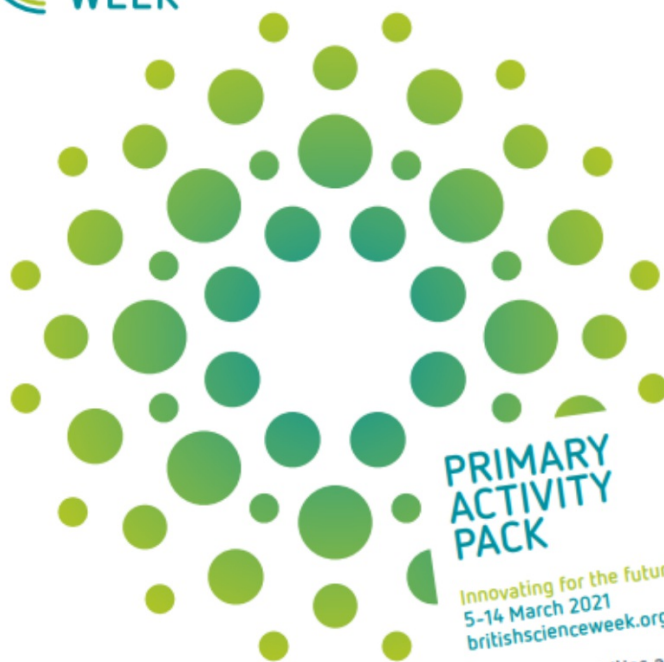


This week, it is 'British Science Week'





## PRIMARY ACTIVITY PACK

Innovating for the future  
5-14 March 2021  
[britishscienceweek.org](http://britishscienceweek.org)

A range of activities and  
ideas to be run with students  
up to the age of 11

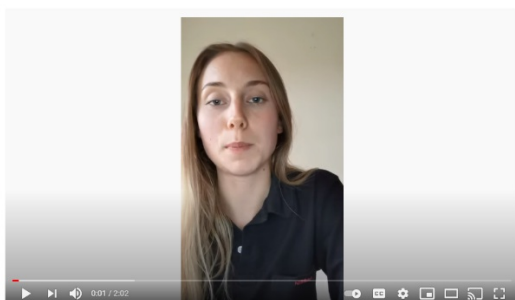


Eve Davison is an engineer at a car factory in the north-east of England.

Classifying plastics is an important part of this job

Why?

Watch the video on our topic page.



The background of the slide is a photograph of various pieces of plastic waste, including clear and blue plastic bottles, some with caps, and crumpled plastic bags. The image is oriented horizontally and serves as a backdrop for the central text box.

Let's help Eve at Nissan,  
classify different types of  
plastics.





Innovating for the future

## Which plastic?

INEOS



### About this activity

Different types of plastic are used to make many everyday objects but do you know which plastic is which? Learn how to help the environment as you carry out simple tests and use a chart to identify different plastics for recycling. You will also find out how one company supports a recycling scheme to reduce the amount of single-use plastic sent to landfill sites.



Innovating for the future

## Which plastic?

INEOS



- 1 Think about the objects you use every day that are made from plastic. Did you know that there are many different types of plastic, each one useful for different things?



Innovating for the future

## Which plastic?

INEOS



### 2 Why is this a negative effect?

Plastic is often thrown away after one use and this can have a negative effect on our environment by ending up in landfill sites or as litter pollution.



Innovating for the future

## Which plastic?

INEOS



- 3 Consider the 'sustainability' of plastics; in other words, how often they can be reused and recycled so that we can keep using them for longer.





Innovating for the future

## Which plastic?

INEOS



Print or open up the Science Experiment file on our topic page

- 4 Gather your numbered plastic samples.



Innovating for the future

## Which plastic?

INEOS



- 5 Half fill your container with water and place sample 1 under the water before letting it go. Do the same for the rest of the samples. Observe and record which plastics float and which sink.



Innovating for the future

## Which plastic?

INEOS



- 6 Using the same samples (removed from the water) fold each piece of plastic backwards and forwards to see what happens - some plastics snap under pressure; others simply fold into a crease whilst some plastics show a white line called stress whitening.



Innovating for the future

## Which plastic?

INEOS

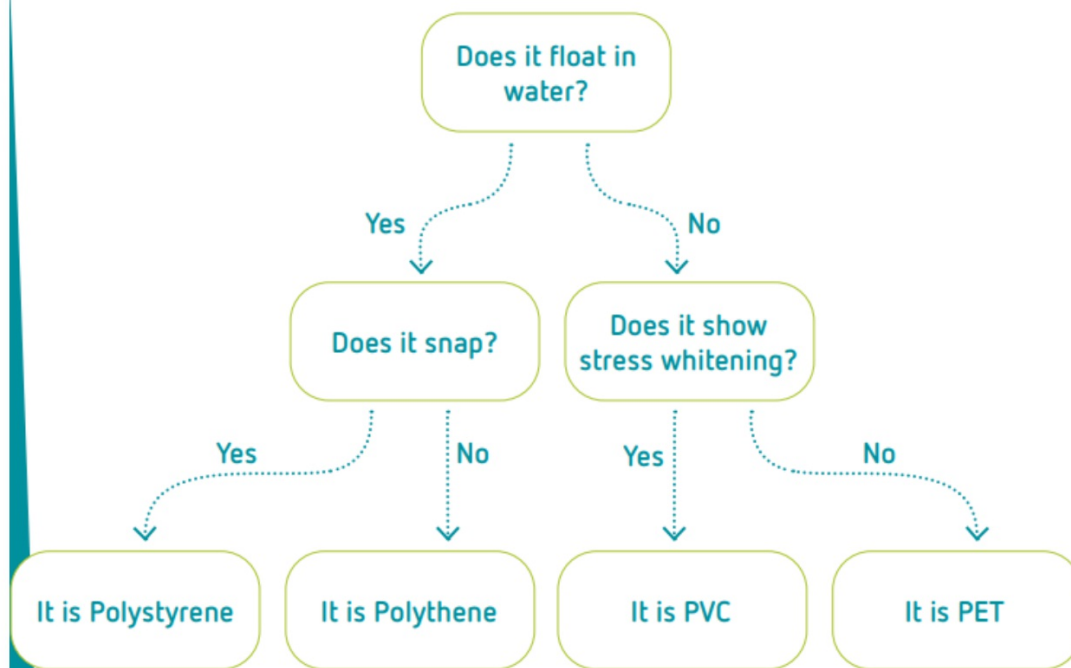


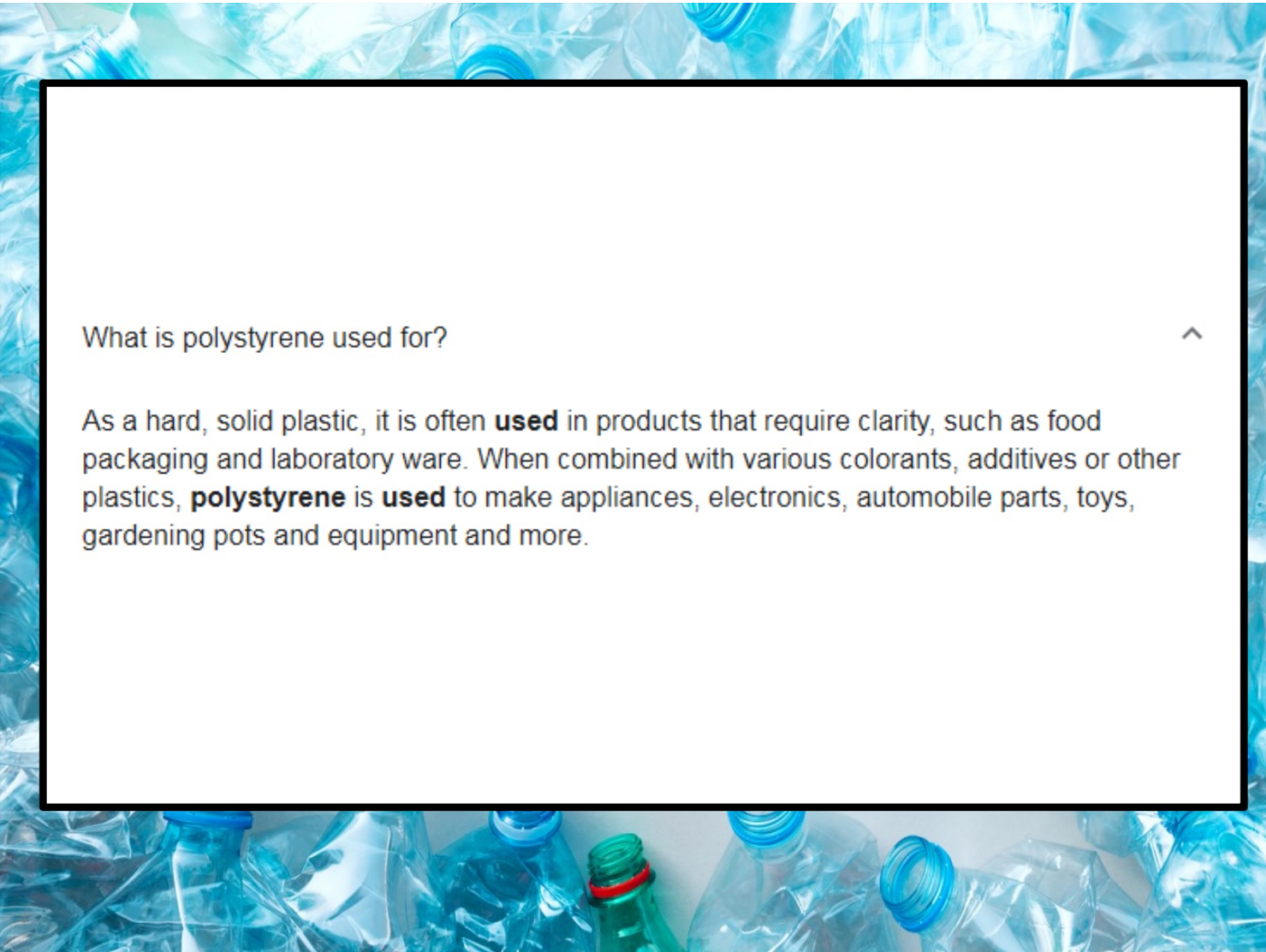
7 Record your results.



## 8 Use this classification key to identify which type of plastic is which:

Can you identify and sort four different types of plastic in order to send any waste materials to the correct recycling centres?

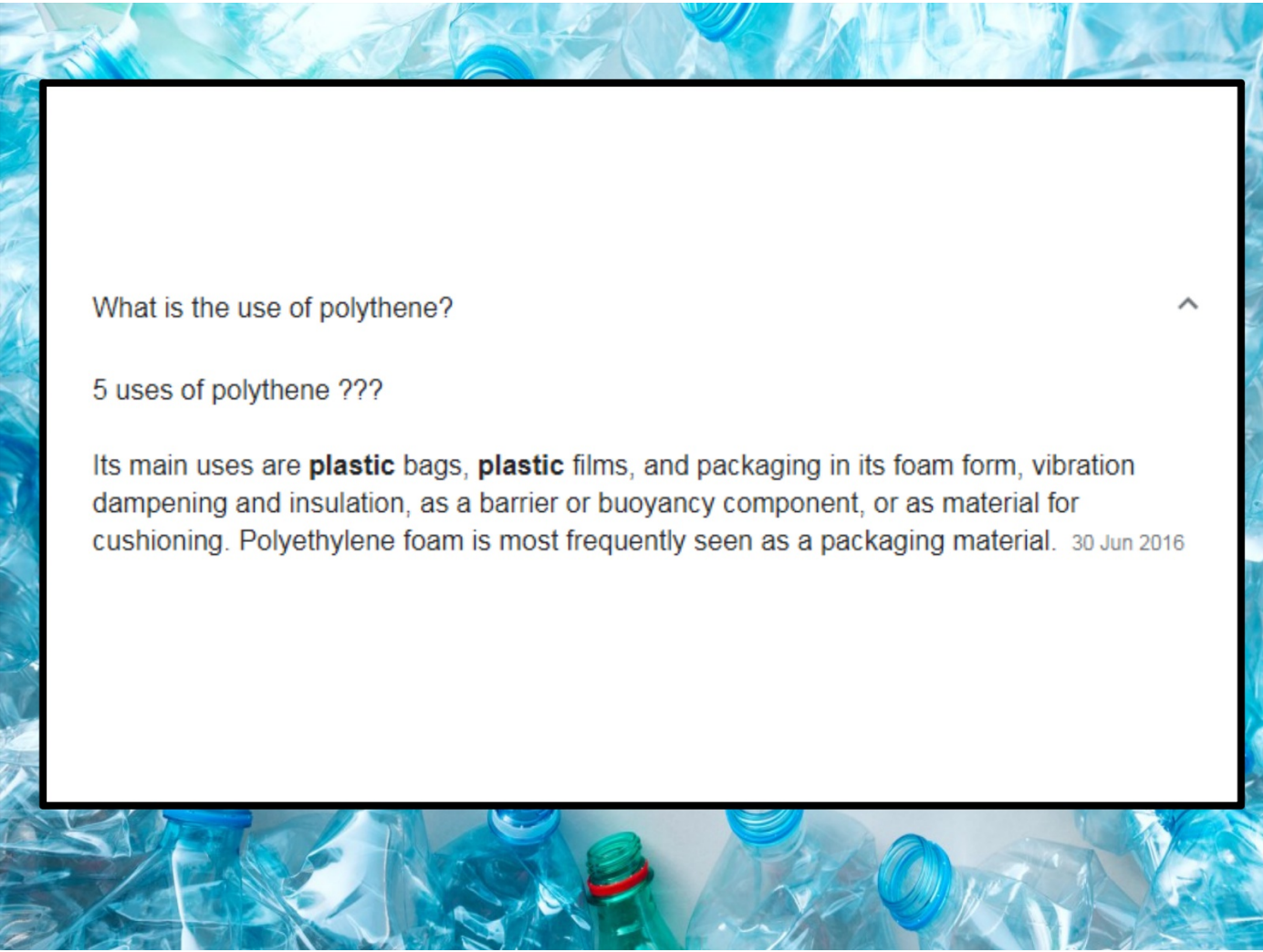




What is polystyrene used for?



As a hard, solid plastic, it is often **used** in products that require clarity, such as food packaging and laboratory ware. When combined with various colorants, additives or other plastics, **polystyrene** is **used** to make appliances, electronics, automobile parts, toys, gardening pots and equipment and more.




What is the use of polythene?



5 uses of polythene ???

Its main uses are **plastic** bags, **plastic** films, and packaging in its foam form, vibration dampening and insulation, as a barrier or buoyancy component, or as material for cushioning. Polyethylene foam is most frequently seen as a packaging material. 30 Jun 2016

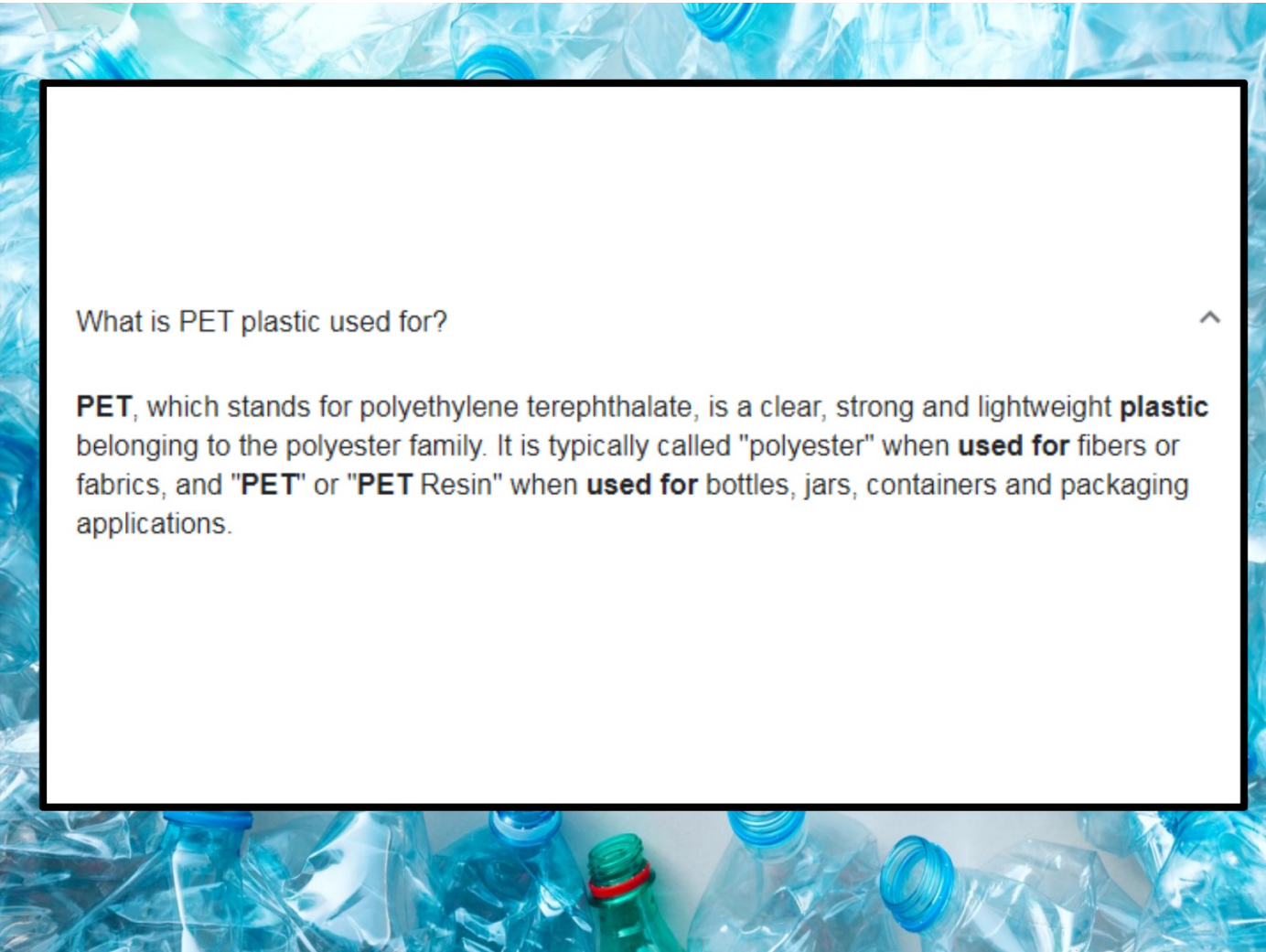


What is PVC?



**PVC**, in full **polyvinyl chloride**, a synthetic resin made from the polymerization of vinyl chloride. Second only to polyethylene among the plastics in production and consumption, **PVC** is used in an enormous range of domestic and industrial products, from raincoats and shower curtains to window frames and indoor plumbing. 5 days ago





What is PET plastic used for? ^

**PET**, which stands for polyethylene terephthalate, is a clear, strong and lightweight **plastic** belonging to the polyester family. It is typically called "polyester" when **used for** fibers or fabrics, and "**PET**" or "**PET Resin**" when **used for** bottles, jars, containers and packaging applications.



	Plastic A	Plastic B	Plastic C	Plastic D
Does it float?				
Does it snap?				
Does it show stress whitening?				
What plastic do you think it is?				

polystyrene

polythene

Polyvinyl chloride

polyester

