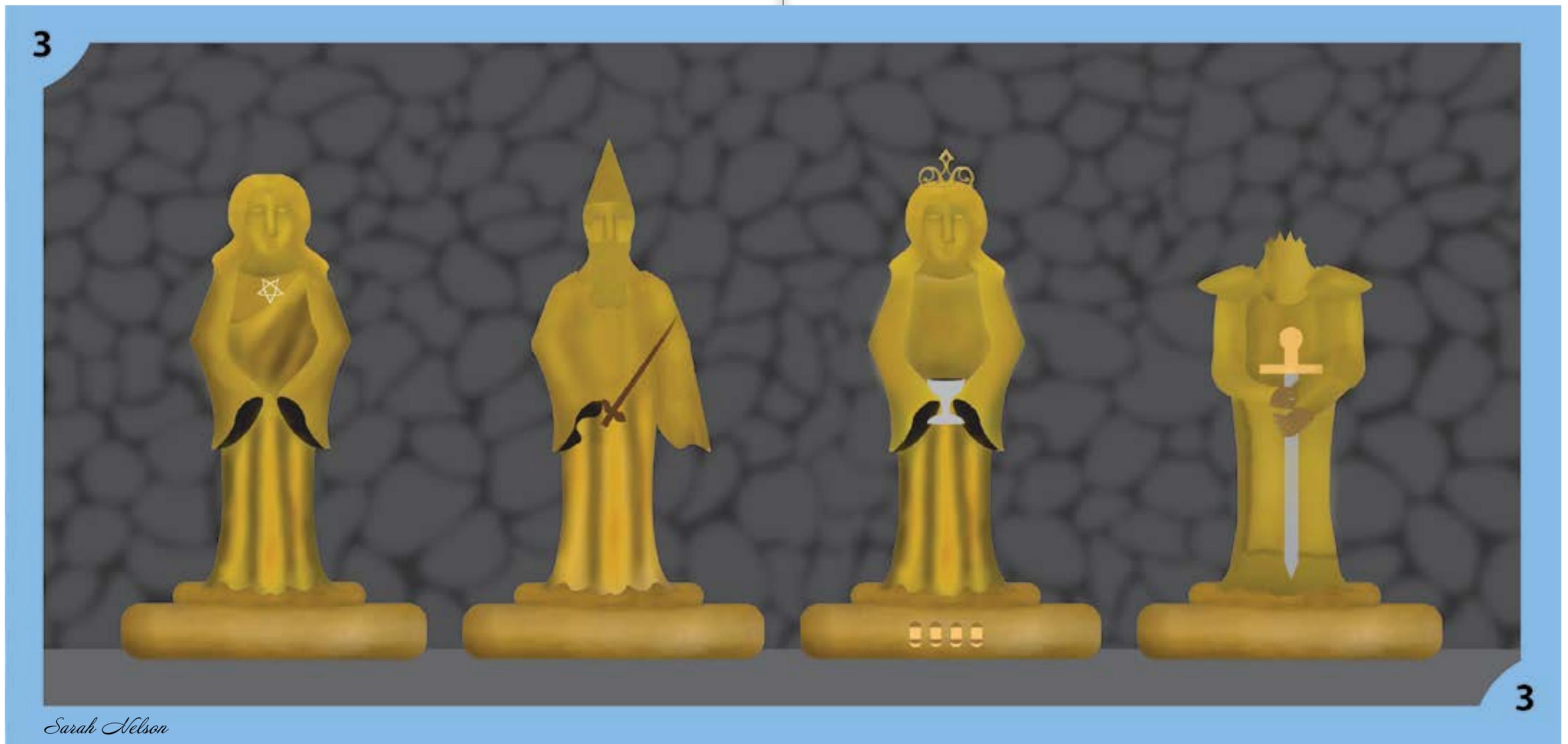
Clue Materials

As players collect the two clue cards for puzzle three, they would get a hint that indicates counting the pieces of something is important. The only clue card that has countable pieces is the one with stained glass windows. When looking at both cards, players would see that the items the statues are holding also appear in the windows. Counting the number of times these items appear in the windows provides the correct code to move forward.





There are shapes hiding in each window.
Counting the times that the objects appear
results in 3 stars 5 wands, 5 cups, and 1 star.

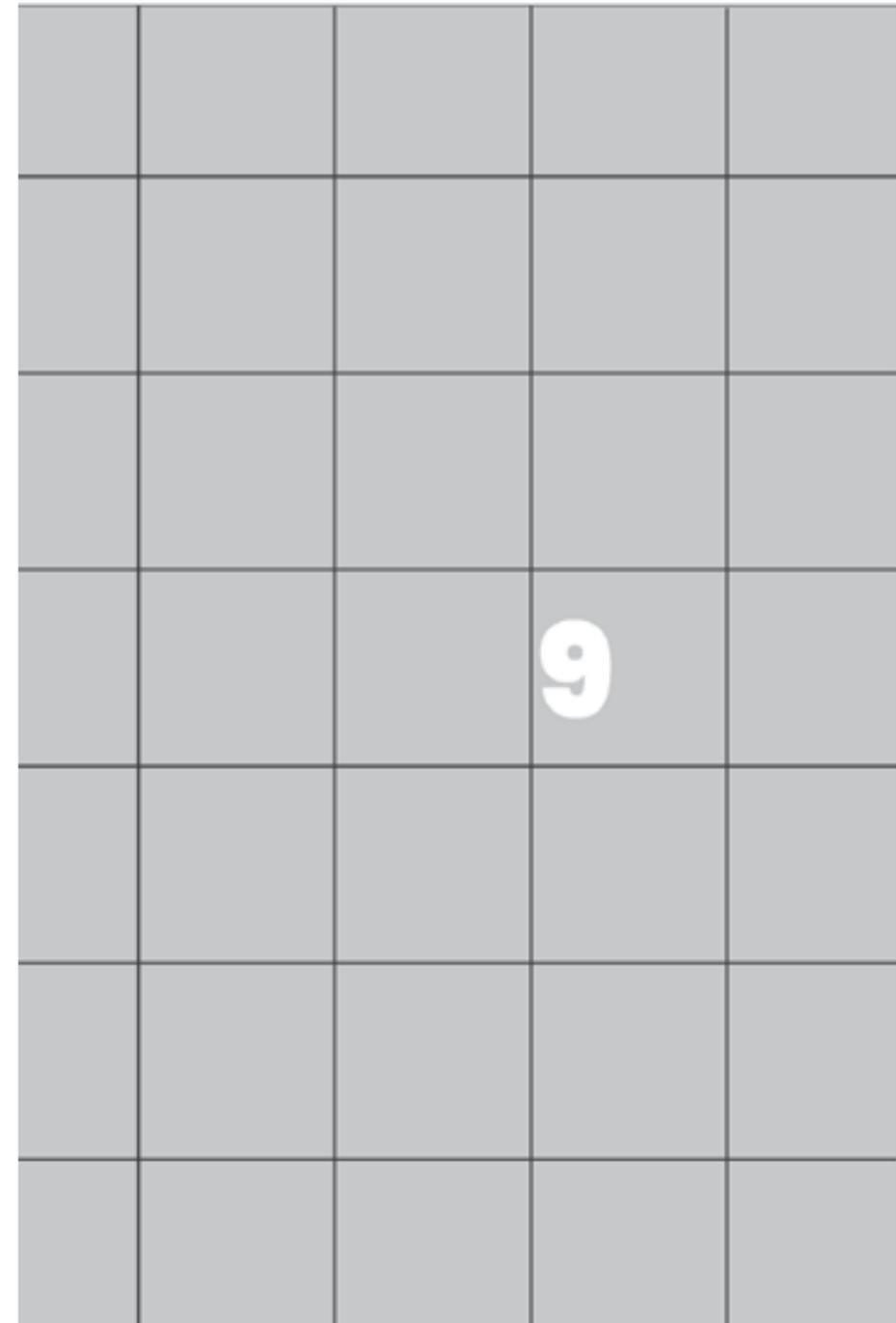


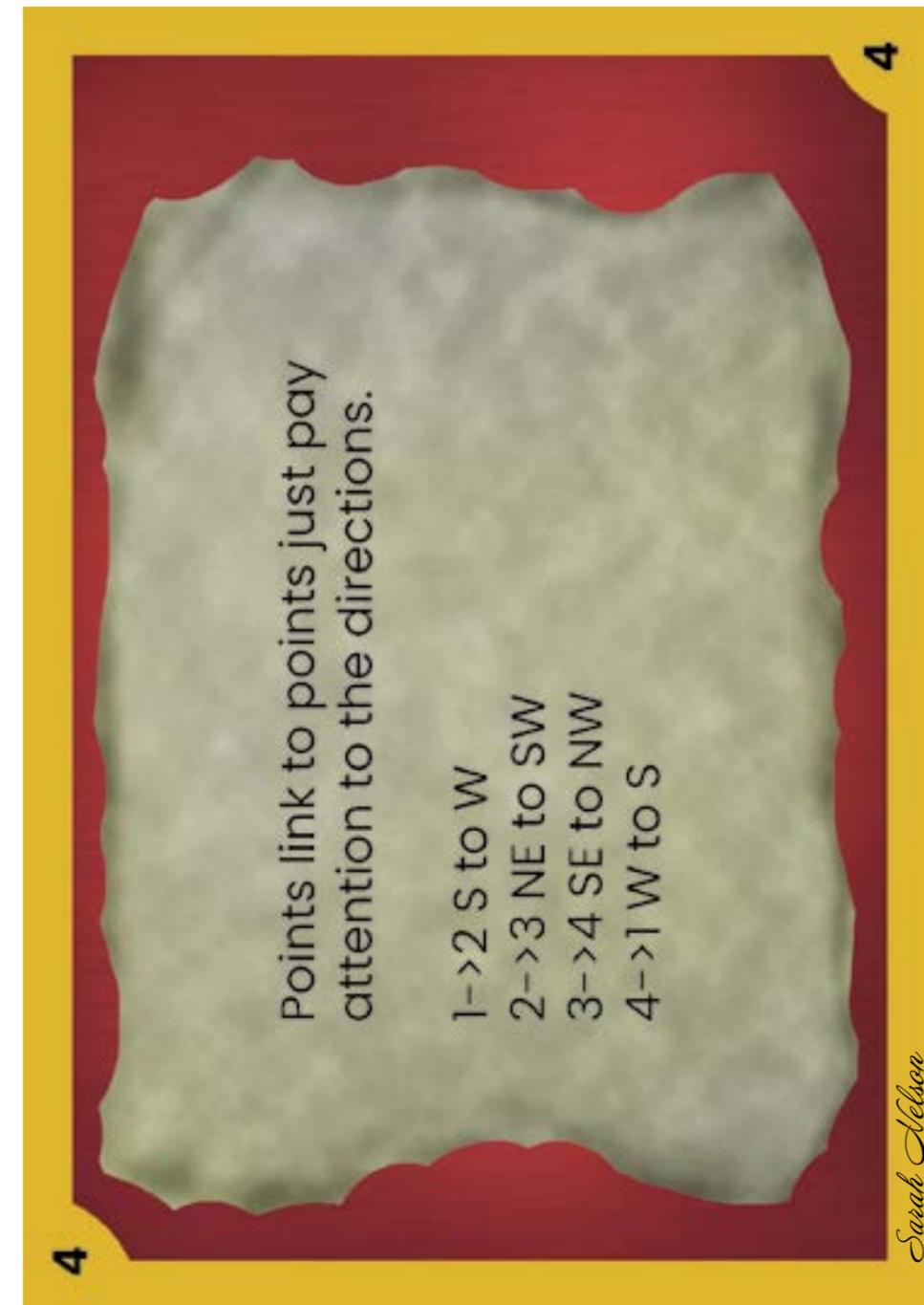
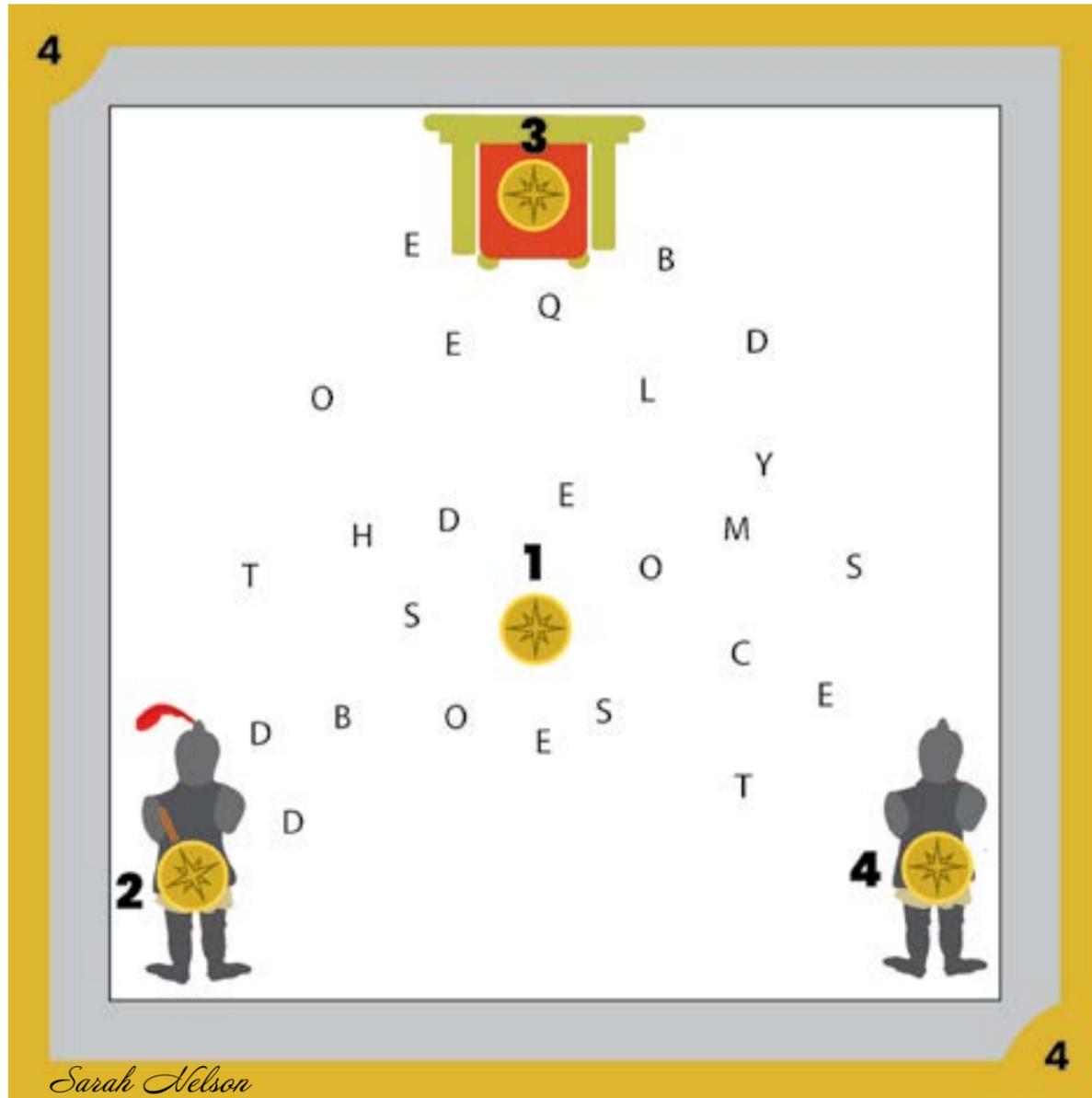
The statues are holding the same objects that appear in the windows.
The number of objects forms the code of 3551. The order that the
objects appear determines the order of the numbers.

PUZZLE: 4

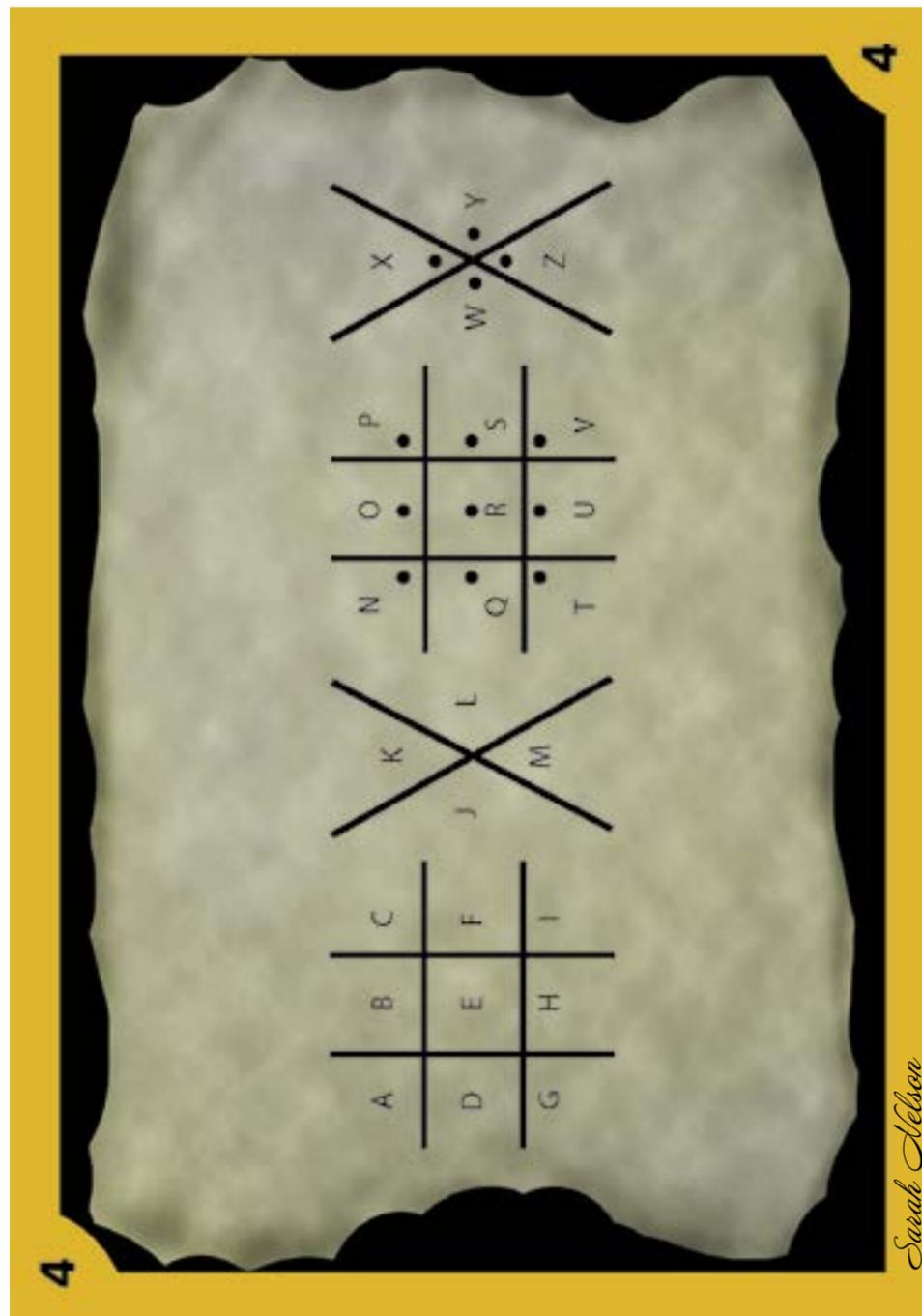
Clue Material

Puzzle four requires a two-step process to get to the answer. Players receive five clue cards. There is a floor map, numbered directions, a pigpen cipher key, a color code key, and a series of helmets. Players can solve this by connecting the compasses based upon the series of directions provided. The lines between the compasses intersect certain letters on the floor. These letters form a phrase. The phrase provides a clue about which helmets need to be decoded. Deciphering the pigpen cipher on the helmets reveals words that tell players how to create the passcode. That is when the color code key comes in. It will take the colorful plumes of the helmets and translate them into numbers.





These are directions indicate how the compasses are to be connected on the floor plan. The lines isolate certin letters that spell the phrase odd helmets, referencing the card with the helmets on it.



A pigpen cipher key: used to decipher the markings on the card with helmets. The grids form shapes around the letters. These shapes form the cipher.



A key that identifies what colors stand for which numbers. The different shapes allow for colorblind players to identify the colors in the puzzle.



The Helmets Decoded: use, add, even, odd, helmet, six, colors.
 Using the color key the numbers each helmet plume and jem correspond to a number. The even numbered helmets have red, green, and blue plume. Red stands for 8, green for 3 and blue for 1. Than means the code is 831.

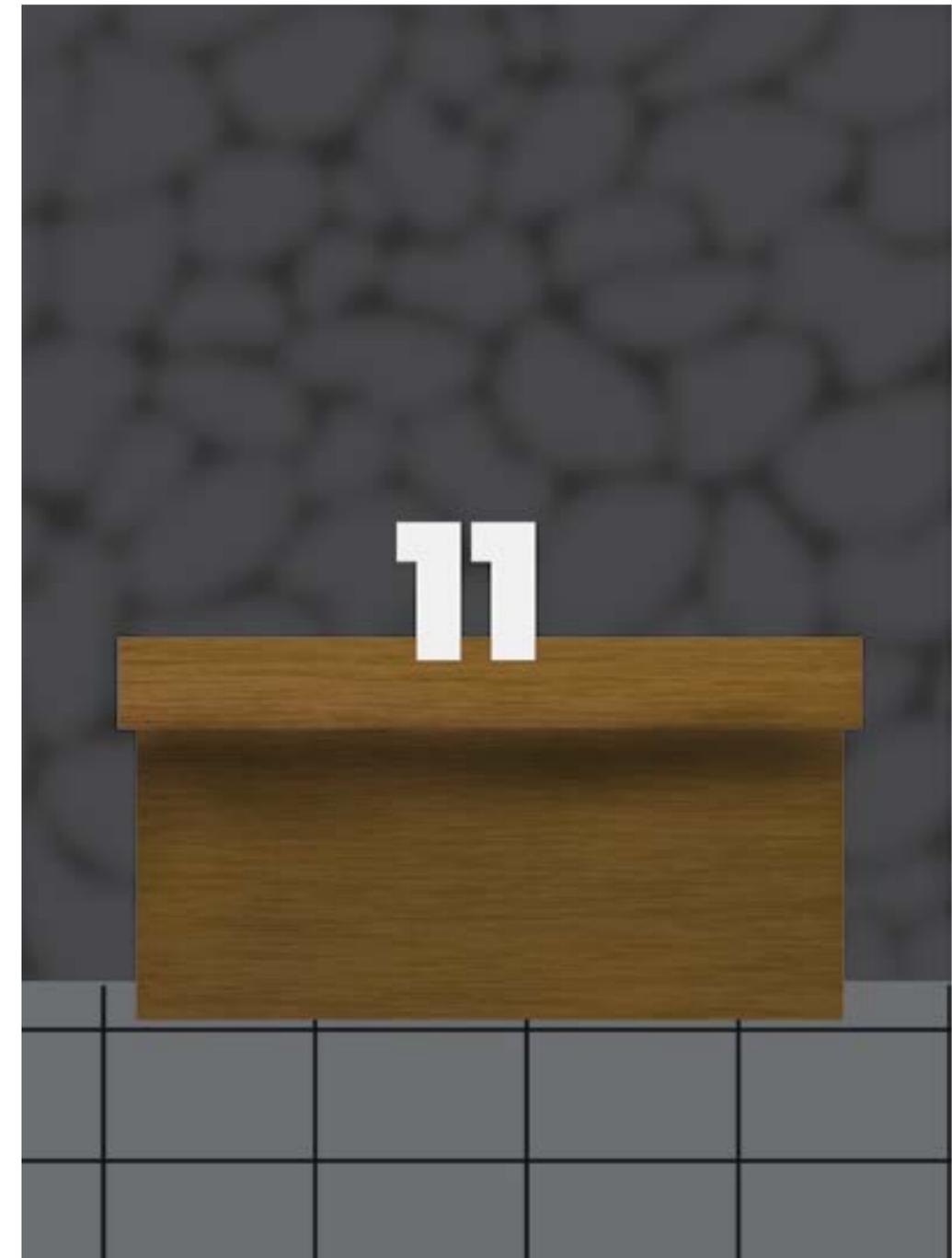
PUZZLE: 5

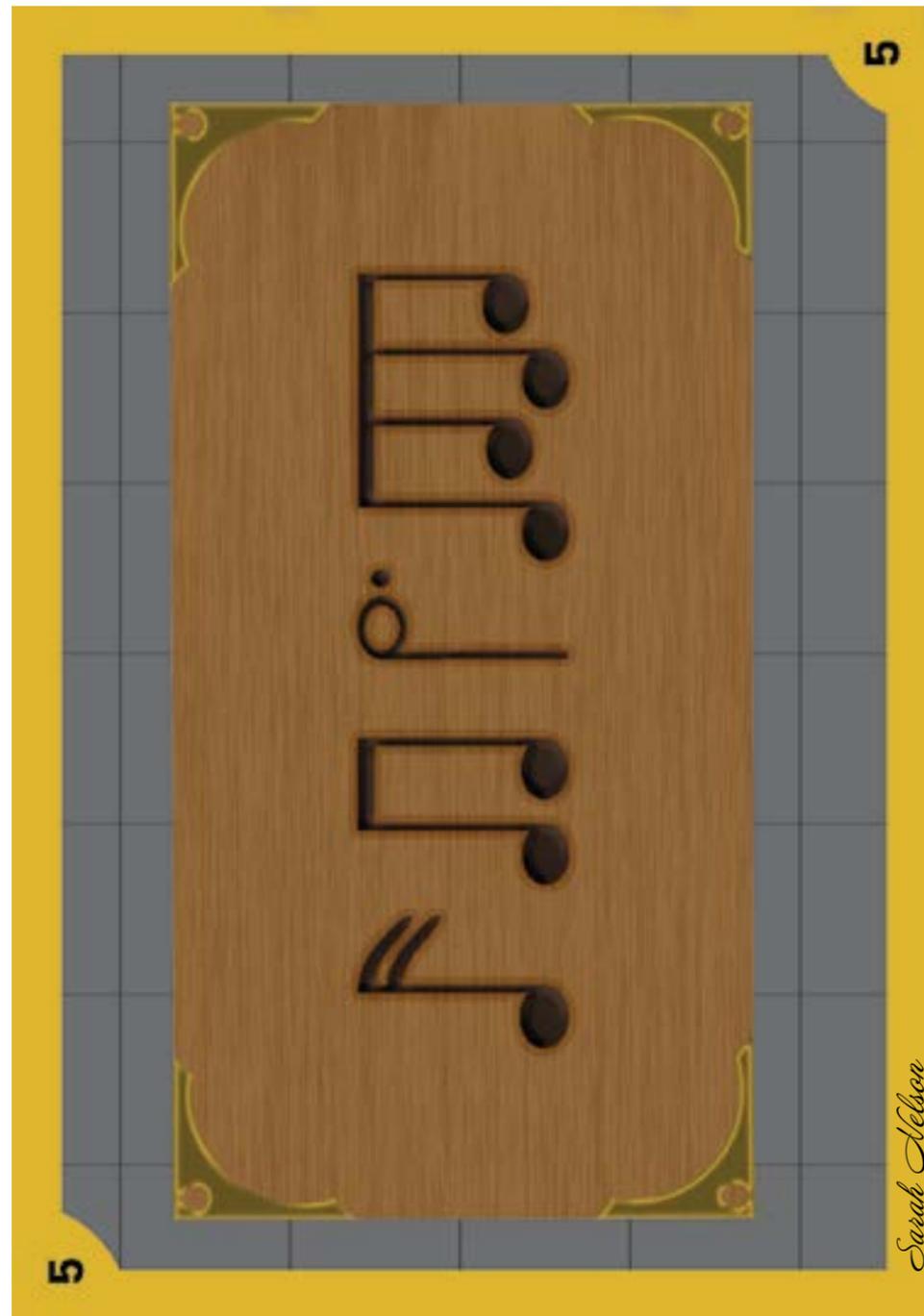
Clue Materials

When players search the room, they will find a chest.

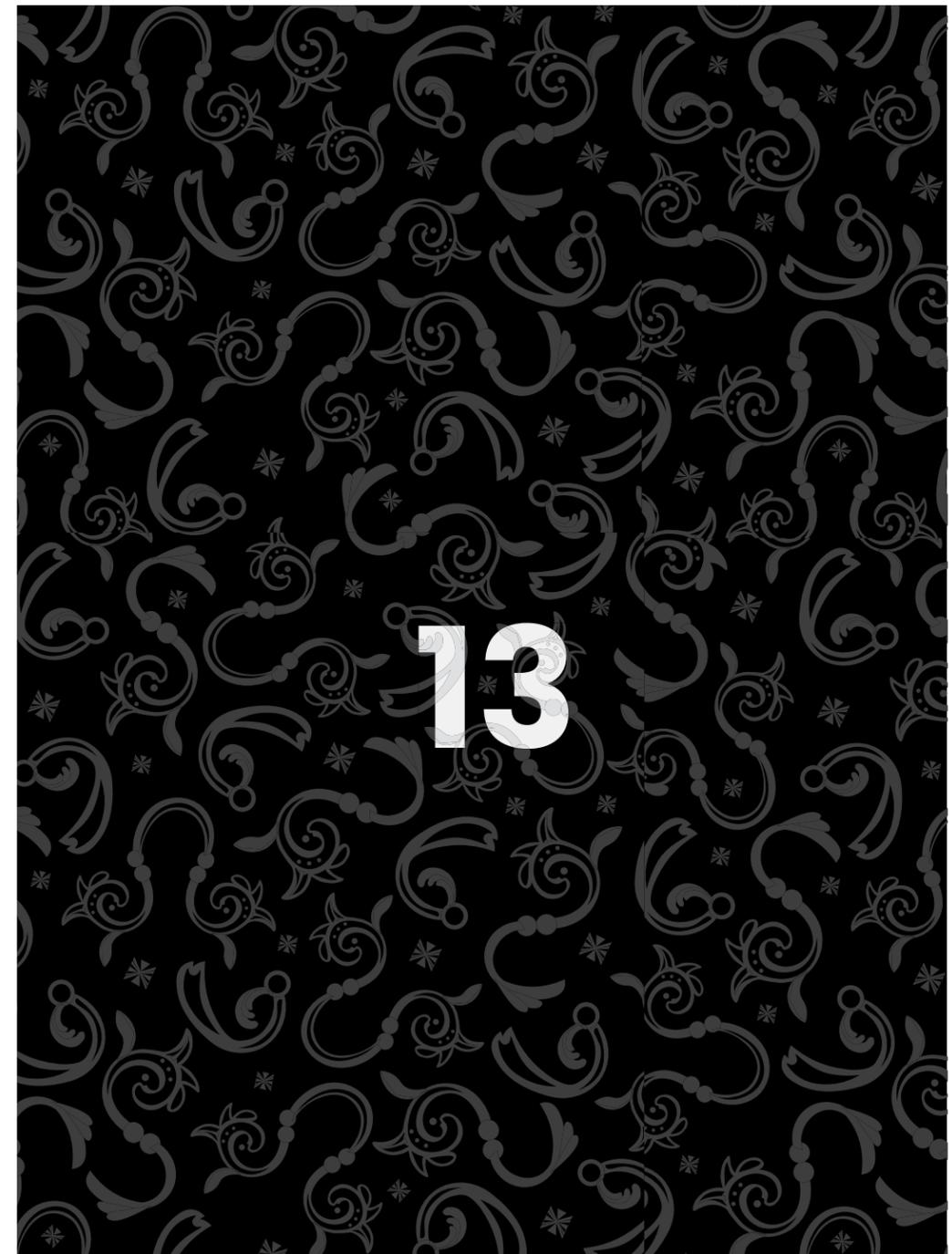
Carved into the lid is a series of music notes. These will help players move to the main part of the puzzle. In the room, there is a choice to look for sheets of music that have the same series of notes on them. At that point, the game instructs players to pick up envelope thirteen. That provides access to the music sheets and the writing that is on them.

The writing in the margins indicates that there is something important on the back. Putting these sheets together reveals the code word.





When players search the room they find a chest with music notes on top. Players have the option to search for anything that has notes matching what appears on the lid. They will find sheets of music that contain the same notes.



A fair lady came to beg Arthur for help for which he would grant but for Beaumains

Beaumains was a knight of great strength. He hid his noble birth while he worked in

the kitchen not telling anyone his name. Who could have known how great he was.

He would prove his worth and win the love of the fair lady and the respect of all.

Make notes ON THE BACK so not to mess up the music.

Sarah Nelson

Front of sheet 1: The note indicates that the back is important. When turned over players see there are markings. These markings will create the codeword when both sheets are slid together

5

SHALOTT

Sarah Nelson

5

Back of Sheet 1

♪ ♪ ♫ ♬ ♭ ♮

Come one come all and hear the tale of a knight so bold. A knight like no other before

A knight who rose to fame in a way no other had before. His name Beaumains.

He would prove his worth and win the love of the fair lady and the respect of all.

He gave his services not taking a no. He set out battling all odds to prove his might.

Note to self. Cut away the rest of the music to look at the chorus.

Sarah Nelson

Front of sheet 2: The note prompts players to cut away anything that does not match. That leaves players with a small section of paper. The previous note indicates that the back is important. The markings when put together creates the word Chivalry.

5

CHIVALRY

Sarah Nelson

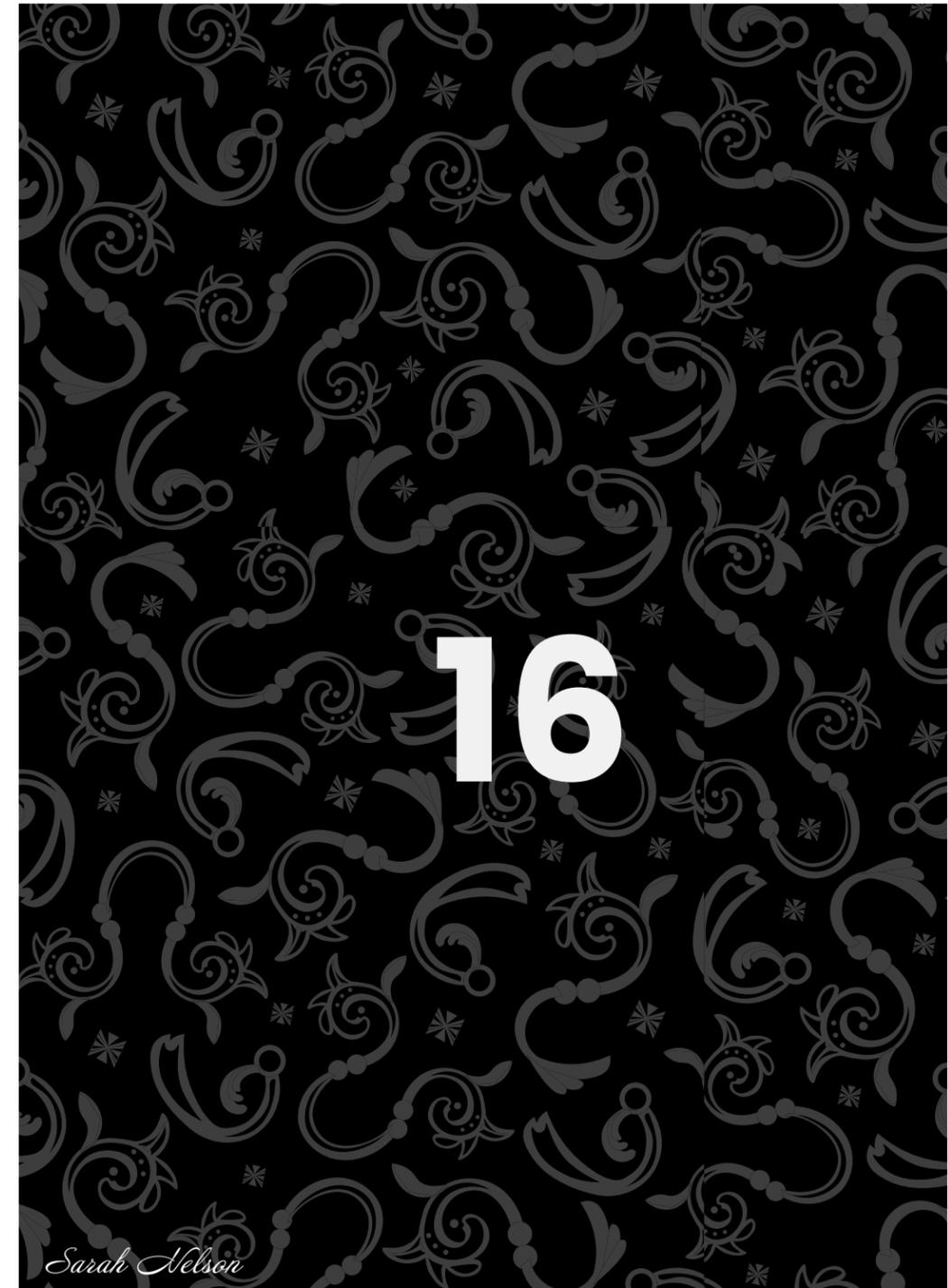
5

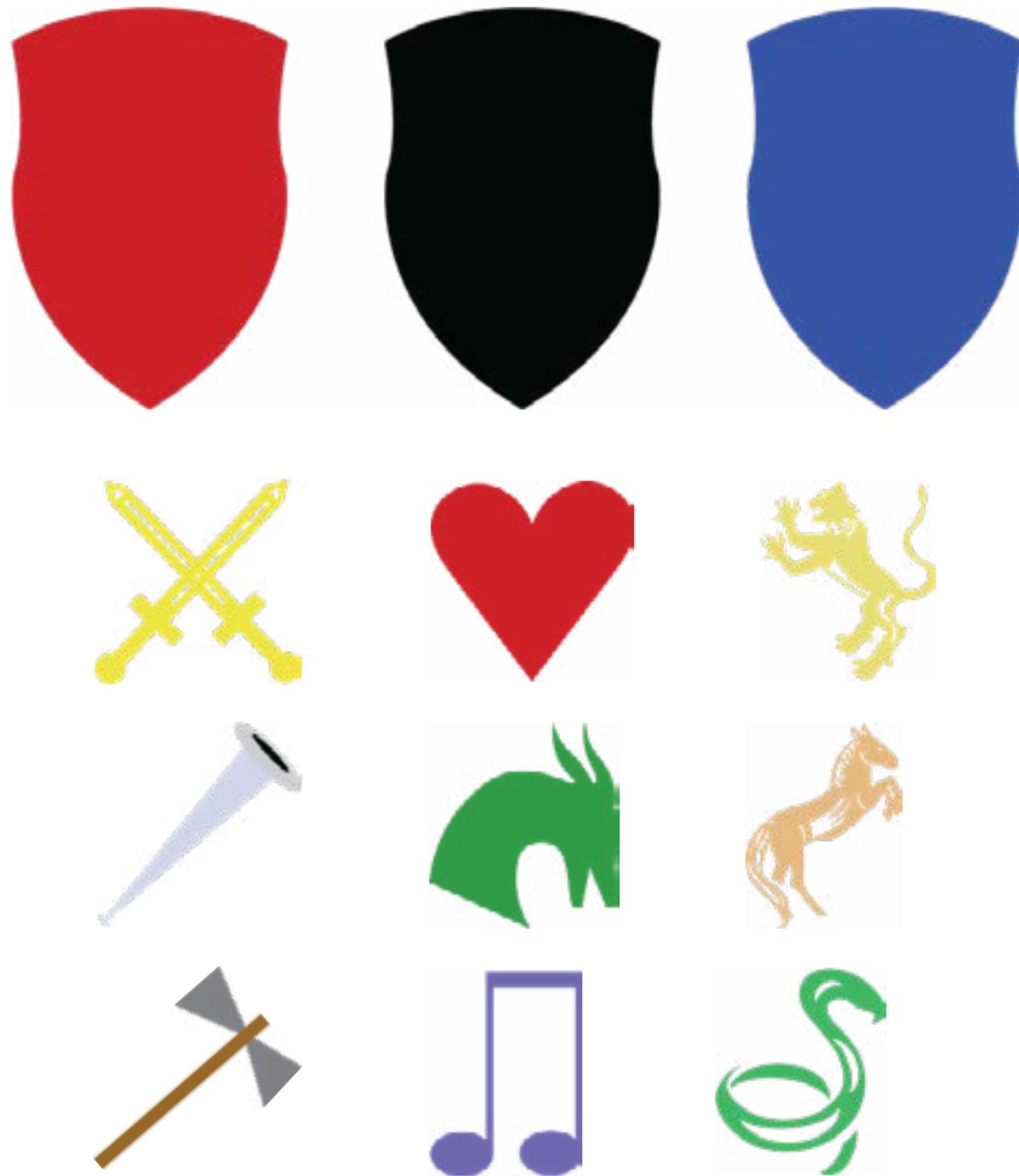
Back of sheet 2

PUZZLE: 6

Clue Materials

As players search the room, they come across a lock under a table. There is a note above the lock describing the appearance of a particular shield. Players are then given an envelope with different icons & colorful shields. On the back of each element, there is a number. These elements are then used to build the shield described. The numbers that appear on the pieces used will create a page number in the book provided. That will provide a transition to the second part of the puzzle. That is the crossword puzzle. There are certain boxes in the layout that have blue circles in them, indicating they are important. Using the letters that fall in those squares, you get the code word.

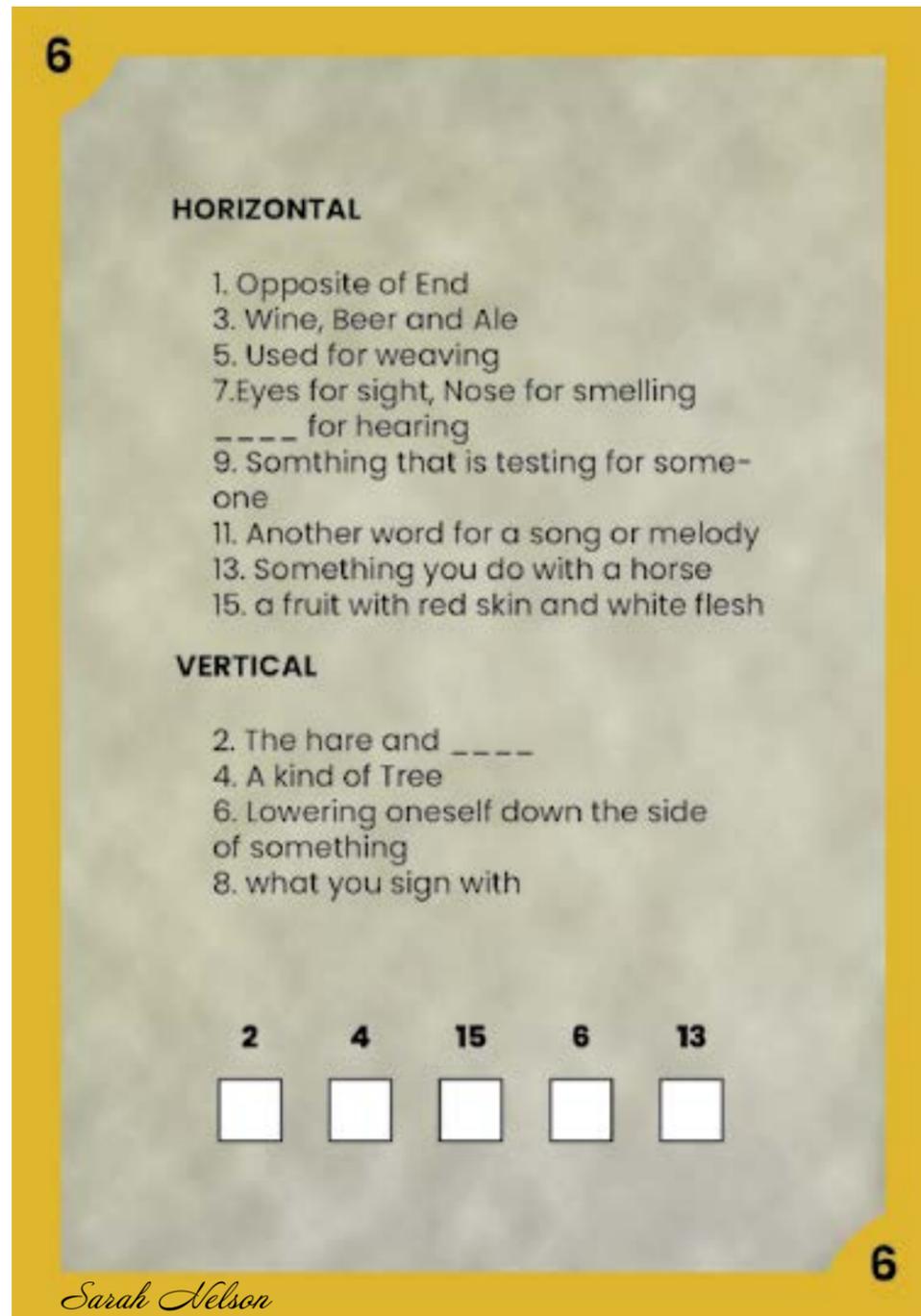




Shield elements players are given in an envelope. The statement above the lock describes a shield that has a yellow symbol rearing upon a crimson field.



The numbers on the back of the shield elements tell players to turn to page 37. When players turn to that page in the book they read that they find a shield like that on a table and underneath is a crossword puzzle carved into the wood.



Players get a second puzzle after solving the sheild puzzle.
 Answers 1) Start 2) Turtle 3) Alcohol 4) Maple 5) Loom 6) Rappel
 7) Ears 8) Signature 9) Trial 11) Tune 13) Ride 15) Apple



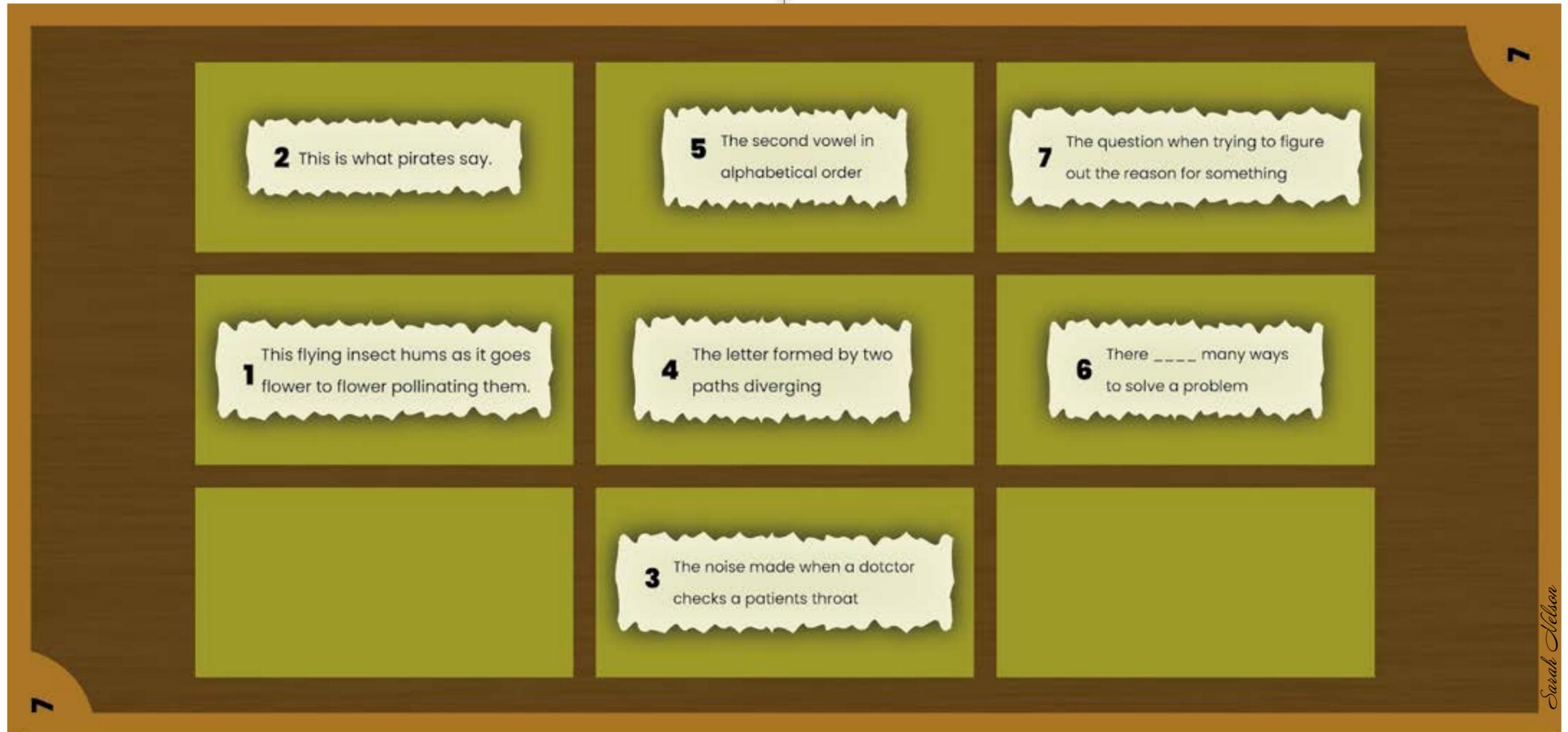
The blue dots indicate imporant letters that go to the other card. When the words
 are filled in the letters that fall on the blue dots are T and E from turtle, M from
 loom, P from apple, L from rappel, and E from ride. Put together it spells TEMPLE.

PUZZLE: 7

Clue Materials

On this clue card, there are several statements in the gold bars. The answers for these statements are one word, that when said, sounds like a letter. When written out, those letters spell a word that will unlock the next lock.





Words: 1: Bee 2: Arrrr 3: Ahhh 4: V 5: E 6: Are 7: Why

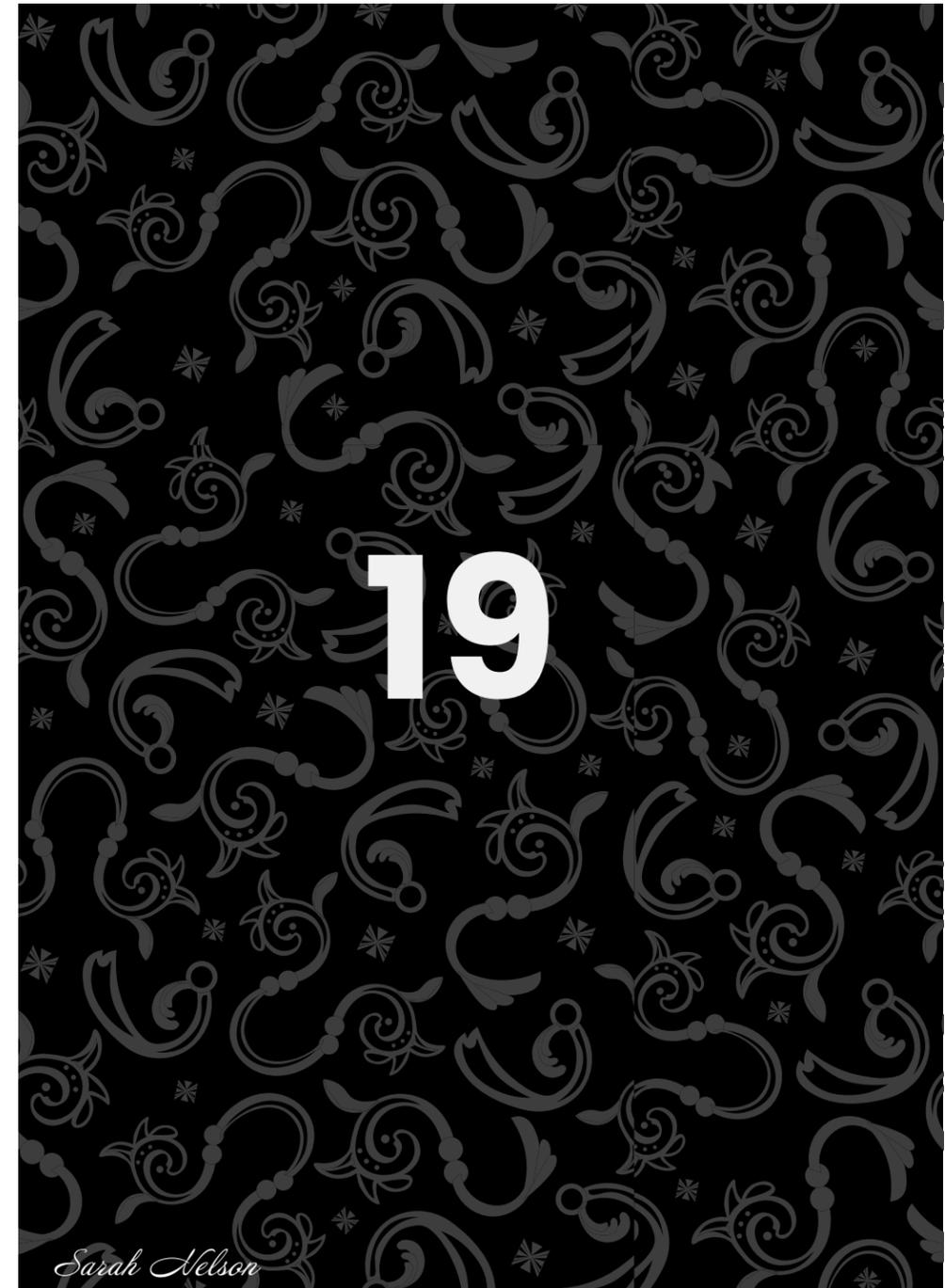
Phonetics: 1: B 2: R 3: A 4: V 5: E: 6: R 7: Y

Answer: BRAVERY

PUZZLE: 8

Clue Materials

Players are given strips of paper that have part of an image on one side and letters on the other. When players put the pieces together, an image forms on one side, and an expression is created on the other. That expression will help players decipher the letters into a password.





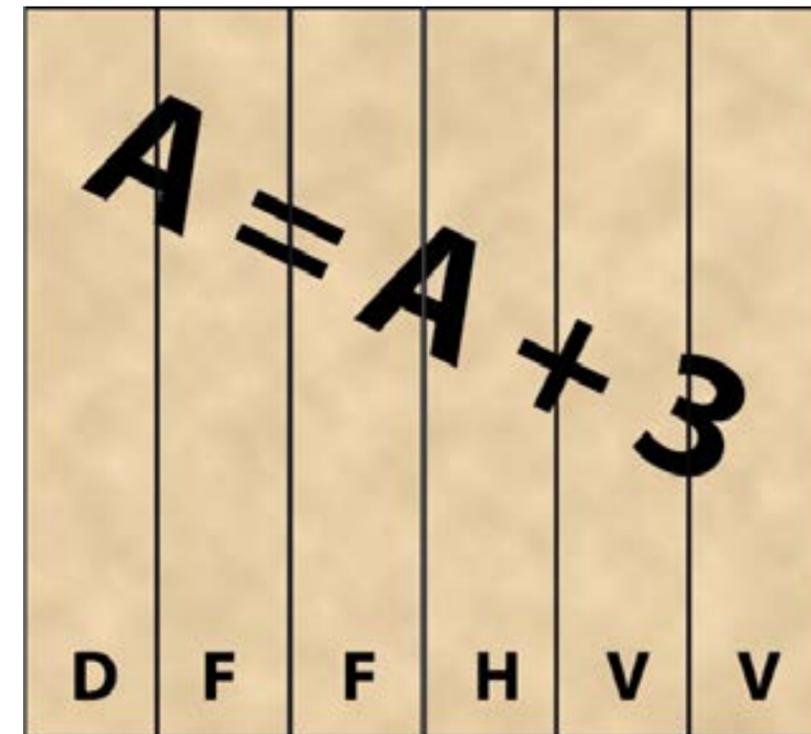
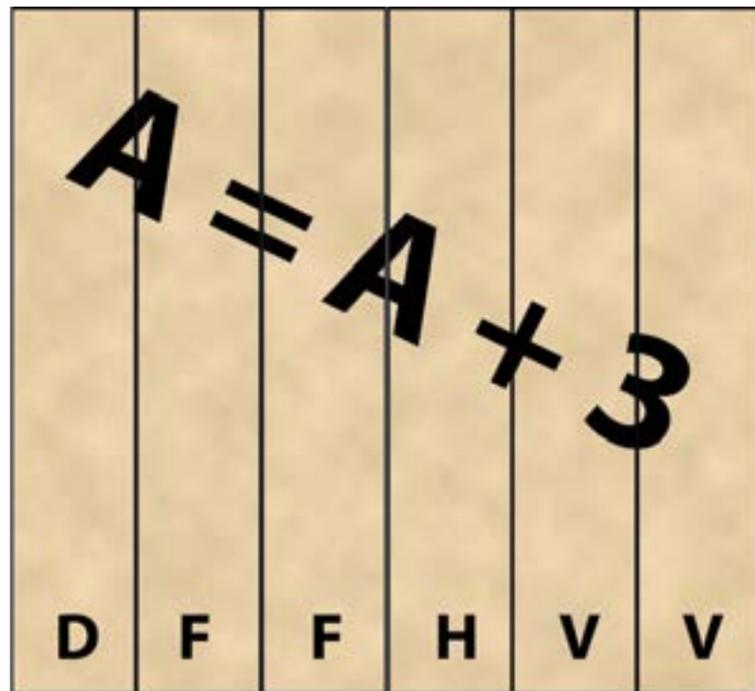
Sarah Nelson

The front: Each strip contains a segment of a photograph of the butterfly. They are to be cut out and assembled.



Sarah Nelson

The back: Each strip also contains markings and letters at the bottom of each strip. They are in cipher so they are currently unreadable.



The letter A is the first letter of the alphabet adding three to that has the alphabet shift three spaces down. A becomes D.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

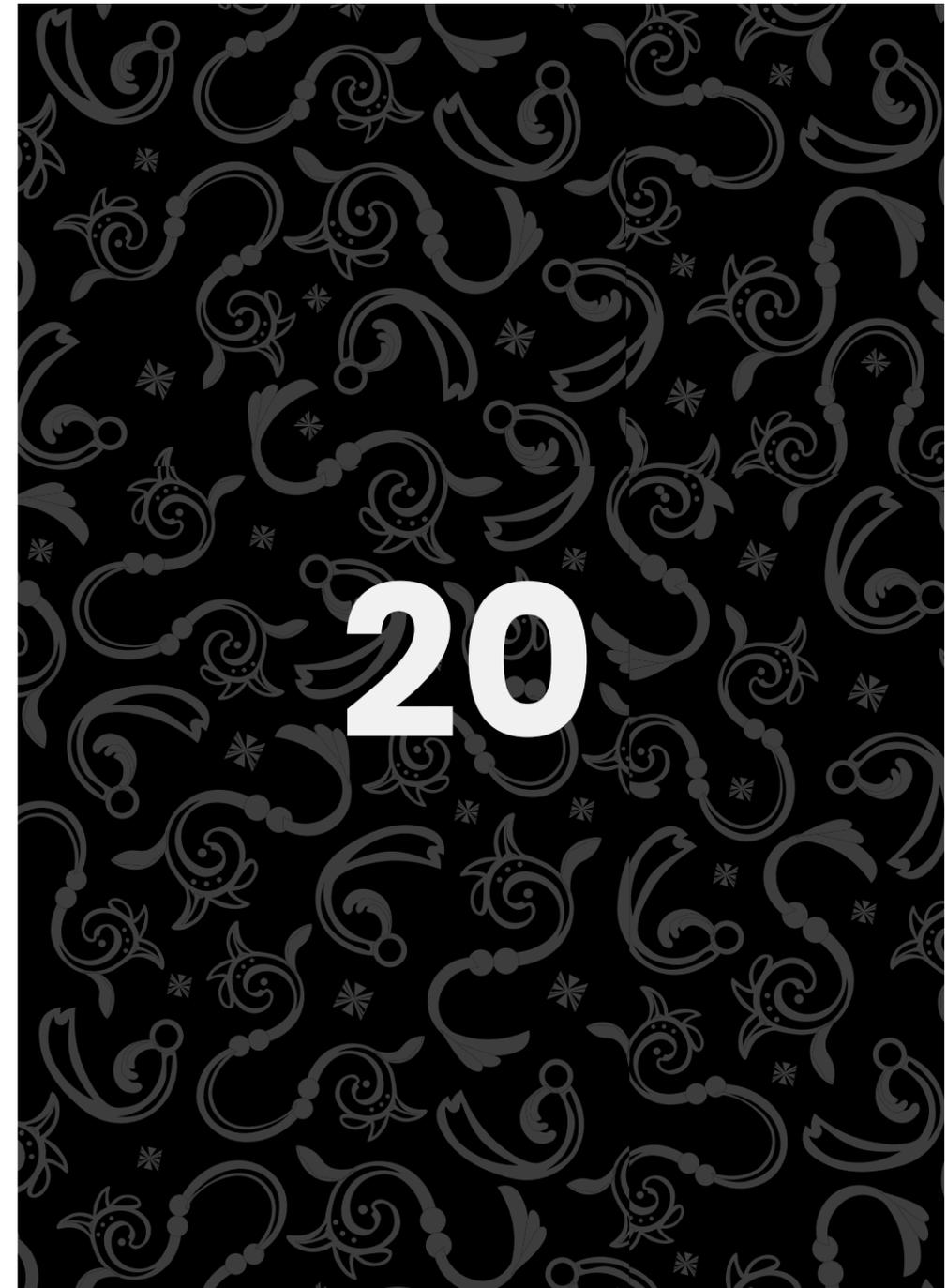
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
 D E F G H I J K L M N O P Q R S T U V W X Y Z A B C

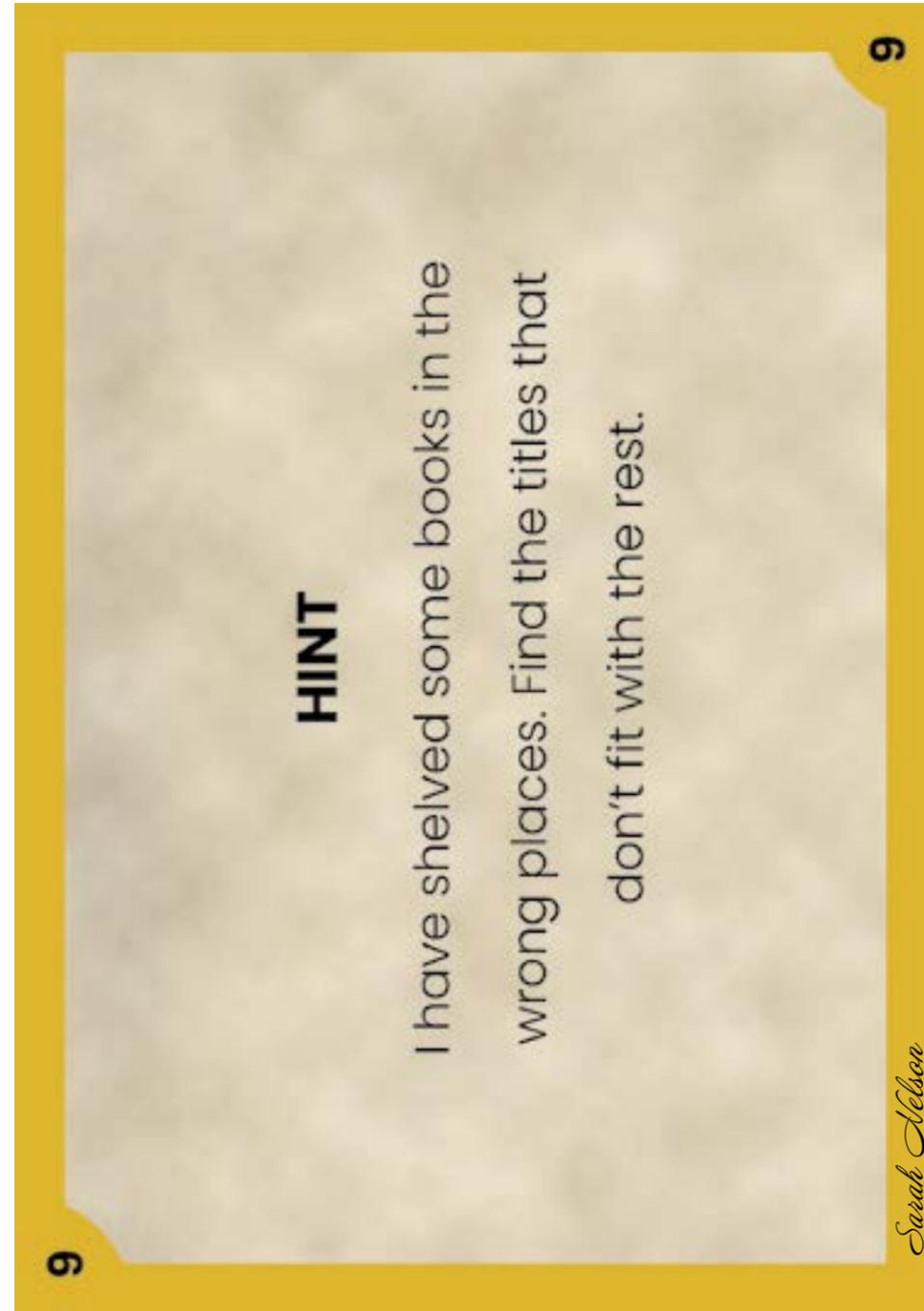
This is an example of a caesar cipher. On the assebled slips D becomes A, F becomes C, H becomes E, and V becomes S. **The answer is Access.**

PUZZLE: 9

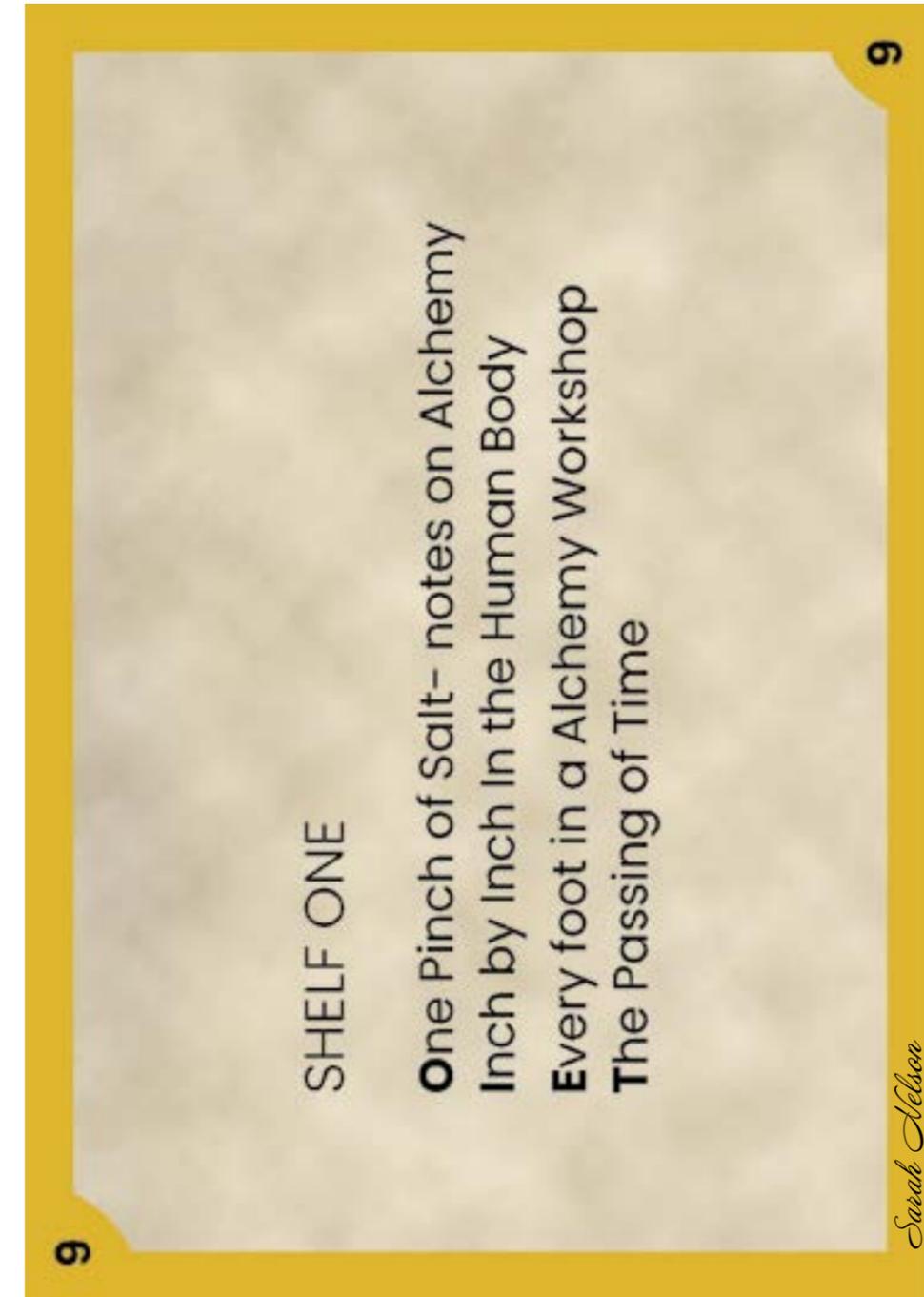
Clue Materials

On these clue cards, there are sets of four titles given. Players are warned to look out for a title that does not fit with the other titles in the group. On each card, the first letter of each title is bold, indicating its importance. When players use the first letter of the misplaced title, a code word forms.

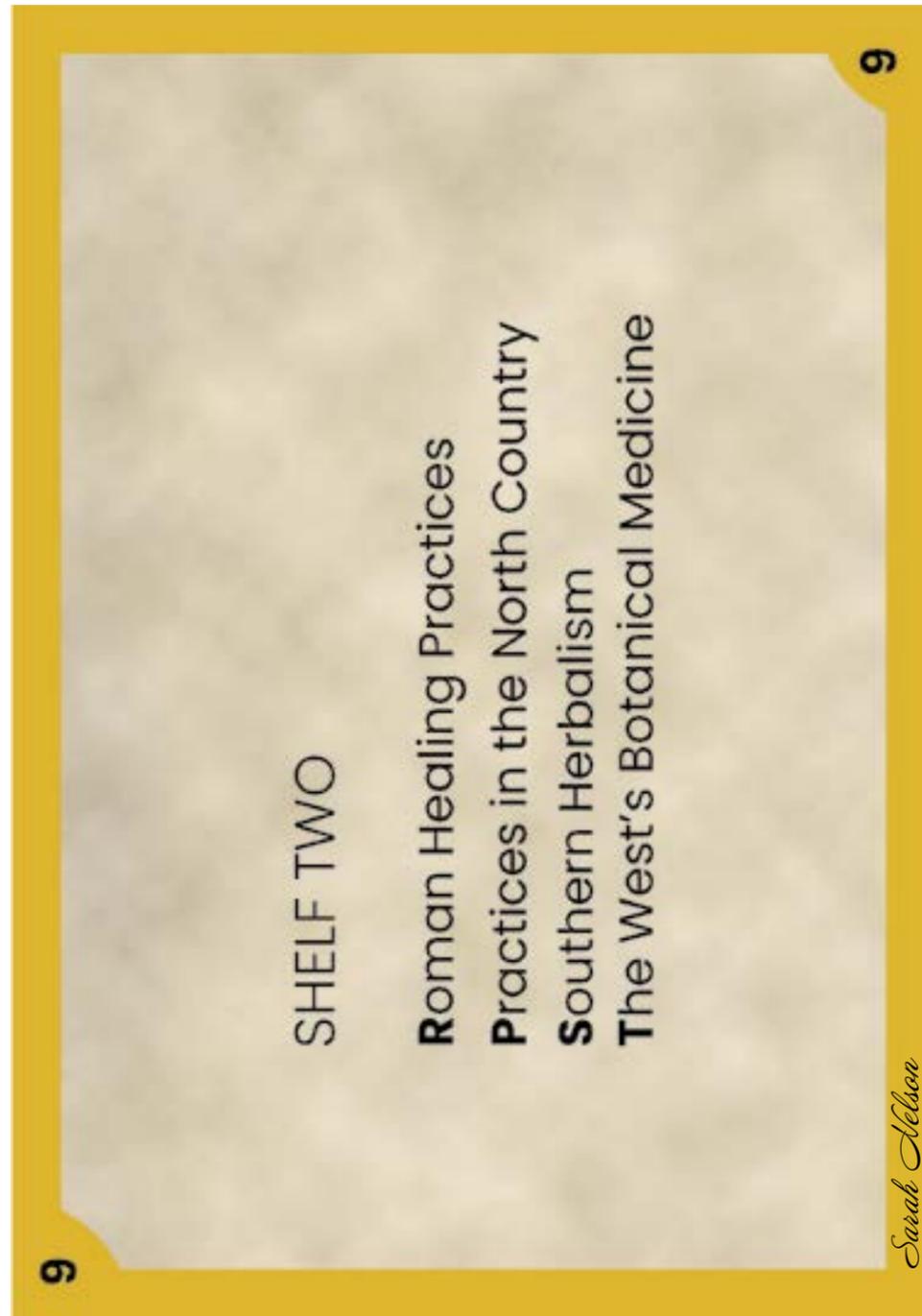




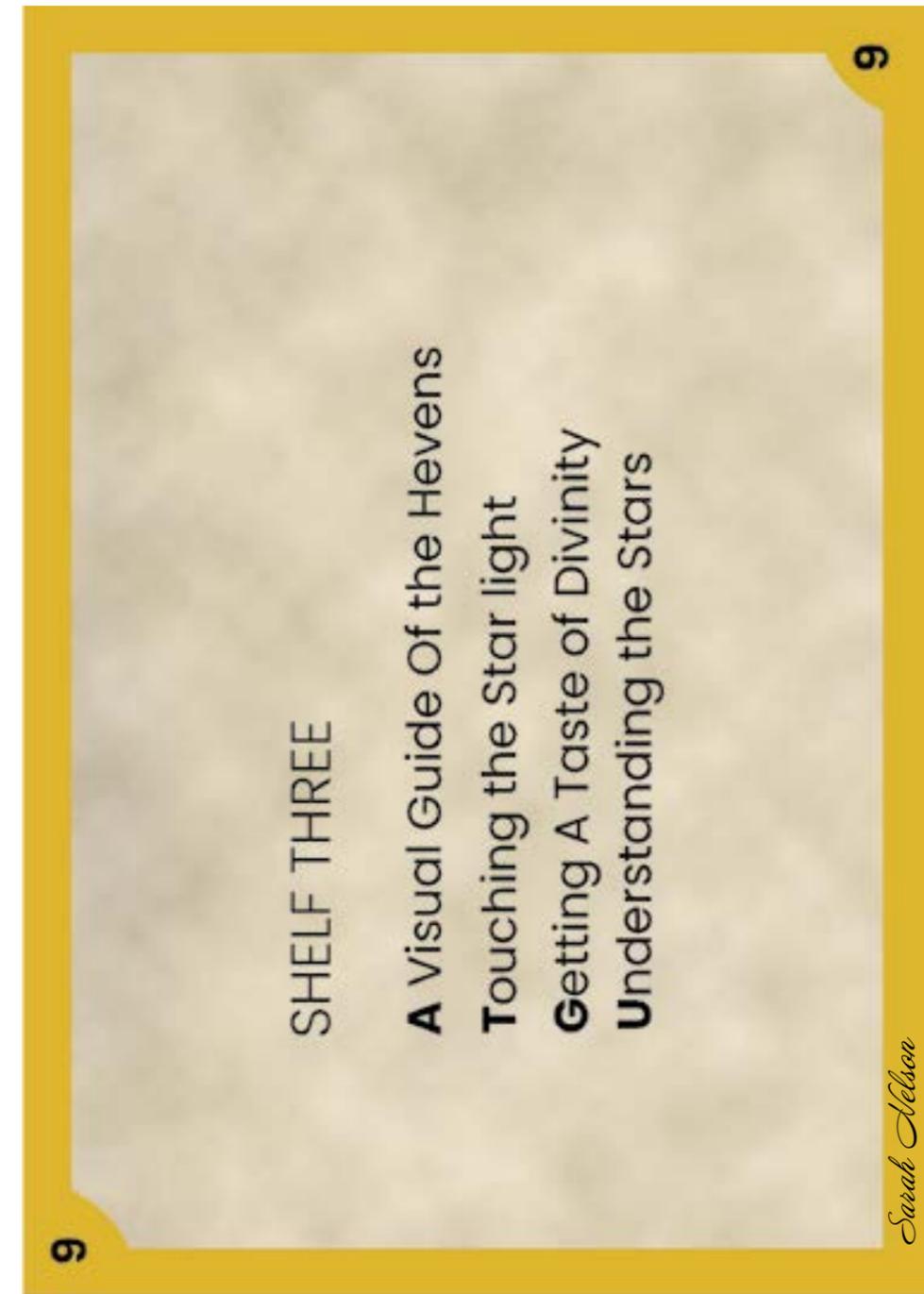
This card is the first of five given to the player. It provides a hint that they need to be looking for titles that are different from the others.



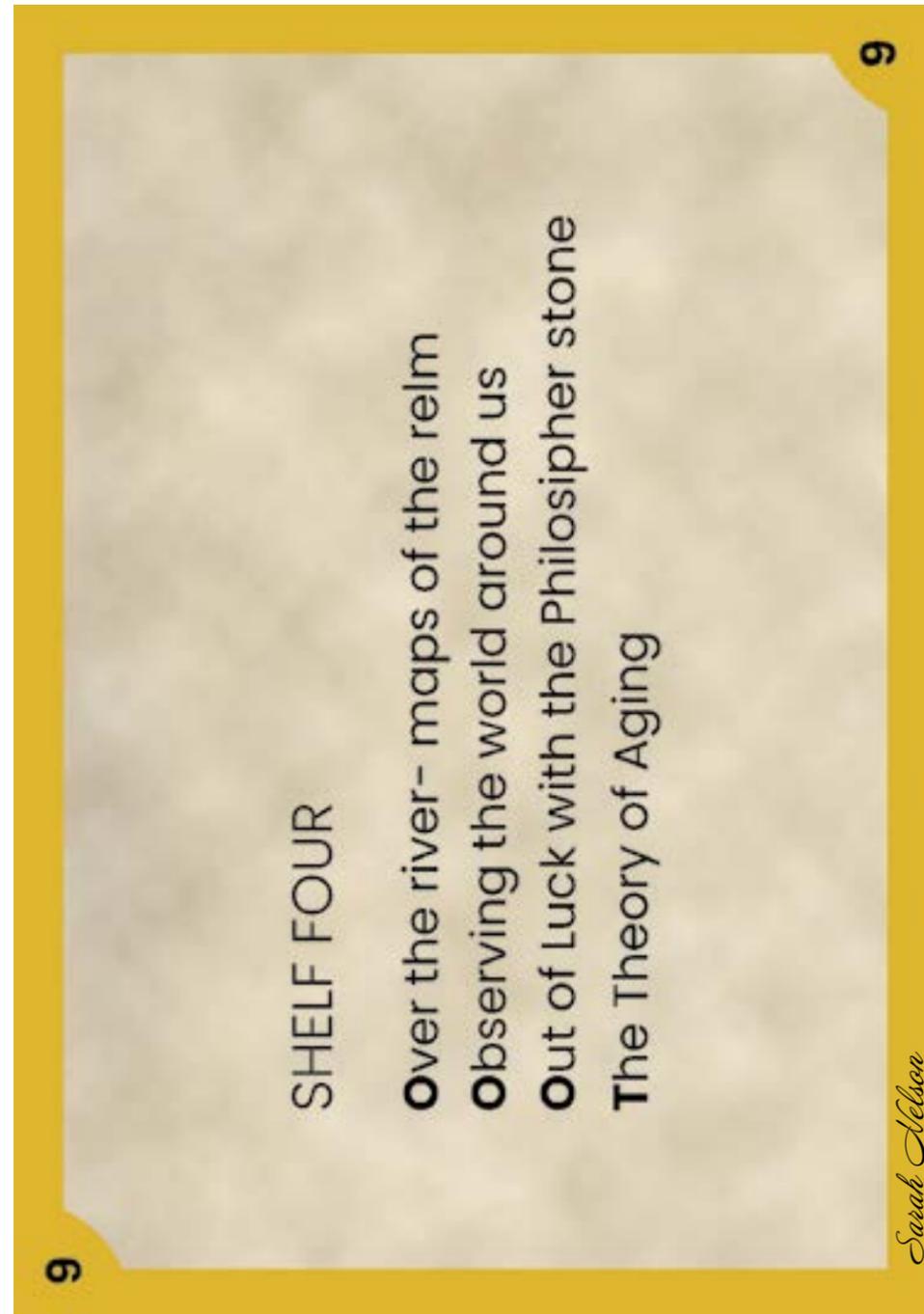
On shelf one all the titles except one contain words that are units of measurement such as pinch, inch, and foot. The only title that does not contain such a word is the last one. The bolded letter indicates the important letter to remember is T.



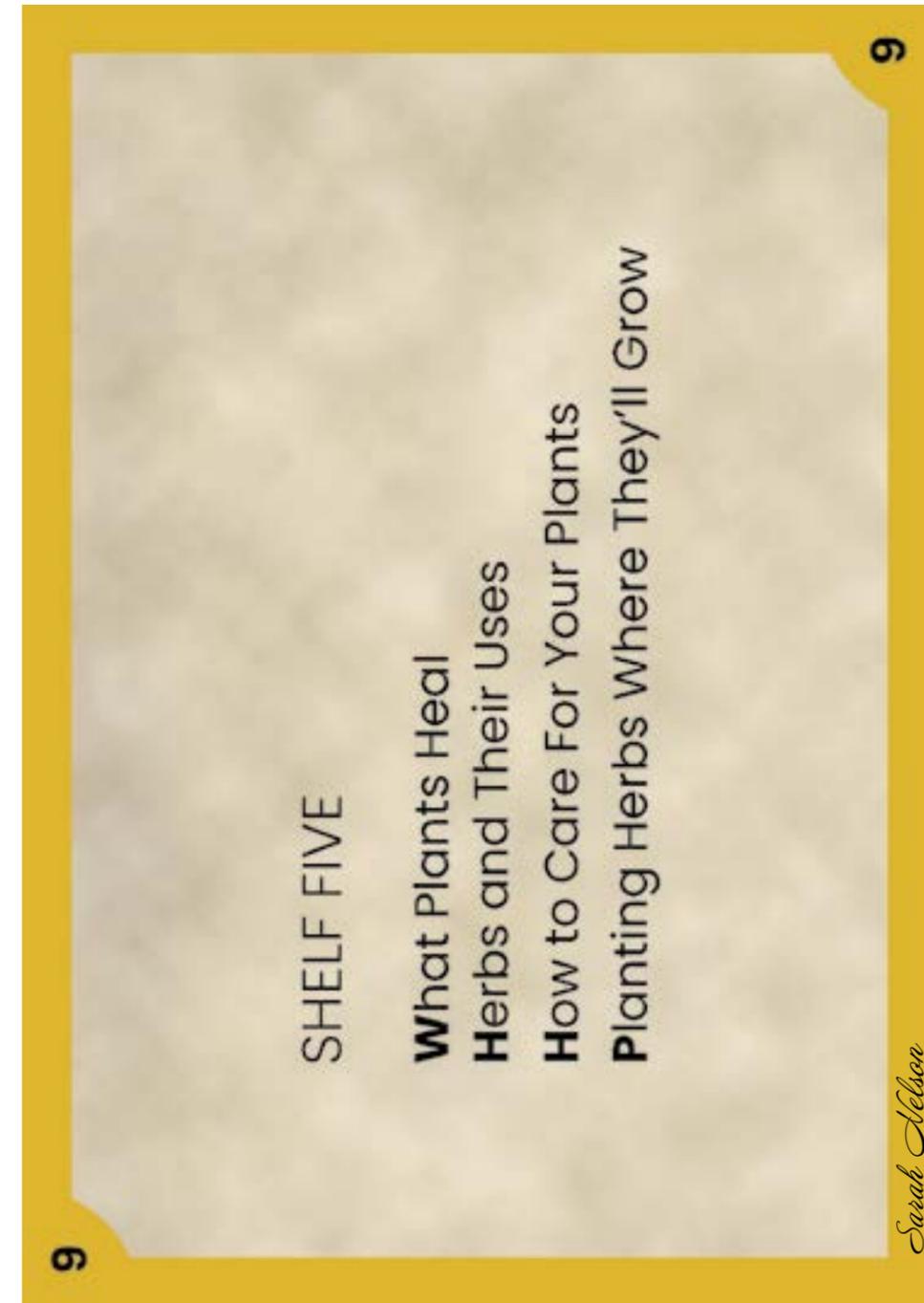
On shelf two the titles three have directions in their titles. The first title does not have a direction in it. The letter that is important from this series of titles is R.



On shelf three the title that have words in common are those with words that are related to the sences. The odd tite is the last one. The letter pulled from that is a U.



On shelf four three of the titles begin with O except the last one. The letter that is important from that title is T.



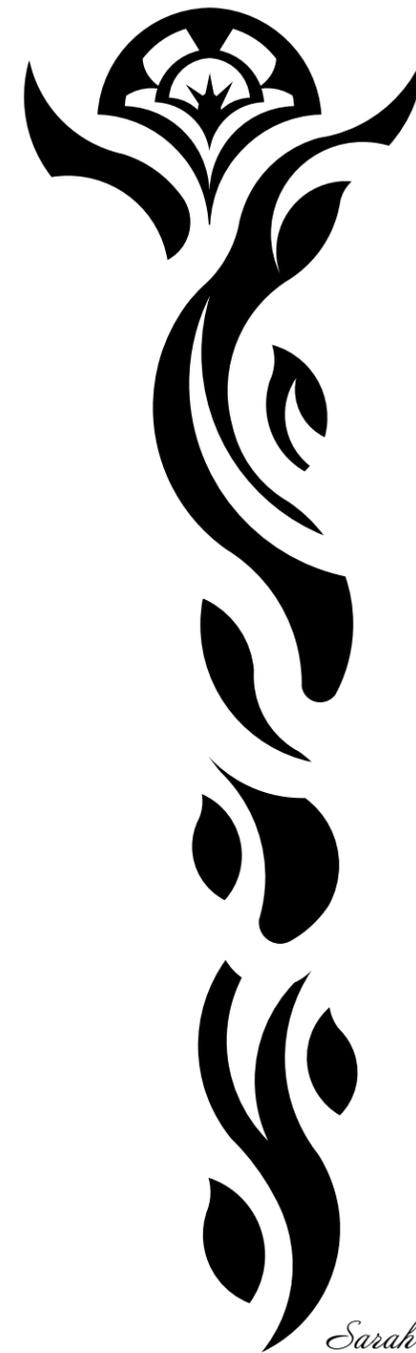
On shelf five three titles have question words such as what, how and where. The only title that does not is Herbs and Their Uses. The important letter is H. When the letters are put together the word spelled out is TRUTH.

CAMELOT CARD SYM-

Icons

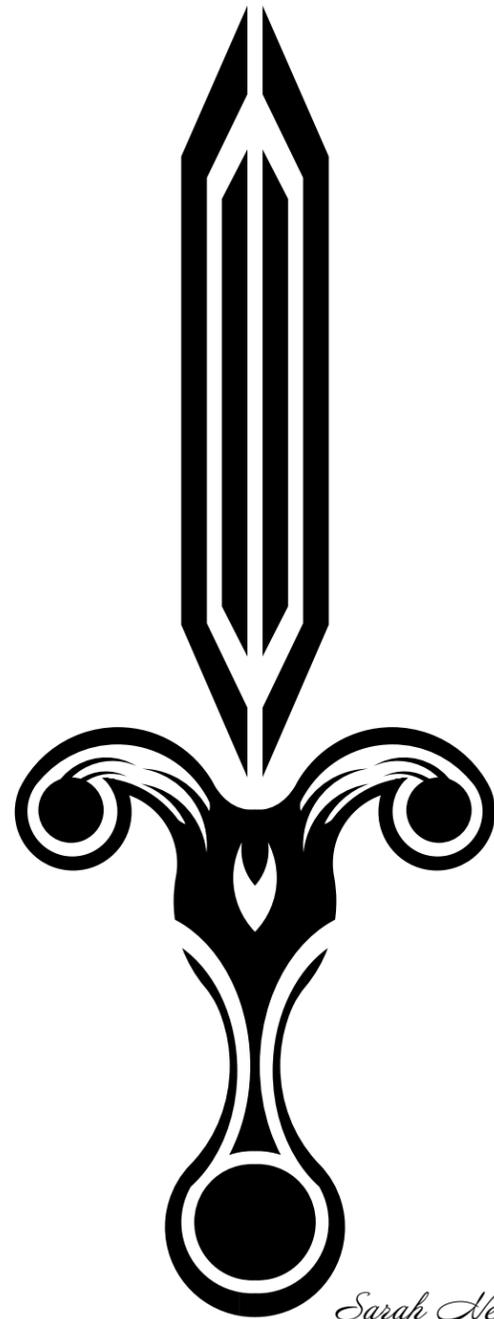
In Camelot there are three games. Each game has two decks of cards and they are identified by these symbols.

These symbols mark each card deck so players can distinguish between the different decks. In the book before each adventure the symbols appear so it is easy to identify what deck is for which game.



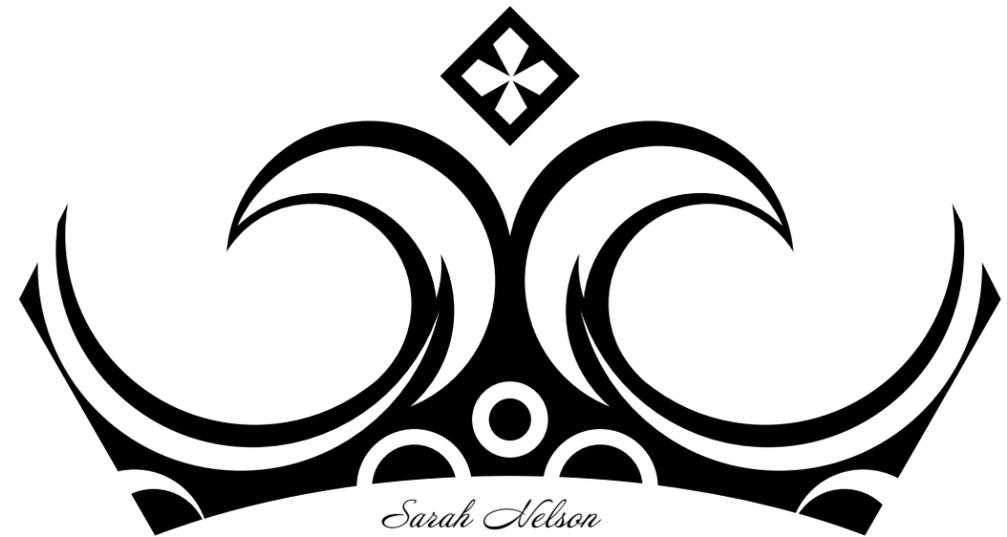
Sarah Nelson

This symbol appears on the deck for the game The Apprentence where the players are trapped in Camelot and must escape in time to make it to Merlin's trials to choose a new apprenticeship.



Sarah Nelson

This symbol appears on the decks for the game Stealing the Stolen. In this game the players are tasked with stealing a stolen sword. They must steal the sword before they are discovered.



Sarah Nelson

This symbol appears on the decks for the game Search for the Crown. Players must search for the crown of King Arthur that is hidden within the walls of Camelot. They must find it before the thieves find it.

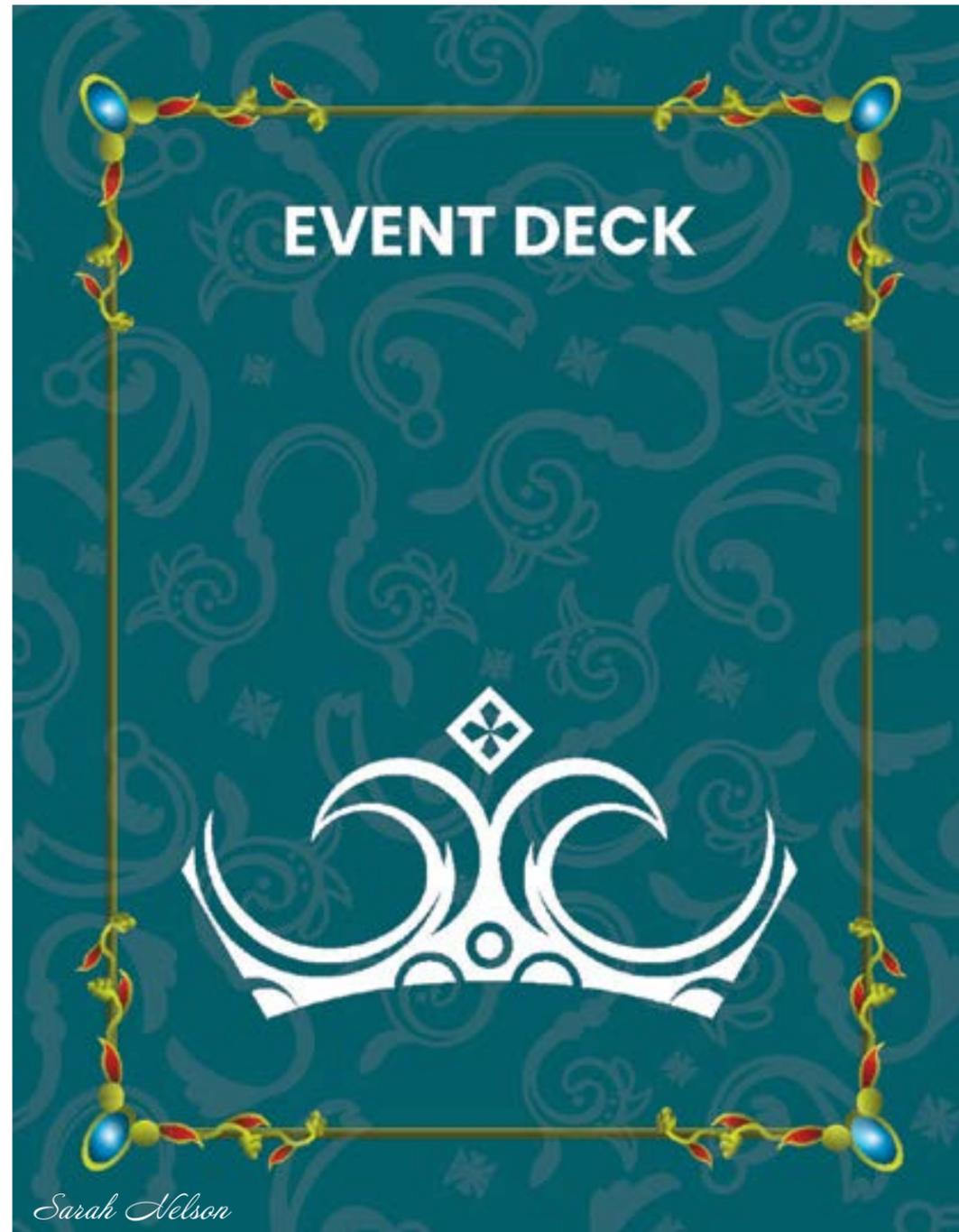
CAMELOT CARD DECKS

Card Deck 1

There are two decks in the game. There is the help deck which has three cards for each puzzle. The first just lets players know what is needed to solve the puzzle. The second card gives a small clue to give a hint on what might be missed. The final card tells players the answer and how it can be solved. The event cards provide different obstacles that players must get past to progress by using items found as they search the room.



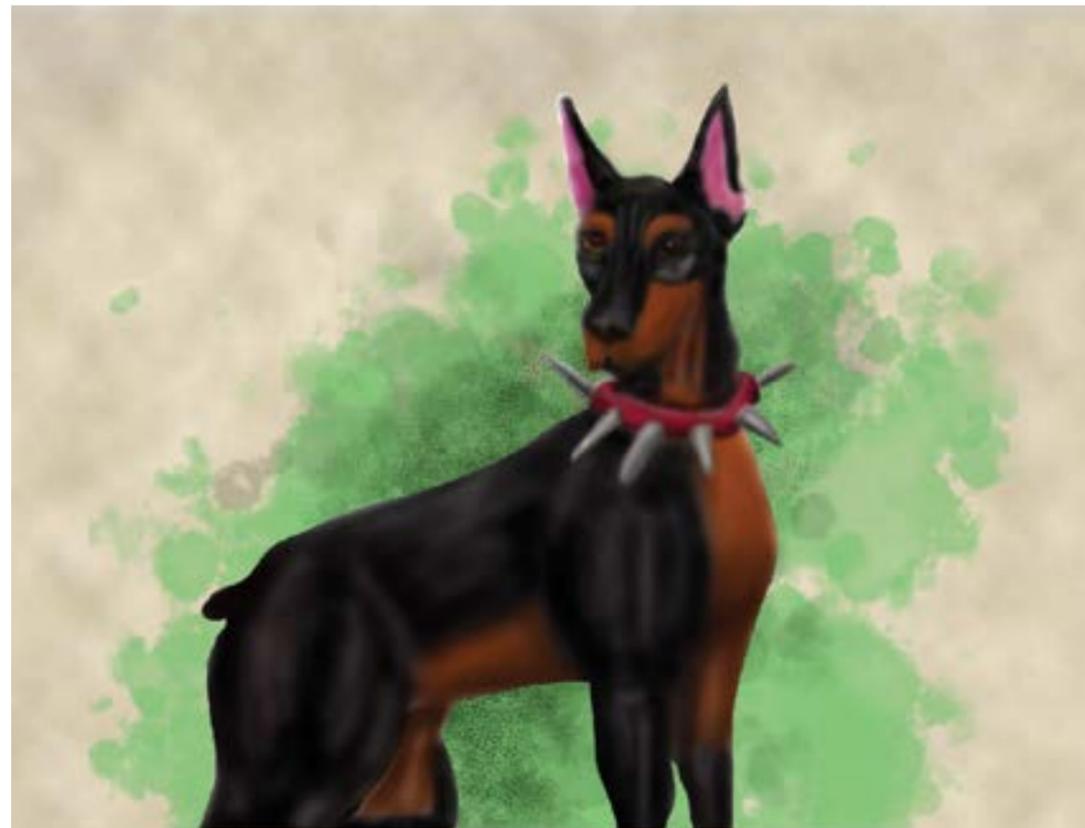
The help deck provides hints for each puzzle in the game. There are three hint cards for each puzzle. The icon identifies which of the three games in the pack it corresponds to.



The event deck contains cards that provide surprises the players must overcome. Each event card deck is different depending upon what game is being played. The icon identifies what game the deck accompanies.



There are different kinds of situations players must overcome. These event cards provide obstacles that provide challenges in the game. They can be overcome using certain game pieces.



DOGS!

They are chained in front of the door you need to go through and they look really hungry

Use a food token to passify them

Sarah Nelson



LIGHTS OUT !

All the candles burn out leaving you in darkness. You can not see anything so you can not see to unlock the next door.

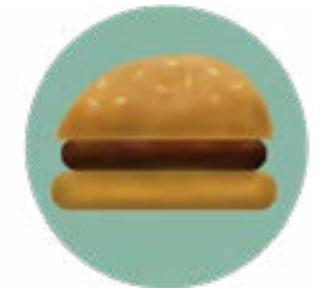
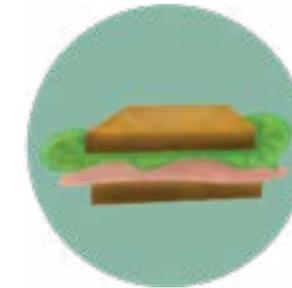
Use a candle token to light the room

Sarah Nelson

PLAY PIECES

Tokens

These are tokens used in the game. The item tokens are collected through the game when players interact with the room. They are used to get past the situations that the event cards create. The keys are collected every time a puzzle is solved. When players get three, they can move to the next room.



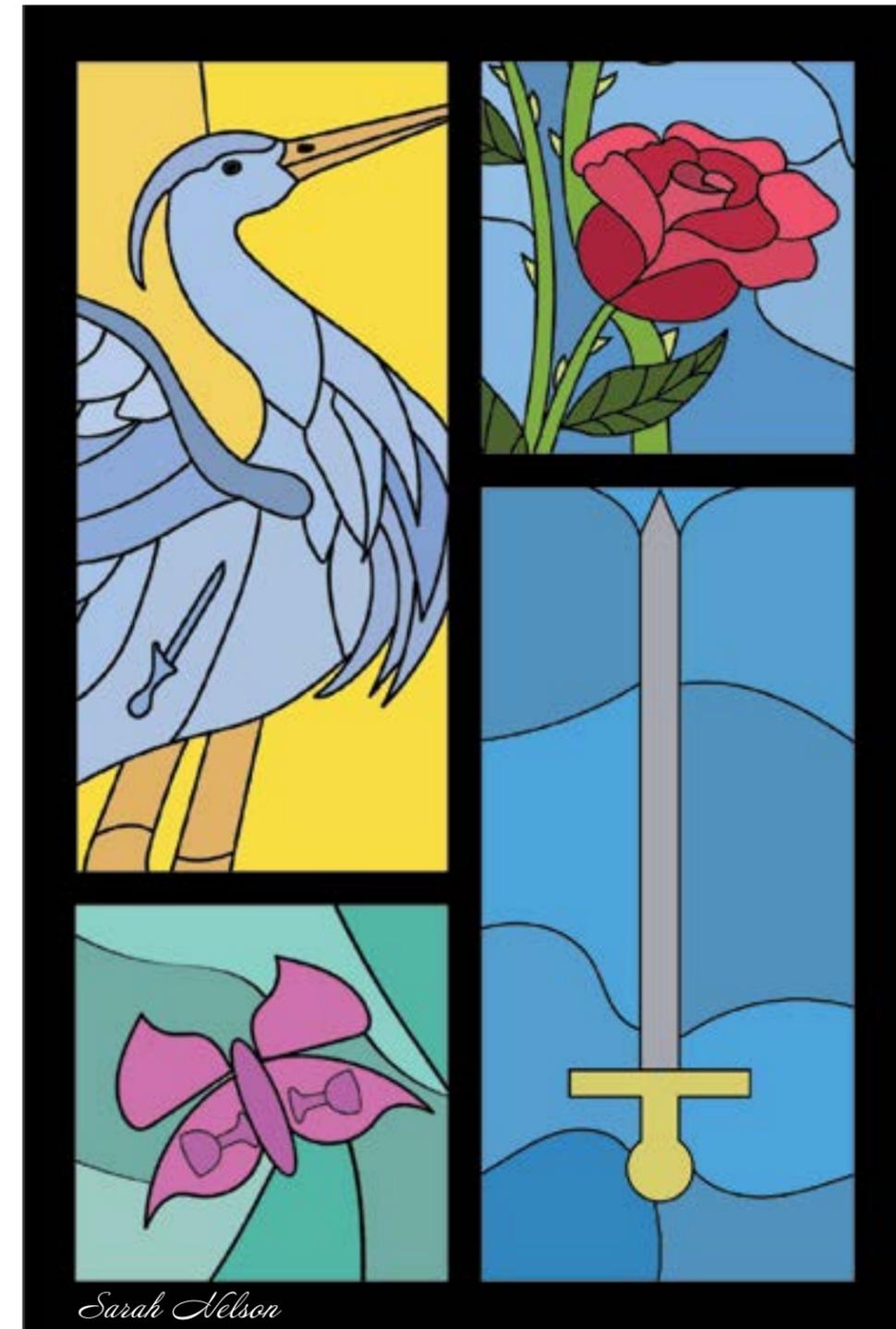
Sarah Nelson

As players search for clues they will find items that they can pick up. These items will help them get past situations that arise in the game. The keys are earned every time a puzzle is solved. There are nine puzzles for each game and solving them all lets players win the game.

POSTCARD 1

Postcard

The artwork on the front provides a reference to the game without providing any details to spoil it. As a result, the postcard generates questions from the viewers as there are objects hidden within two of the illustrations. That curiosity would prompt viewers to follow the link on the back of the postcard. That link would bring them to the website to sign up for the event.



POSTCARD 2

Postcard

The artwork on the front provides a reference to the game without providing any details to spoil the game. It will get viewers excited to learn more about what the postcard is about. They can learn more by following a link on the back.

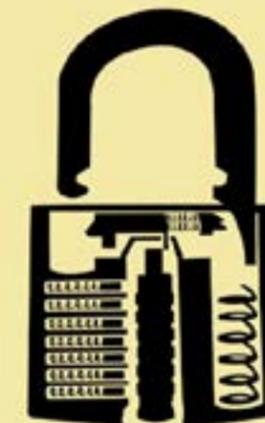


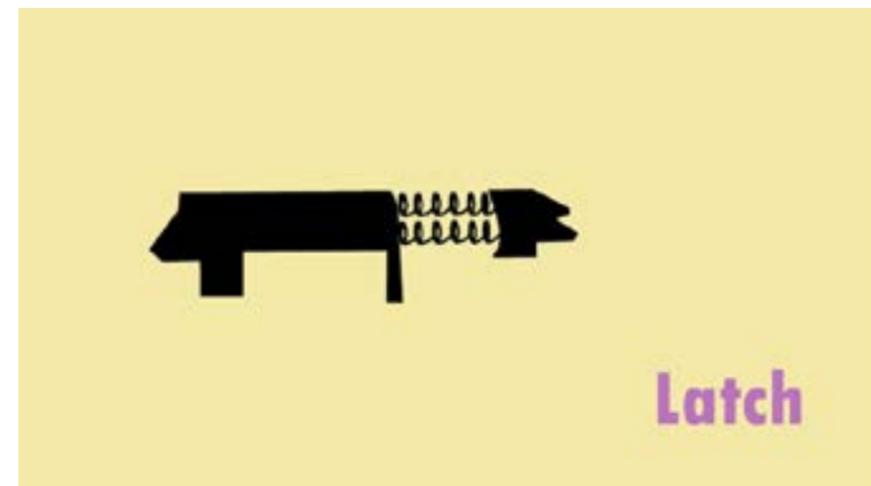
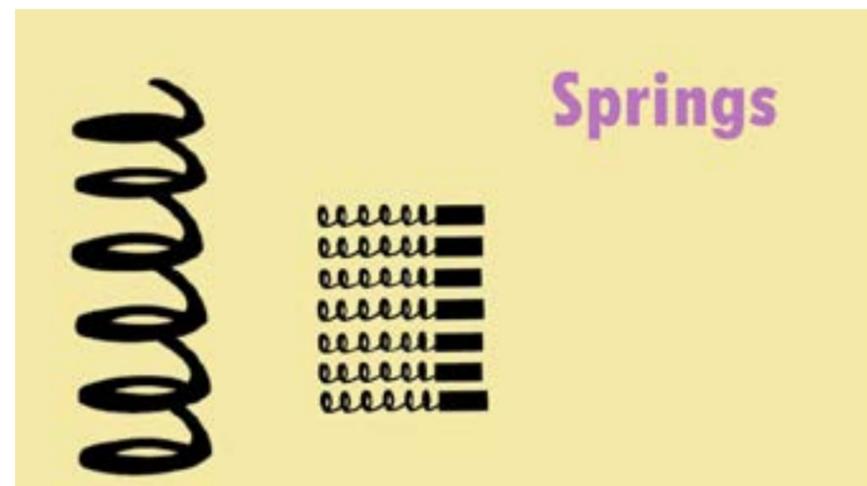
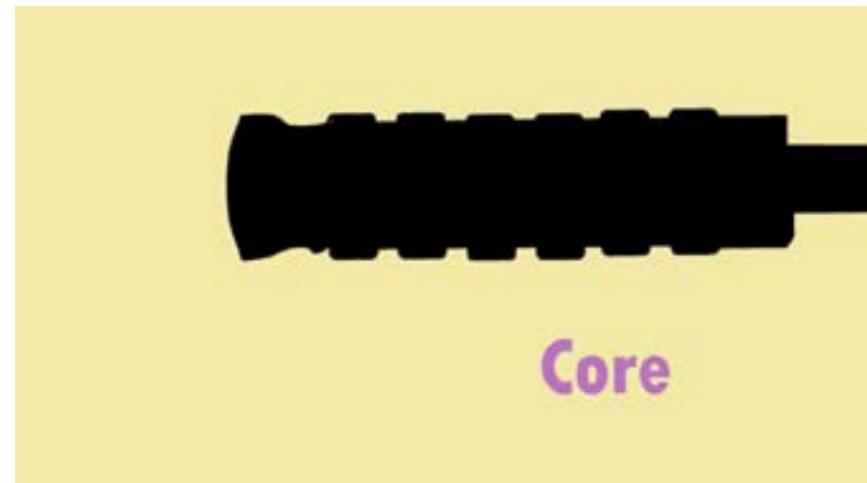
VIDEO 1 STORY BOARD

Anatomy of a Lock Video

One of the key elements of an escape room is the locks. They appear on objects such as cabinets, boxes, doors, etc. These are important because they prevent certain information from being accessed until a task is completed. This video identifies the parts making up a padlock and how all those parts move together to open the hatch.

ANATOMY
OF A
LOCK





VIDEO 2 STORY BOARD

Animated Postcard

Email is one of the quickest ways to get a hold of someone. There is no better way to get the recipient excited for the opening of an escape room than a postcard that moves. The animated front of the postcard conveys the Arthurian theme of the Escape Rooms along with the idea of piecing game elements together to unlock locks. As the front of the postcard draws the viewer in, it will get them interested in clicking on it to learn more.



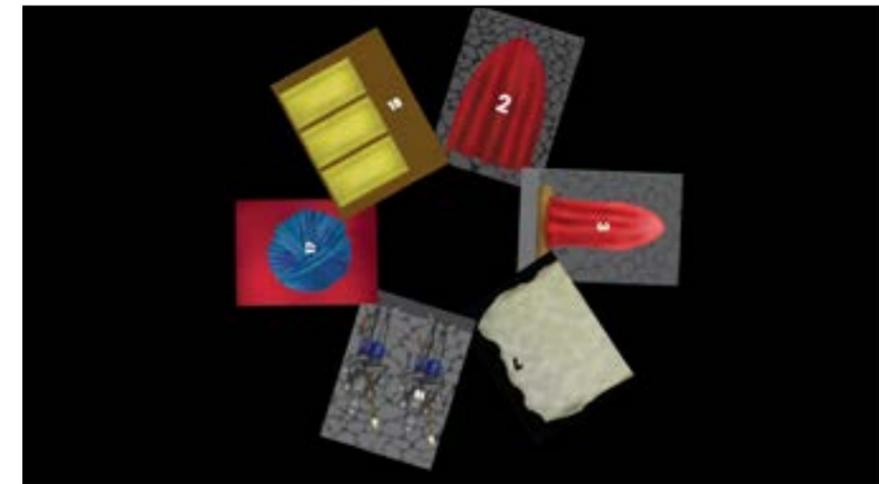
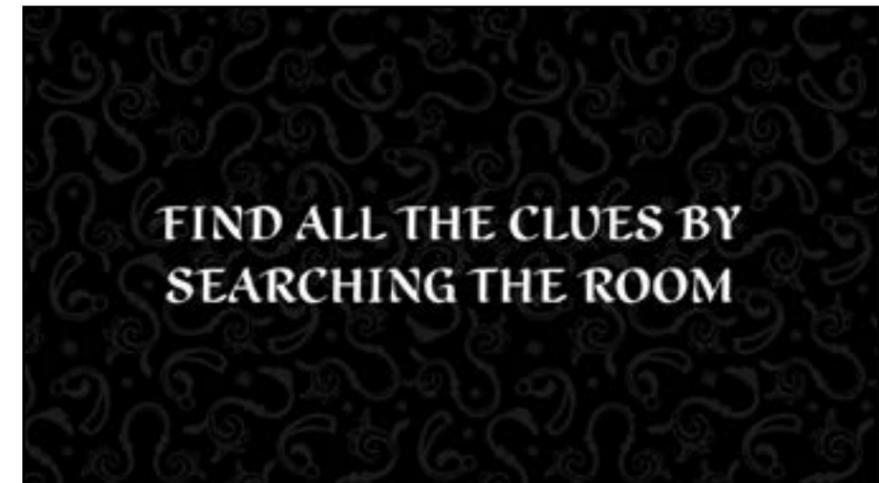
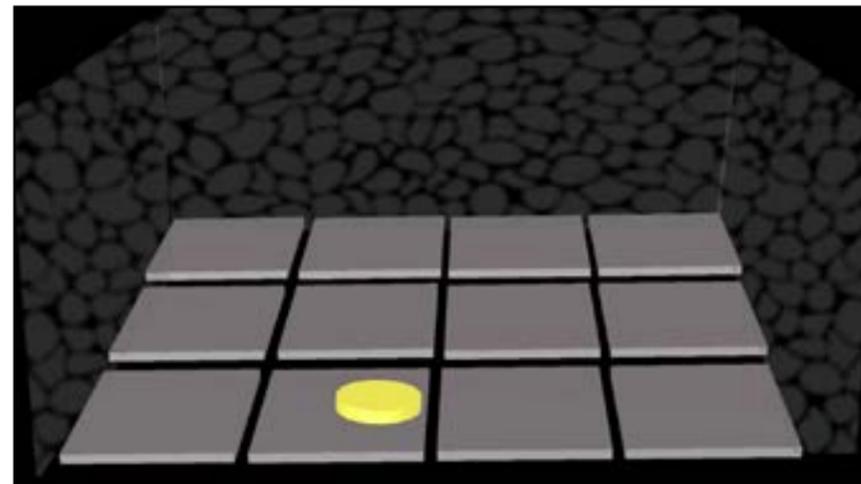
VIDEO 3 STORY BOARD

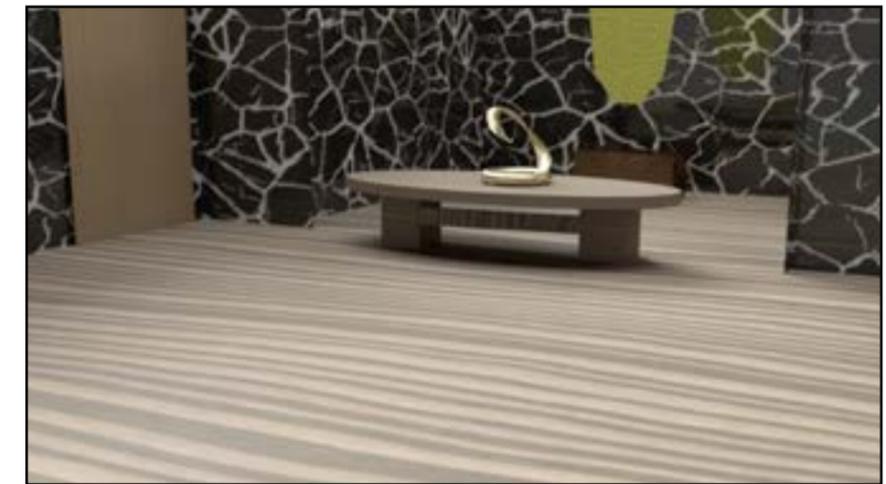
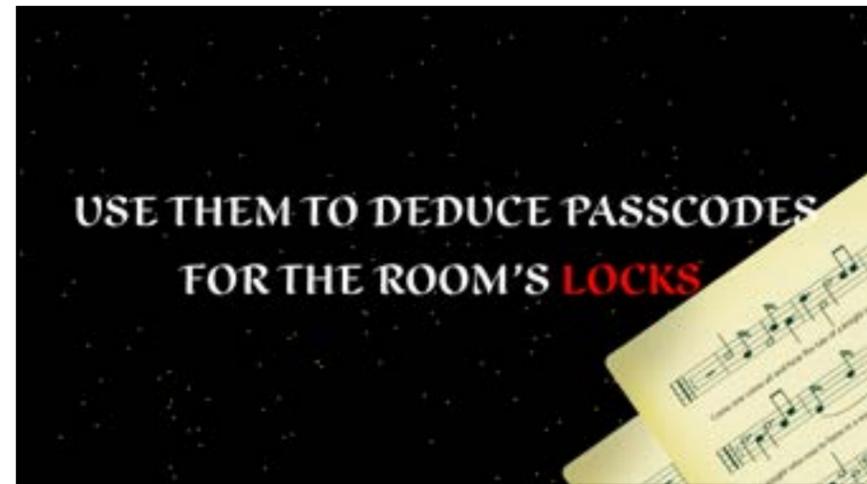
Game Promo

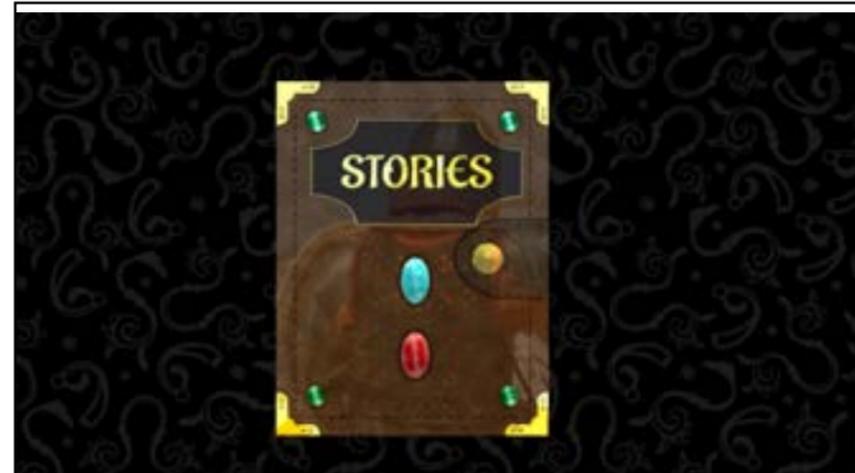
Get a sneak peek of Camelot, a new escape room game, in this promotional video. See the game unfold before your eyes as it takes you through all elements of the game.

Prepare to step into the medieval story that the game centers around. This video raises awareness of this upcoming game as it provides an exciting and engaging overview of the play experience. Most importantly, it gets the audience excited to play so they can see if they can escape the walls of Camelot. This teaser will make any game lover anticipate the release of the game so they can get their hands on it.









CONCLUSION

This project establishes the history, art, and culture surrounding escape rooms. It provides a solid understanding of the artifacts and events that have influenced the design of escape rooms along with the steps for creating an original room. It also explores the culture that the rooms foster by diving into the reason they have remained popular and how fans sustain the practice. This information will continue to inform the way I move forward with developing my escape room game so that experience can be preserved but expanded upon in new ways. This way it will create a community that supports imagination and ambitions.

I also have explored the historical and aspects of King Arthur and the tales of Camelot to tie it into the game. These games offer an experience that can convey information in an immersive and engaging way. What better way to share stories than let people experience it in real life. There is so much possibility with these rooms as it offers ways for people to share their passions with others.

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