



National Curriculum references:

Science Key Stage 2 - Programmes of Study

1. Systematic Enquiry

- a ask questions related to their work in science;
- b use focused exploration and investigation to acquire scientific knowledge, understanding and skills;
- c use both first-hand experience and secondary sources to obtain information;

3. The nature of scientific ideas

- a obtain evidence to test scientific ideas in a variety of ways;
- b recognise that science provides explanations for many phenomena.

Experimental and Investigative Science

1. Planning experimental work

- a to turn ideas suggested to them, and their own ideas, into a form that can be investigated;
- b that making predictions can be useful when planning what to do;
- d that changing one factor and observing or measuring the effect, whilst keeping other factors the same, allows a fair test or comparison to be made;

2. Obtaining evidence

- a to use simple apparatus and equipment correctly;
- b to make careful observations and measurements;

3. Considering evidence

- b to make comparisons and to identify trends or patterns in results;
- c to use results to draw conclusions;
- d to indicate whether the evidence collected supports any prediction made;
- e to try to explain conclusions in terms of scientific knowledge and understanding

4. Communication

- a use appropriate scientific vocabulary to describe and explain the behaviour of living things, materials and processes;

5. Health and safety

- a recognise and assess the hazards and risks to themselves and to others when working with living things and materials;

1. Grouping and classifying materials

- a to compare everyday materials, *eg wood, rock, iron, aluminium, paper, polythene*, on the basis of their properties, including hardness, strength, flexibility and magnetic behaviour, and to relate these properties to everyday uses of the materials

3. Light and sound

everyday effects of light

- a that light travels from a source;
- b that light cannot pass through some materials, and that this leads to the formation of shadows;
- c that light is reflected from surfaces, *eg mirrors, polished metals*;

Science activity 2

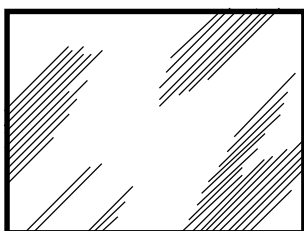
Light & Sound Physical processes

Instructions
for you to
follow

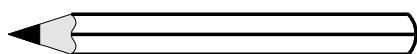


Some things reflect light and some things absorb light.
Let's investigate a little further:

You will need to collect or make:



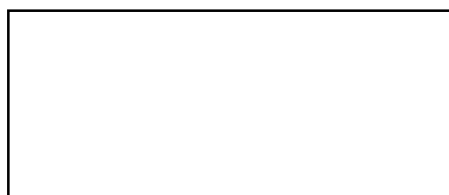
A mirror



A pencil



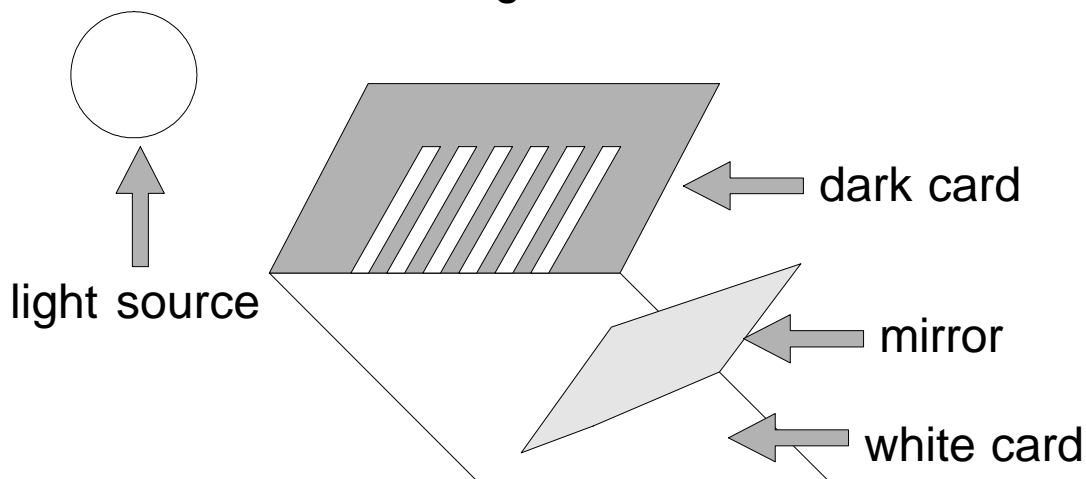
A piece of dark card with strips cut out



A piece of white card

Take the equipment to a sunny window. If it is not sunny ask your teacher if you may use the light bulb holder.

The picture below shows how the equipment should be set up. You will need to set the dark card in such a way that it faces the light. **WARNING** - do not look straight into the sun!



**Science
activity 2**

Light & Sound
Physical processes

Questions
to think
about



Once the experiment has been set up, answer the following questions:

- 1) Find out all you can about the word **reflect**.
What does it mean?
- 2) Find out all you can about the word **absorb**.
What does it mean?
- 3) Draw on the white card with the pencil.
Trace the lines that you can see on the white card.
- 4) Is the light travelling in a curved line or a straight line or something else?
- 5) What does the mirror do to the lines made by the light?
- 6) Replace the mirror with each of the following:

card wood clear plastic coloured plastic silver foil

Record the effect that each of the different materials have.

**Now place a glass jar with water in it between
the dark card and the mirror.**

- 8) Draw a diagram of the experiment using the glass jar.
Don't forget to label the diagram.

**Science
activity 2**

Light & Sound
Physical processes



name..... class..... date.....

1) The word **reflect** means:

.....
.....

2) The word **absorb** means:

.....
.....

3) Show the teacher the white card with your tracing on it.
Explain to the teacher what the card shows.

4) How does the light travel?

.....
.....

5) What does the mirror do to the light?

.....
.....

6) Here is my record of what happened when I used the following objects:

card	
wood	
clear plastic	
coloured plastic	
silver foil	

7) Show your diagram to the teacher and explain what happened.