



## Lesson 4: Hidden plastics plastic where we don't expect it

### Can we spot plastics hidden in our household items?

We don't always know that we're buying plastic because it is hidden. In this lesson, children learn where there is hidden plastic in their lives. Plastics are put in products like face cream or toothpaste for a number of reasons: to make the product coarse and grainy so it cleans better, or to act as a type of filler to smooth out those wrinkles. When you bath or shower these microplastics get washed off and go down the plug hole. The microplastics are so small that they end up in the ocean. There are many alternatives, such as sugar or salt, that can be used instead.

Did you know that your clothes may contain plastic? Plastic clothes are very useful, they can easily be washed and can last a long time. However, some types of plastic clothing shed a lot of plastic fibres when they're washed.

Have you considered how a paper cup can hold your drink without leaking? Hidden plastics are often used to line cardboard cartons and cups to make them waterproof. The paper cup is a much longer activity which can be set up and then looked at every week for a couple of months.

#### Science concepts

The children will consider

- that not all plastic can be easily seen and that some products contain hidden plastics
- where plastics are hidden in day-to-day items

#### Science skills

- separating mixtures through sieving, filtering and floating

#### Key vocabulary

filter, lining, microplastic



# Hidden plastics

## plastic where we don't expect it

### You will need

#### Activity 1 – beauty and washing products

- a liquid beauty or washing product containing microplastics\*
- a beaker, jug or vessel containing warm, but not hot, water
- a teaspoon
- a second container or bowl to if no sink available
- a funnel
- coffee filters or filter papers
- a magnifying glass (optional)
- absorbent paper – paper towels are ideal
- Additional Printable: Hidden plastics instruction sheet – Activity 1 – Beauty and washing products

\* The following ingredients in beauty products are types of plastic: acrylates, carbomer, dimethicone, any type of methacrylate, nylon, polyacrylamide, polyacrylate, polyethylene, polymethyl methacrylate, polypropylene, polyurethane, polyvinyl, propylene, polypropylene, PVP, styrene, tetrafluoroethylene, vinyl acetate copolymer, VP/VA copolymer.

#### Activity 2 – socks

- a pair of socks, old fleece or duster that is made of a polymer e.g. Polyester, nylon, etc
- a bowl
- a funnel
- coffee filters or filter papers
- a magnifying glass or camera (optional)
- Additional Printable: Hidden plastics instruction sheet – Activity 2 – socks

#### Activity 3 – paper cups

- at least 1 single-use paper cup – you may like to compare different types of cup
- 1 large bowl full of water, a clear bowl works well here
- Additional Printable: Hidden plastics instruction sheet – Activity 3 – paper cups