

How Objects Are Seen – Lesson Ideas

Curriculum Aim: Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.

Success Criteria:

- I can explain how we see objects because light travels in straight lines.
- I can use one or more mirrors to see an object and around a corner.

Resources:

- Mirrors
- Pencils and coloured pencils
- Whiteboards and pens
- The ability to work in pairs or small groups.

Whole Class Questioning and Discussion Activity 'High Five Questions':

In order for all children to participate in this activity, it could be organised as timed/quick discussions in groups or suggestions on whiteboards.

Question 1: Can we see things when it is pitch black?

Answer: No.

Question 2: What does there need to be to be able to see anything?

Answer: Light.

Question 3: When we are thinking about the super slowed-down process of how we see something, where does it start?

Answer: A light source (e.g. the sun, candle, electric light, torch, etc.).

Question 4: If we were looking straight at the candle light (safety reminder to children: looking at the sun or straight at a string light is dangerous), we are seeing the candle light but if we want to see an apple on the table, where would the light have to go first?

Answer: It would have to 'light up' the apple on its way to us.

Question 5: So, if we imagine the light as a bus starting at the light source, what are the stops on the way to its final destination?

Answer:

1. Start at the source (candle, sun, torch)
2. The apple
3. My eye

Extra Challenge: can anyone work out the bus stops for looking at an apple through a mirror?

Answer:

1. Start at the source (candle, sun, torch)
2. The apple
3. The mirror
4. My eye

Working in Pairs Demonstration Activity:

Arrange the children in pairs or threes.

They will need a mirror each and a whiteboard and pen (or other means of jotting down a diagram).

1. Stand facing away from each other in different parts of the classroom/hall/playground.
2. Use the mirror to look at each other.
3. Think about the bus journey of the light from its source to the person seeing.
4. Try and draw the journey of the light on your whiteboard.

Independent or Paired Work:

Here are some activities designed to investigate the way light travels in a straight line from its source to our eyes.