The Amazing Trick Assessment Task.

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

Using the scientific properties of light, shine a light through a maze. The light must enter the door at the front and leave the box through the back.

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| Challenge 1 |
| A. Construct a model of the maze using a box and the maze template provided. Use cardboard to create the walls. B. Place your cardboard mirrors to transmit light from doorway 1 to doorway 2. You will:* Use a torch as your light source
* Make your light source enter the box from doorway 1
* Adjust your maze to allow the light to reach doorway 2.

**Note:** You cannot change the position of the walls in any way. |
| Materials and Equipment |
| * Plastic mirrors
* Adhesive putty
* Torch
* Scissors
* Tape
* Black paper to show the light source as it exits doorway 2
* A small box, e.g. a shoebox
* Cardboard
 |
| Diagram |
| Draw an annotated ray diagram to show how the light travels through the maze. |
| Steps |
| List the steps that you have used to transmit light from doorway 1 to doorway 2 |
| Identify any problems that you had transmitting light from doorway 1 to doorway 2.Explain how you solved these problems. |
| Challenge 2 |
| Make a change to the maze that affects the appearance of the light as it exits doorway 2. You must:* Keep the light source the same (the torch)
* Keep wall A and wall B in their original position.
 |
| Plan first. |
| List possible changesCircle the variable that you will change (C) in the list aboveList the variables that you will not change. |
| Investigation Question. |
| What happens to the appearance of the light when I change  |
| Prediction |
| If we changeThenBecause |
| Diagram |
| Draw an annotated diagram to show how you predict the light will travel if you make this change to your maze. |