

Streetlight Challenge

Get the streetlights Working Again



Read the Story and Mission

"One quiet evening, the streetlights in your city suddenly stopped working! The roads became dark, and people can't walk safely. You're the city helper and it's up to you, to fix the broken lights and make the streets safe again. Solve the puzzles, follow the steps, and light up the street so the city can shine bright once more! **Get started!**"

INSTRUCTIONS

Activity - 1



Build the House



What You Need

1. Maze sheet
2. Cut-out house
3. Cut-out Streetlight
4. Glue stick
5. LED
6. Copper tape
7. 3V coin battery

1

Take the **cut-out house** and fold along all the dotted lines then put glue on parts **labelled "apply glue"**. Then, stick them together to form a house shape.

2

Put glue behind parts **A, B, C, and D**, then stick the house onto the **Maze sheet** where it says **"house"**. Face the house to the road.

3

Activity - 2



Solve the Maths and Maze

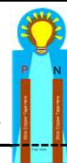
- a) Take your **maths cards** and your **maze sheet**.
- b) To figure out the correct path, answer **question 1 and 2** on the maths card and circle the answer on the maze sheet.
- c) Attach a copper tape from point **P to S**, through the circled answers. Make sure the tape goes all the way without any gaps.
- d) To figure out the second path, do **question 3** on the maths card. Circle the answer on the maze sheet. Then stick copper tape on the path from **N to Q** through the answer for question 3.

4

Activity - 3



Make the Streetlight



Get the **cut-out streetlight**. This is the piece that will become your streetlight. Stick copper tape on the part labelled **"copper tape"** only.

5

Stick the **long leg (positive)** of the LED to **1** and the **short leg (negative)** to **2**, using copper tape. **Test if your connection is correct** by holding down the positive (red) wire of the battery on **3** and negative (black) on **4**. If the LED lights up, then you're good to go. If it didn't work, check the connection again, press down to make sure there is no break.

6

After it worked, remove the battery and continue the following. Take the streetlight cover, peel off the back and stick it on the part with copper tape. The LED should pass through the hole.

7

Fold along the dotted line and put glue behind the part labelled **3** on the streetlight. Stick it on the maze sheet where it says **"streetlight"**.

Activity - 4

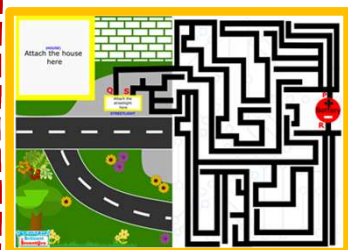


Final Steps to Light it Up!

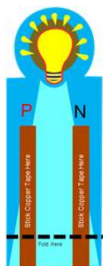
8

Use copper tape to connect **3** on the streetlight to point **S** on the **puzzle sheet**. Also, connect point **4** to point **Q**. Make sure the tape path is not broken so the light works.

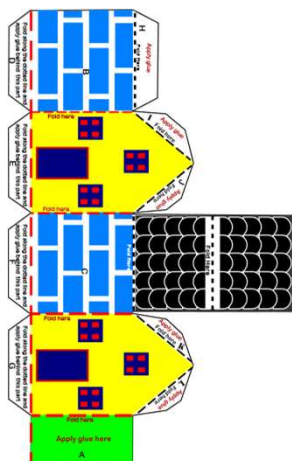
Connect the positive side of the battery (**red wire**) to point **P** using a piece of copper tape. Also, connect the negative side of the battery (**black wire**) to point **N**. Turn the battery switch **ON** and the streetlight would come on. Check your connection if it doesn't work.



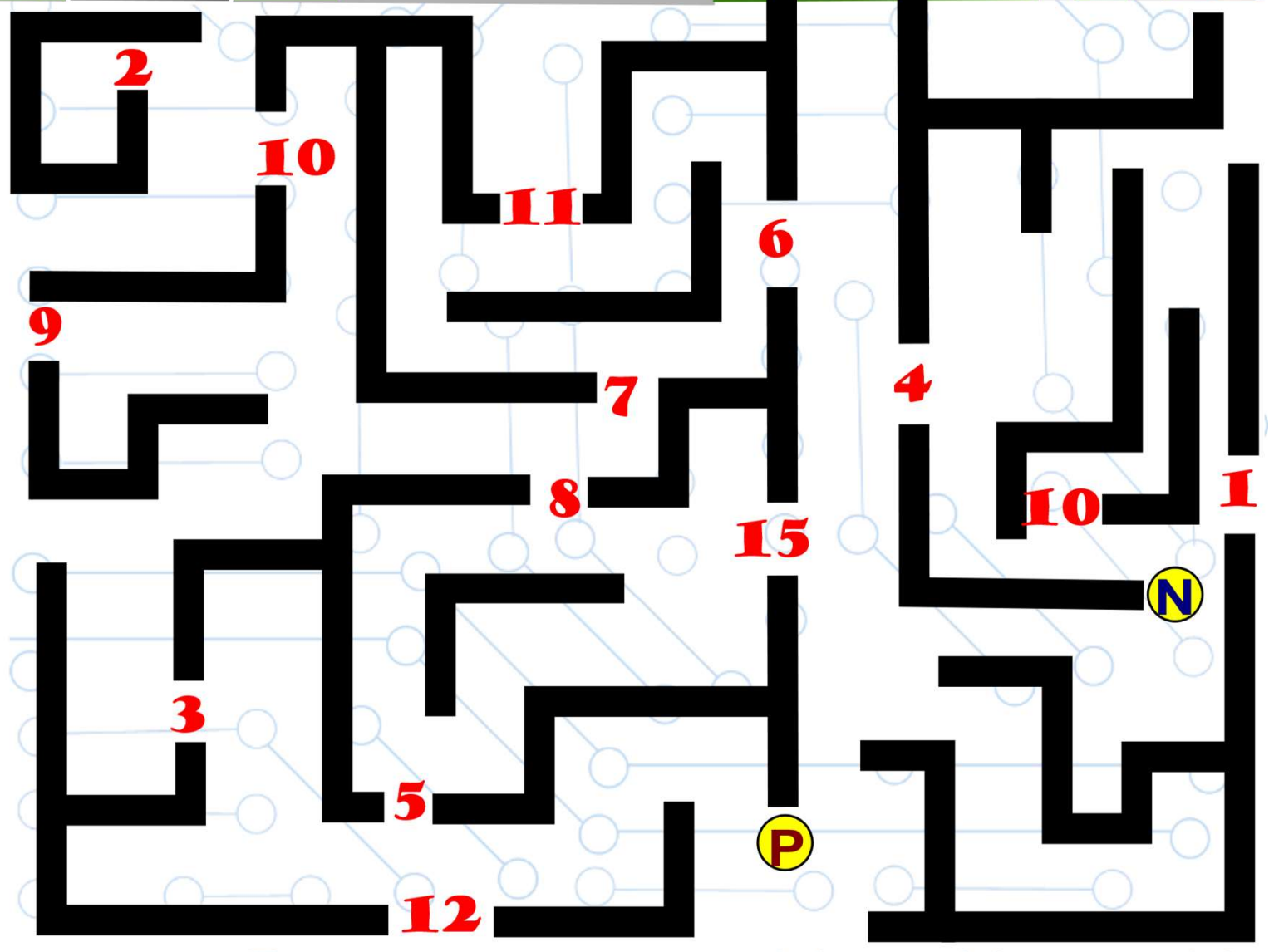
Maze Template

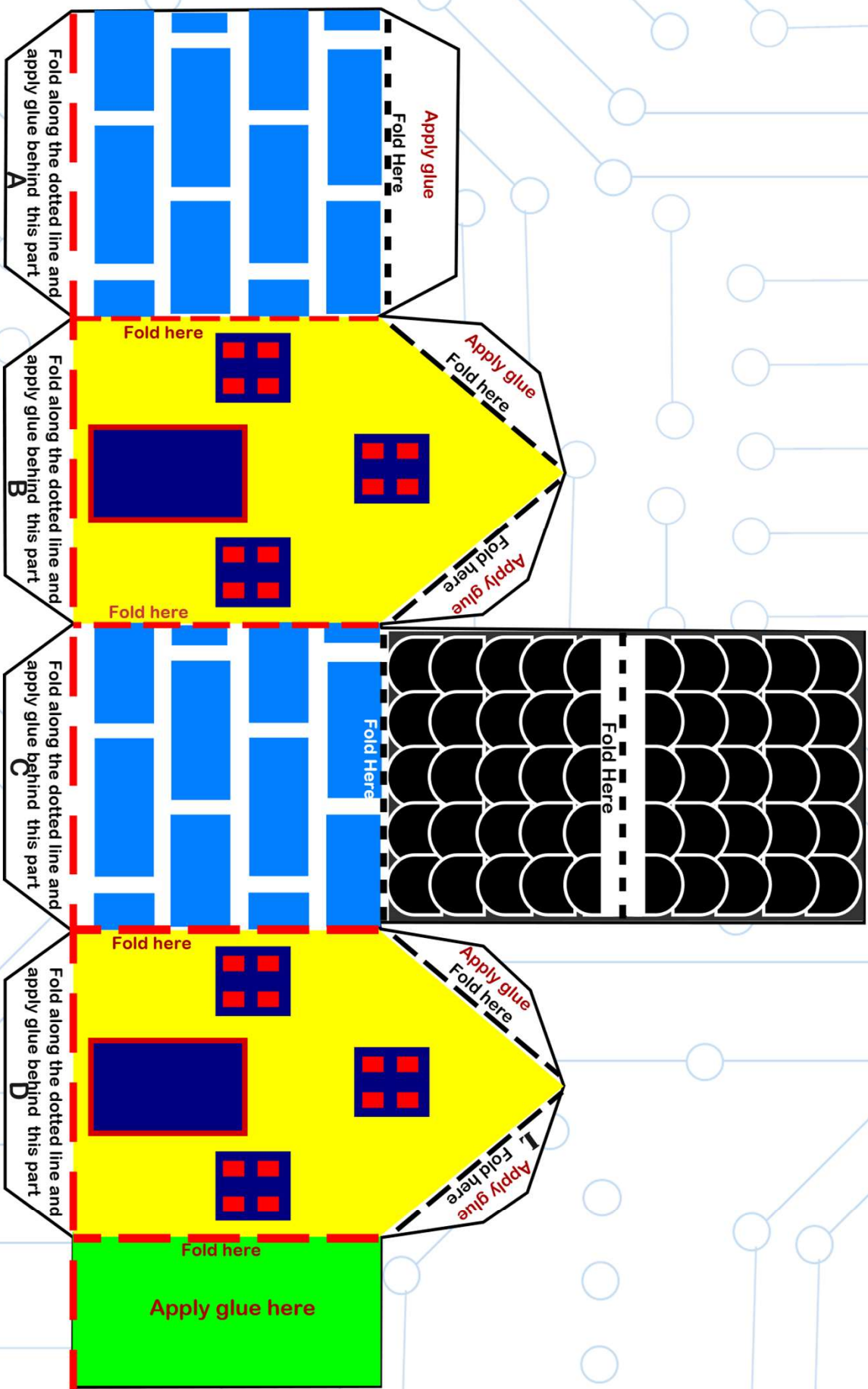


Streetlight



Cut-out house





Street Light

QUESTION 1

MATHS CARD

What is $12 - 6 = ?$

Choose the correct answer below:

A 1
 B 6
 C 11

Go to the puzzle template and circle the correct answer

☐ Tick the box when completed



Street Light

QUESTION 2

MATHS CARD

What is $30 \div 2 = ?$

Choose the correct answer below:

A 4
 B 10
 C 15

Go to the puzzle template and circle the correct answer

☐ Tick the box when completed



Street Light

QUESTION 3

MATHS CARD

What is the missing number?

2

6
8
10
12

A 8
 B 5
 C 4

Go to the puzzle template and circle the correct answer

☐ Tick the box when completed



