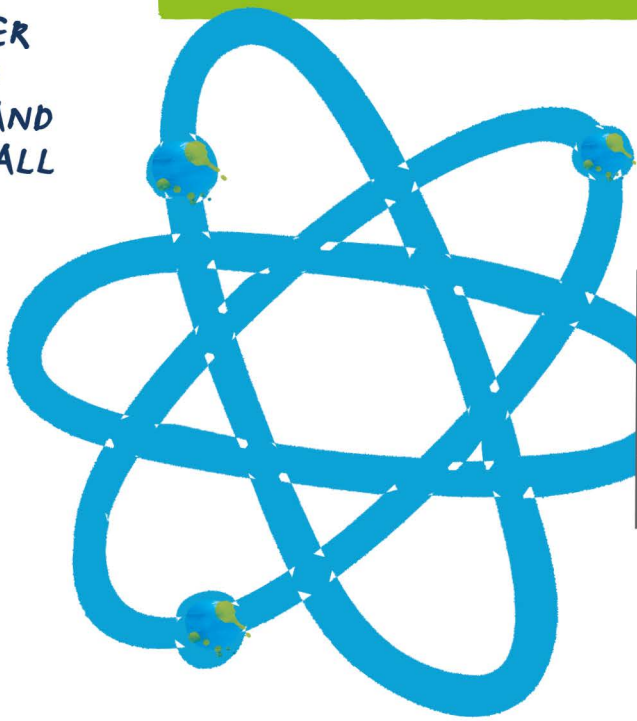
PLASTIC: HERO OR VILLAIN?

BE PLASTIC SMART
A DIRT FOR GOOD PROJECT

around 30 mins | low level prep | can be child-led | interactive quiz

TAKE THIS 20-MINUTE QUIZ AND TOGETHER WE'LL DISCOVER SOME INTERESTING (AND SOMETIMES SCARY) FACTS ABOUT PLASTIC. AND WE'LL HAVE A THINK ABOUT HOW WE CAN ALL REDUCE THE AMOUNT WE USE AT HOME.



we'll learn about...

ENGLISH

by explaining and understanding new information

SCIENCE

by understanding more about plastics and their different properties

CITIZENSHIP

by making positive changes at home and in the community

LET'S GET STARTED!

Grab some pens and scrap paper (or a tablet) to write down your answers. Or, print the scorecards on the next page!

small actions, big difference

Kids might be surprised by some of the answers – so have a chat about what small changes we can make that will have a positive impact. Question 8 will help you think about the positive actions you can all take at home.

NAME _____ FINAL SCORE ____

ANSWERS

1

2

3

4

5

6

7

8

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ANSWERS

1

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3

4

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6

7

8

HOW FANTASTIC IS YOUR KNOWLEDGE OF PLASTIC?

INTRODUCTION

Plastic is a very popular material for all kinds of products and it has many benefits – **just look around your own house!**

Unfortunately plastics are also having a massive harmful effect on the environment.

Take part in this quiz to see how well you understand plastics.

QUESTION 1

What are most plastics made from?

A) Renewable sources such as corn starch, sugar or algae

B) Non-renewable energy sources of oil and natural gas

C) Chemicals developed in a laboratory

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QUESTION 1

Most plastics are made using (non-renewable) sources of crude oil and natural gas, mixing in other chemicals for different properties. These resources are finite i.e. they won't last forever and harmful to the planet as they don't degrade easily.

Find out more in the next question!

QUESTION 2

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A) Up to 200 years

B) Up to 500 years

C) Up to 1000 years

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Normal plastic isn't biodegradable. That means bacteria and other microorganisms can't break it down into its original elements. Some types of plastic may break down when it's exposed to sunlight and pressure, but this doesn't always happen if the plastic ends up in the sea, nature or in landfill. Most plastic just breaks down into smaller and smaller pieces called 'microplastics' which are building up in environments and inside the living things that can ingest them. Then they can stay up in the environment up to 1000 years until they finally degrade. A big report written in 2016 estimated that if we keep on using plastics at the same rate and recycling and re-using as little as we do now, there will be more plastics in the sea than fish by 2050.

QUESTION 3

What does the adjective ‘plastic’ mean?

A) Shiny and fake

B) Made from unnatural materials

C) Easily shaped or moulded

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QUESTION 3

Plastic is a man-made material that can be stretched or moulded when it’s soft and set into rigid or bendy shapes. This makes it ideas for making everything from simple things such as toys or packaging to clothes, to complex medical devices and aircraft parts and lots of other useful things.

QUESTION 4

Which of these is not a property of plastic?

A) A good conductor of heat and electricity
B) Strong and long-lasting
C) Versatile (can be used in many ways)
D) Waterproof
E) Cheaper to produce than other materials
F) Hygenic and used a lot in health care

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QUESTION 4

Plastic is used to make so much stuff because it’s so adaptable. But plastic is an insulator, not a conductor. That means it can tolerate some changes in temperature and electricity will not pass through it, contrary to metal.

QUESTION 5

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A) Reducing plastics

B) Reusing plastics

C) Recycling plastics

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QUESTION 5

Reducing – if we all cut back on the plastic products we use, companies will have to change how they do things and that will lead to less plastic waste going into the environment but if we only focus on reducing, there would still be some waste created!

Reusing is useful as it means things last longer resources and we don't need as much new plastic material from finite resource. However, all things cannot always be re-used (protective medical equipment for instance are better recycled or burnt for hygiene reasons).

Recycling is better than plastic being piled in landfills, but currently not all plastics can be recycled. Unfortunately, a lot of the plastics that are recycled are also converted into pellets that then go into making recycled plastic products like fleeces or furniture. When we're finished with them though , these items usually go to the dump. Recycling works best if an item gets recycled into the same item (a shampoo bottle into a shampoo bottle, or a chair into another chair).

That is why there isn't one solution only to plastic problem: re-using, reducing and recycling are all important.

QUESTION 6

What percentage of plastics are not currently recycled?

A) 91%

B) 52%

C) 76%

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QUESTION 6

Since the 1950s, plastic use has increased a lot. A big study was published in 2018 which found that only 9% of global plastic waste is recycled. That means for every 100 pieces of plastic waste only 9 are actually recycled into something else! 12% is burnt and the rest (79%) goes to rubbish dumps or even worse – leak into the natural environment, which can cause big problems in our oceans. There need to be more recycling done!

QUESTION 7

There are different types of plastic, what is the best way to identify them?

A) By a colour code for the plastic type

B) By the look and feel of the plastic

C) By a recycling symbol with a number and letter code

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QUESTION 7

Different types of plastics are numbered from 1-7. They often have a label on their base to say their number and name, e.g. 1-PET. These numbers are important because local recycling stations accept different types of plastics. Some are easier to recycle than others!

QUESTION 8

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

A) Replace clingfilm with reusable food wraps
B) Replace soap or shampoo bottles with soap or shampoo bars
C) Have a reusable metal drinks bottle or cup
D) Use reusable containers for food storage
E) Buy materials in bulk to cut down on packaging
F) Refuse plastic straws and plastic cutlery
G) Litter pick and recycle as much of your plastic waste as you can
H) Buy quality items that last instead of disposable ones

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QUESTION 8

Trick question!

The answer is, you can do all of this – and much more too!

What other ideas do you have as a family?

WELL DONE

ADD UP THE POINTS ON YOUR SCORECARD AND COMPARE AGAINST YOUR FRIENDS!