

Wednesday 4th November
L.O: Exploring how to make an absorbent material
waterproof



Plastic in the World's Oceans set to triple over the next decade

Useful Words:

biodegradable – breaks down easily

Plastic pollution is one of the biggest threats facing the world's oceans. An estimated 12 million tonnes of plastic is found in the oceans and washed up around our planet each year. Plastic isn't biodegradable and it stays in the environment for up to 1000 years.

Each year, hundreds of thousands of animals choke to death on large pieces of plastic, which they mistake for food.

There are many groups working to protect the world's oceans.

They are asking big businesses to reduce plastic packaging and governments to introduce bans on carrier bags.

By taking action now, we can stop further damage to our planet's precious marine environment.

1. Find and copy a word which describes materials which rot down easily

2. How much plastic is believed to enter our oceans each year?

3. What can we do to reduce the amount of plastic we use?

Look at the pictures we did last week using wax crayons and water paint.

Write an explanation to say what you did and what happened.

Answering the questions on the next page might help you with your sentences..

What happens to the paper when you put water colours on?

What do you already know about wax?

What did you do with the wax crayon?

What happened when you painted water colours over the wax?

We used water colours to paint on white paper. The paint soaked through the paper.

We used white wax crayons on another piece of paper before painting with water colours.

The wax _____ the paint.

The wax made the paper _____.

LO: To investigate reflective materials



Watch this video

 <https://www.bbc.co.uk/bitesize/clips/ztcg9j6>

While watching think about these questions:

What does it look like if a material reflects light well?

Which colours do you think reflect most light?

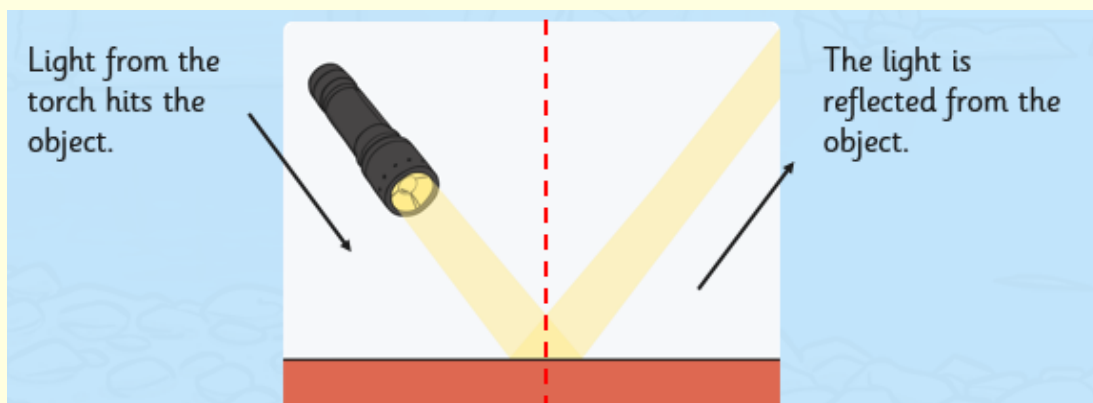
What are reflective materials useful for?

Reflective light

Light travels in a straight line.

When light hits an object, it is reflected (bounces off).

If the reflected light hits our eyes, we can see the object.



Some surfaces and materials reflect light well. Other materials do not reflect light well.

Reflective surfaces and materials can be very useful:

- Reflective strips on coats or bags mean you can be seen at night. They are also useful for fire-fighters or builders who may work in a dark and dangerous environment.
- 'Cat's Eyes' help drivers see the road by reflecting light from headlamps.
- Mirrors let us see ourselves, and are also useful in cars, to allow drivers to see behind them.
- Retro-reflectors are used for road signs so that drivers can see the signs from their car.

Can you think of any other uses?

We have decided which material we will use to make our waterproof coats.

Now we need to find a material we can add to it to help us stay safe while walking near roads on dark mornings and evenings.

You need to choose the best material for a reflective strip

Look at the different materials.

Which material do you think will be best to add to your waterproof coat?

Write your prediction

You will need to test the different materials to see how reflective they are

In order to test the materials, you will need to make a reflection tester.

Attach a piece of white card to a torch:

1. Cut a hole in the centre of the card and push the torch through so that the card fits snugly around the torch without you having to hold it.
2. Shine the torch at the material you are testing.
3. If the material reflects light well, you will see the reflected light shine through the white card and light it up.



Use your reflection tester to test the different materials.

Order the materials from most reflective to least reflective on your results table.

Most

Least

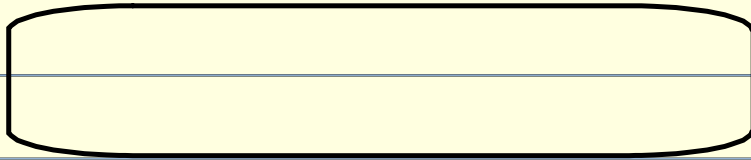
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You need to decide which material is best to use on your coat.

Choose the most reflective material from the ones you tested.

Draw your waterproof coat with the added reflective material and label it.

Write an explanation to say why you have chosen this material.



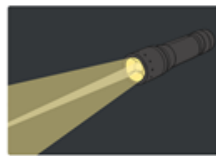
I chose this material because when I tested it, the light from the torch _____

This material feels _____

It looks _____



reflected



shone



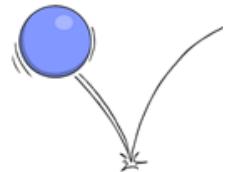
smooth



shiny



bright



bounce

