

How long does rubbish take to break down?

You need:

- Printed timeline labels
- Printed images of packaging waste (or the real thing)

When litter gets into the ocean it can cause big problems for whales and dolphins and can even kill them. But how long will it hang around? What type of litter breaks down the slowest?



- 1** Choose ten children to stand in a line, with gaps between them, to represent a timeline. Each of the ten children will have a time, e.g. 1000 years, to hold.
- 2** Hand out the bits of rubbish – either pictures or real examples, so that each group of children has at least one. They will need to decide how long their piece of rubbish would take to break down in the ocean.
- 3** Ask one child from each group to stand along the timeline where they think their piece of rubbish belongs.
- 4** Once all the pieces of rubbish are in the timeline, ask the other children whether they think anything should be moved.
- 5** Give the children the answers, and get them to move into the correct positions on the timeline. Did any of the times surprise them?

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Notes for teachers

Although the timeline shows that a plastic bag, for example, breaks down in 20 years, it doesn't actually biodegrade. Along with other plastics, it simply breaks down into smaller and smaller pieces of plastic, called "microplastics". Although these won't block up a whale/dolphin's stomach, they are toxic, and build up in the food chain.

Some plastic rubbish looks like it is made from other materials. For example, crisp packets look like foil, and coffee cups look like card, but are lined with plastic on the inside.

Discussion points:

- Is it better to buy something packaged in recyclable material that would take a long time to break down if it ended up in the sea, or something non-recyclable that takes less time?
- Because plastic is so dangerous for whales, dolphins and other animals that live in the ocean, is it better to choose glass even though it will take longer to break down?

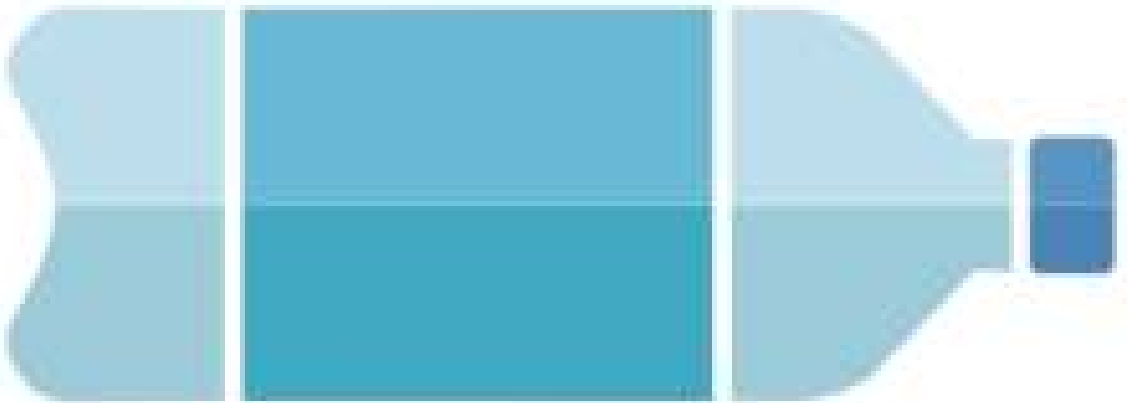
Type of rubbish	Time to break down
Apple core	1 month
Cardboard box	2 months
Balloon	4 years
Plastic bag	20 years
Coffee cup	30 years
Crisp packet	80 years
Drinks can	200 years
Plastic bottle	450 years
Fishing line	600 years
Glass bottle	1 million years



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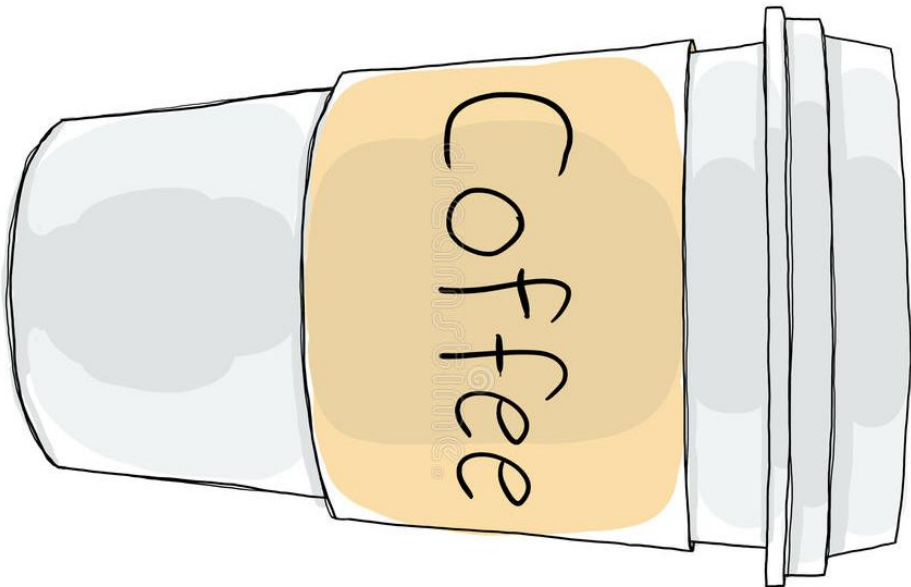
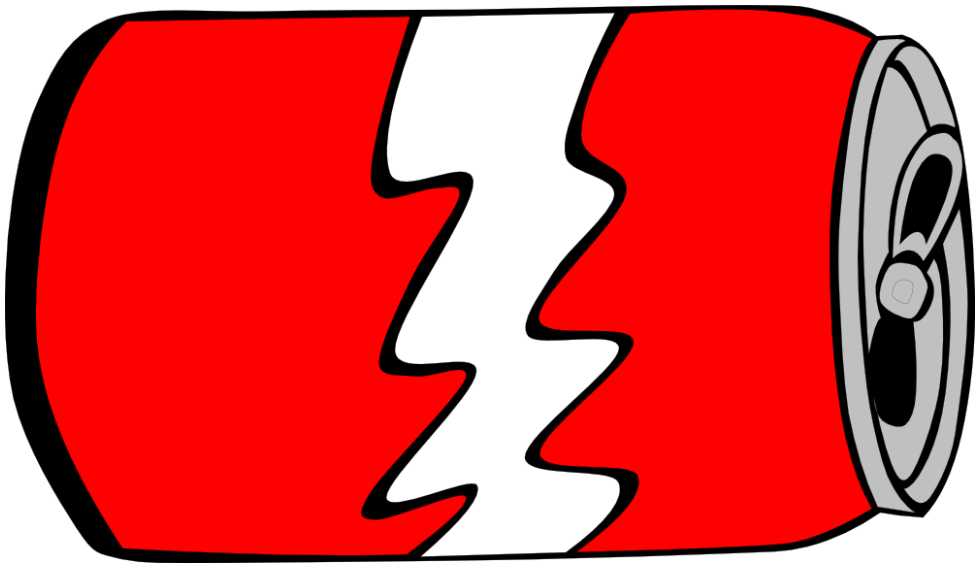
Printable litter examples



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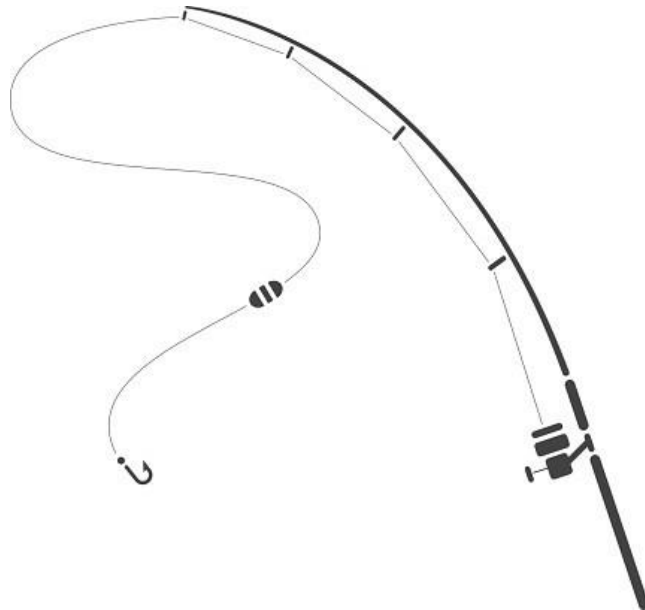


Printable litter examples



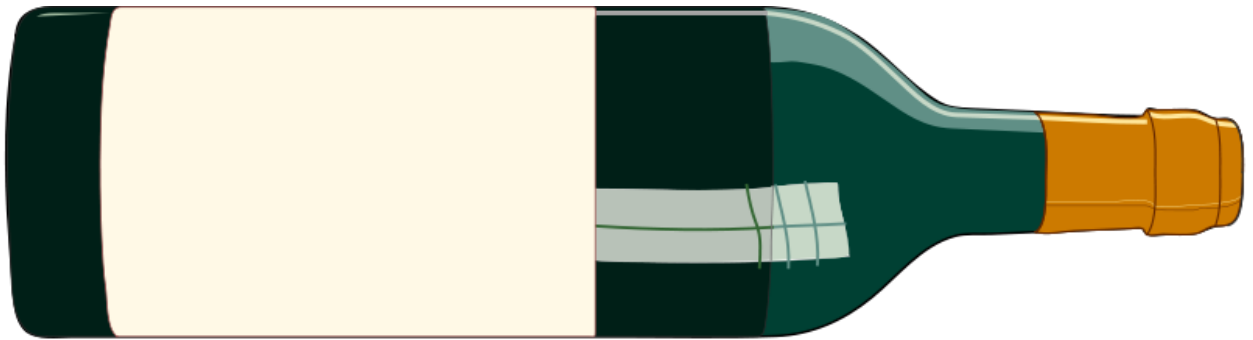
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**How long does rubbish take to
break down?**



Printable timeline



1 month

2 months

**How long does rubbish take to
break down?**



Printable timeline



1 year

5 years

**How long does rubbish take to
break down?**



Printable timeline



10 years

50 years

**How long does rubbish take to
break down?**



Printable timeline



100 years

500 years

**How long does rubbish take to
break down?**



Printable timeline



1000

years

1 million

years