Facilitator Answer Key:

The Missing Inventions Time Travel Escape Room is an activity intended to educate young people (ages 10 -12) about **STEM**.
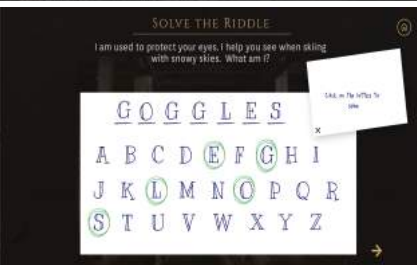
Mission 1

Puzzle 1: What's the year that Garrett Morgan received a patent for the gas mask?

Or

Solve this math problem:
(30*100)+(900/2)+(50+90-20)-(20*100)+(20*20)-56

Answer:1914

Puzzle 2: I am used to protect your eyes, they help you see when skiing with snowy skies. What am I?

Answer: Goggles

Puzzle 3: I am full of holes but I am great at holding water. What am I?

Click on the lower cabinet to reveal the image of sponges (see red circle for where to click)

Answer: Sponge

Puzzle 4: Word Search Puzzle

Answers:
1. **Traffic Light**   2. **Laboratory**   3. **Device**   4. **Sewing Machine**

Final Puzzle

Answer: Cleveland

Mission 1 Key Code: 19 - 3 -9 -5 -14 -3 -5

> 💡 **Tip:** Remind player(s) to write down the Key Code

Mission 2

Puzzle 1: Use the longitude and latitude to identify the year that GPS was launched.
Correct Location: Dahlgreen, VA
Latitude: 32.9961331   Longitude: 96.7815246
Clue: Using the numbers from both the Latitude and Longitude for the year that GPS was first launched

Clue	Answer	Clue	Answer
First #: Use Latitude position 6	**1**	Third #: Use Longitude position 3	**7**
Second #: Use Latitude position 3	**9**	Fourth #: Use Longitude position 4	**8**

Answer:1978

Puzzle 2: What does GPS stand for?

Answer: Global Positioning System

Puzzle 3: Select careers that Gladys West held

Answers: Mathematician, Computer Programmer, Inventor, Educator

Puzzle 4: How GPS Works

Answers:
1: **Locations**
2: **Light**
3:   **GPS**
4: **Geometry**

Puzzle 5: Have players click on the image to find the answer. The satellite with the answer is in the lower left portion of the image (see red circle for where to click).

Answer:24

Final Puzzle: Enter secret code, the number of satellites launched as part of the original GPS system to return back to the present. (Hint: Answer from last puzzle)

Answer: 24

Mission 2 Key Code: 20 - 5 - 3 - 8 - 14 - 15 - 12 - 15 - 7 - 25

Tip: Remind player(s) to write down the Key Code

Mission 3

Puzzle 1: Click the numbers/operations for the correct position to reveal the year the 1 GHZ microprocessor was created.

Selections

-	9	40	x

Answer:1999

Puzzle 2: Click around the room to find the next clue.

Answer: Laptop with white screen on the storage rack. Note: Player has to click the laptop to have the arrow appear to advance.

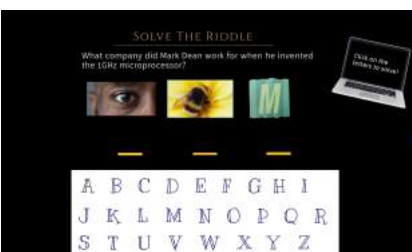**Puzzle 3:** Jigsaw Puzzle w/ 4 Questions. Each Multiple Choice

Answers:

Q1	Q2	Q3	Q4	Code
1,000,000,000 Hz	27 Tons	China	XBOX	0110

Puzzle 4: Code from previous puzzle

Answer:0110

Puzzle 5: What company did Mark Dean work for when he invented the 1 GHZ microprocessor?

Answer: IBM

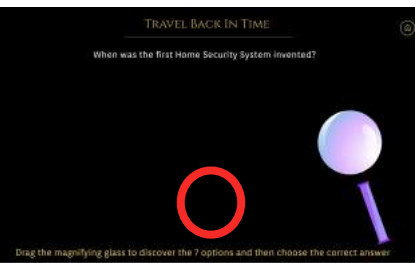**Final Puzzle:** Text the name of the company Mark Dean worked for. (Hint: Answer from last puzzle)

Answer: IBM

Mission 3 Key Code: 5 - 14 - 7 9 - 14 - 5 - 5 -18 - 9 - 14 - 7
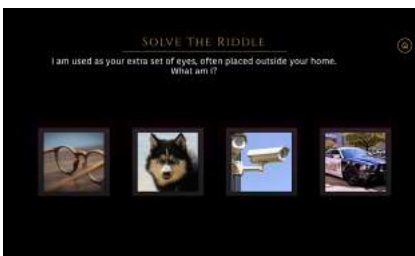
💡 **Tip:** Remind player(s) to write down the Key Code

Mission 4

Puzzle 1: When was the first Home Security System invented? Search for the correct year using the magnifying glass.
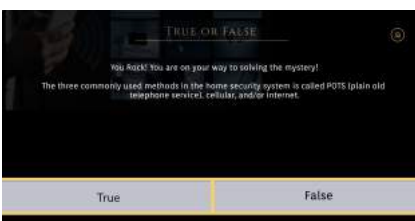
Answer: 1966

Puzzle 2: I am used as your extra set of eyes, often placed outside your home. What am I?
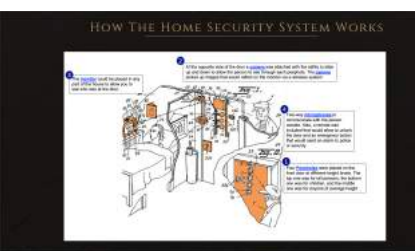
Answer: Camera

Puzzle 3: Which of the following was not included in the home security system invented by Marie Van Brittan Brown?

Answer: Cell Phone

Puzzle 4: The three commonly used methods in the home security system is called POTS (plain old telephone service), cellular, and/or internet.
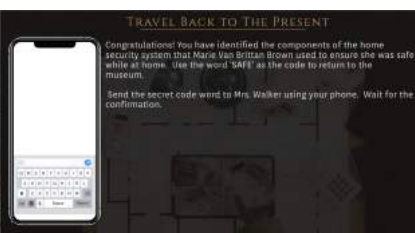
Answer: **True**

Final Puzzle: How the Home Security System Works

Answers:

1. Peepholes	2. Camera	3. Monitor	4. Microphones

Secret Code Word: Safe

Mission 4 Key Code: 13 - 1- 20 -8

💡 **Tip:** Remind player(s) to write down the Key Code

Restore the Mission

Puzzle 1: Unlock Restore Exhibit! Enter first digit(s) of each Mission Key Code in order.

Answer: 19-20-5-13 (Hint: Enter without spaces or dashes)

Puzzle 2 - Gas Mask 1914: Have the play use the **Mission 1** Key Code to find the corresponding letters on the cipher wheel to spell a word. Have the player click the red arrow to bring up the screen. Enter code translated from Mission 1 key. (Hint: All CAPS)

Answer:SCIENCE
Mission 1 Key Code: 19 - 3 -9 -5 -14 -3 -5

Puzzle 3 GPS 1978: Have the play use the **Mission 2** Key Code to find the corresponding letters on the cipher wheel to spell a word. Have the player click the red arrow to bring up the screen. Enter code translated from Mission 2 key. (Hint: All CAPS)

Answer: TECHNOLOGY
Mission 2 Key Code: 20 - 5 - 3 - 8 - 14 - 15 - 12 - 15 - 7 - 25

Puzzle 4 Home Security 1966 Have the play use the **Mission 3** Key Code to find the corresponding letters on the cipher wheel to spell a word. Have the player click the red arrow to bring up the screen. Enter code translated from Mission 3 key. (Hint: All CAPS)

Answer: **ENGINEERING**
Mission 3 Key Code: 5 - 14 - 7 9 - 14 - 5 - 5 -18 - 9 - 14 - 7

Puzzle 5 1GHZ Microprocessor: Have the play use the **Mission 4** Key Code to find the corresponding letters on the cipher wheel to spell a word. Have the player click the red arrow to bring up the screen. Enter code translated from Mission 4 key. (Hint: All CAPS)

Answer: MATH
Mission 4 Key Code: 13 - 1- 20 -8

Timeline Complete