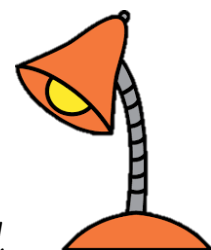




Year 5 See the Light

TEACHER REFERENCE GUIDE

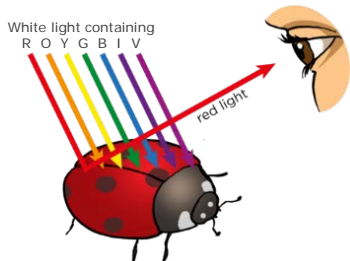


WORKSTATION #1 – ABSORPTION

1a) Which light energy was absorbed by the beads to make them change?

- Visible (white light) Ultraviolet (UV) Infrared

1b) Colours we see are a combination of different colours of visible light being **ABSORBED** or **REFLECTED**



What is your favourite coloured shirt to wear? _____
 Which colour/s of light are reflected by this shirt? same as 'favourite colour'
 Which colour/s of light are absorbed by this shirt? All of Red, Orange, Yellow, Green, Blue, Indigo, Violet EXCLUDING 'favourite colour'

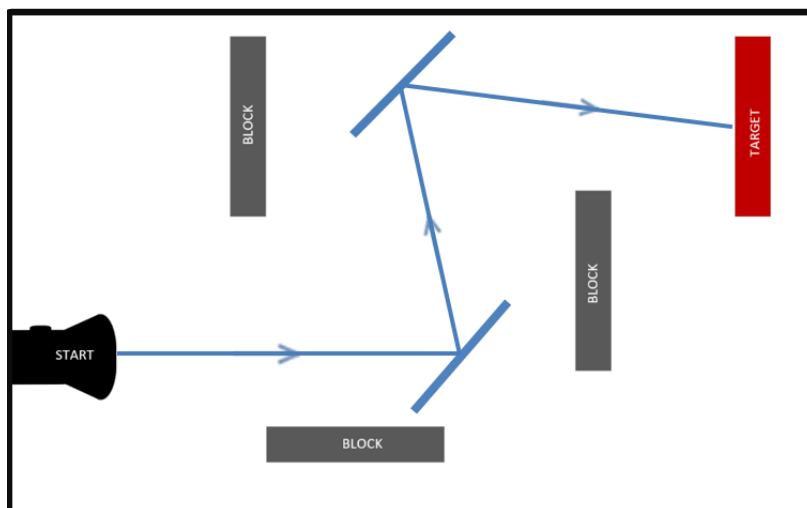
WORKSTATION #2 - REFLECTION

Circle the mazes that you solved: 1 2 3 4 5 6

2a) Can you solve the maze below with only 2 mirrors?

Draw...

- The location and angle of the mirrors that reflect the light from the torch to the target.
- A line to show the path of light through the maze, with arrows showing the direction it travels.



Key

Use these symbols in your diagram

Mirrors

Light path

2b) Describe why you need to use mirrors to allow the light to reach the target.

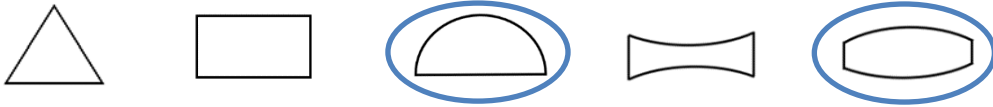
Light only travels in straight lines. We need to use mirrors so the light can be reflected to move between the blocks and reach the target. Without the mirrors the light would hit the blocks and would not reach the target.

WORKSTATION #3 - REFRACTION

3a) TRI-CHALLENGE: Switch on all THREE light beams.

Which prisms/lenses refract the light so all THREE light beams cross at one point?

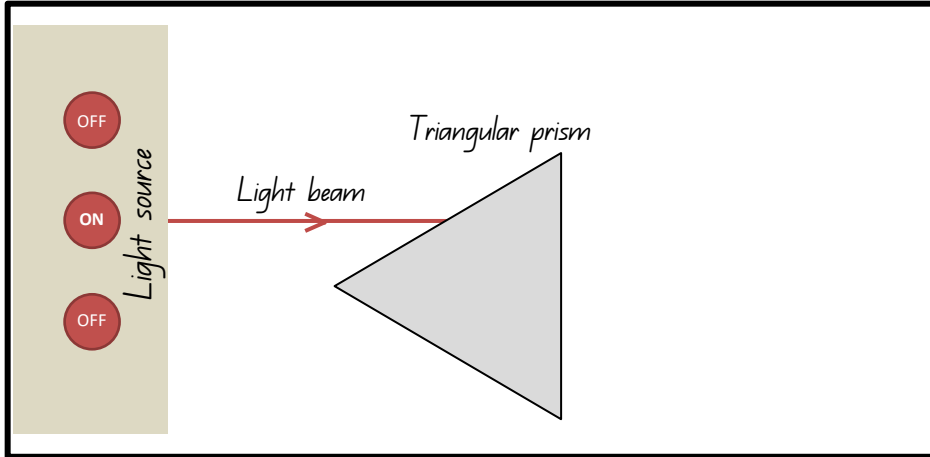
Circle TWO answers:



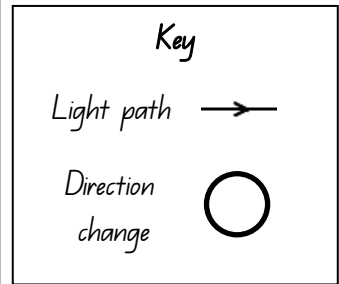
3b) UNI-CHALLENGE: Switch on ONE light beam.

Put the triangular prism in front of light source like the picture below.

Draw the path of light as it leaves the prism.



Bonus: Add the symbols below to your diagram



WORKSTATION #4 - SHADOWS

Circle the shadow puzzles that you solved:

1 2 3 4 5 6

Question 4a) Use the word bank to complete the paragraph to describe how a shadow is made.

A shadow is made when an object blocks light. Opaque objects block all light creating dark shadows. Translucent objects block some light, whereas transparent objects allow all light to pass through and do not make shadows.

WORD BANK: Translucent transparent light shadow Opaque

Question 4b) How can you change the size of a shadow? _____

The size of a shadow can be changed by moving an object closer to the light source which makes the shadow bigger,

or moving the object away from the light source which blocks less light making the shadow smaller.

Extras for Experts!

Match the words to their definitions

- | | | |
|------------|---|--|
| Reflection | → | The absence of light on a surface, caused by an opaque or translucent object blocking the path of light from a source. |
| Refraction | → | The process by which energy like light bounces off an object or surface. |
| Absorption | → | The change of direction of light as it passes from one medium to another. |
| Shadow | → | When light energy is transformed/used by an object rather than being reflected or refracted. |