

Science - Year 3

Light and Shadows

Session 1

What is Light? How do we see?



Let's investigate!

When scientists investigate, they try things out to see what will happen.

They are always asking the question:

Why?





You will need a
cardboard box

1. First, turn your box face down on the table. Fold out any flaps.

If you were inside the box, what do you think it would be like?

Why?

Because no light can get inside



Dark



2. Ask an adult or sibling to choose a few items from around the house. Arrange them under the box so you have a few in the middle. If your box is quite big you will need more items.



Do this so YOU – the scientist, cannot see what is place under there.

3. Make a hole in the top of the box using a sharp pencil. Look into the box through the hole. What can you see?



Why?

4. Make some more holes in the top of the box. Each time look down through one of the holes.

Can you see any of the objects inside?

Why?



5. Try making a few holes on one side of the box.



Can you see the objects when you look from top?

Can you see the objects when you look from the side?

Why?



5. Try shining a torch into one of the holes and looking through the other. What can you see in the box?

Why?





6. Your task is to identify all the object hidden beneath the box, using the holes and the torch to see.

Why do we need the torch?



How do we see?

Watch the short clip -

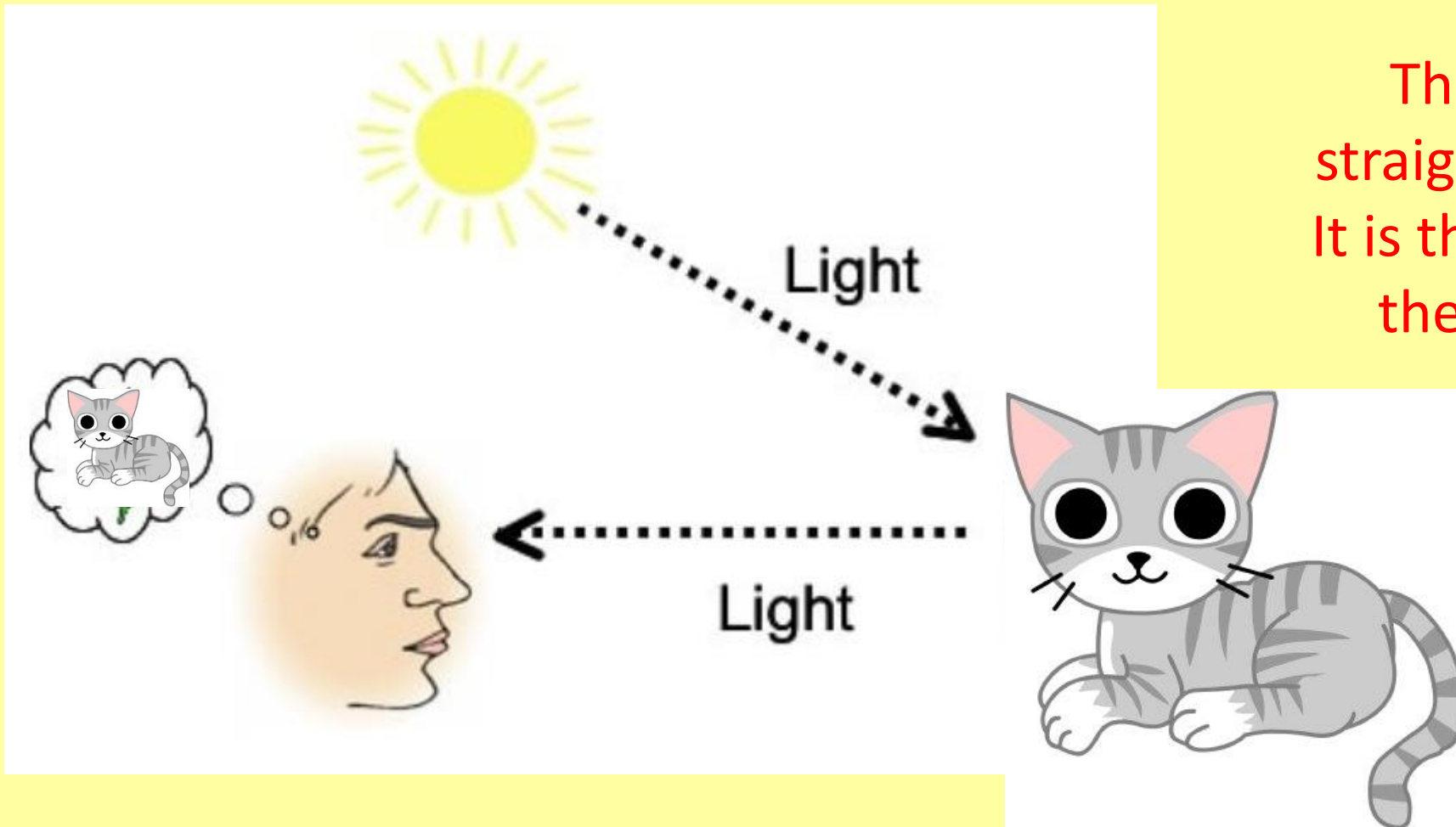
<https://www.bbc.co.uk/bit/size/clips/zb3s34j>



Draw a simple diagram to show how the eye can see the cat.

How do we see?

Does your diagram look something like this...



The light travels in a straight line to the object. It is then reflected back to the eye for us to see.

Challenge: Can you complete the passage using the words in red from the box.

Light helps us to _____. Light comes from many different sources such as the _____ or _____, natural light sources. Artificial light sources include _____ or a _____ which are powered by electricity or batteries.

Without light, it is very _____ for our eyes to see.

see

sun

fire

light bulbs

torch

difficult.