



Animals and the environment

DID YOU KNOW?

Every second, 160,000 plastic bags are used around the world.



Imogen Napper with an unearthed bag.

An alternative to plastic

Edible seaweed pouches filled with an energy drink were offered to runners at the London Marathon, held on 28 April. More than 40,000 runners took part this year, and the race organisers wanted to reduce the number of plastic bottles used. The pouches, created by a London company, break down naturally within four to six weeks if they're not eaten.

A water-filled pouch.



Green bags don't decay quickly

Some biodegradable and compostable shopping bags can remain in a usable condition for at least three years, despite claims that they break down naturally without causing pollution. That's the surprising finding of a study led by Imogen Napper, at Plymouth University, who wanted to see how types of supposedly environmentally friendly bags behave in the real world.

Biodegradable materials are substances that can be broken down into nothing in certain conditions by natural organisms such as bacteria and fungi. Compostable materials are designed to be recycled in an industrial composting facility along

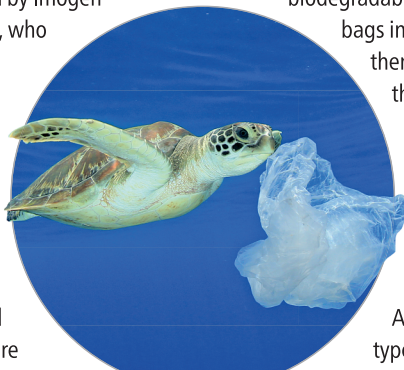
with food waste. Increasingly, these materials are being used instead of traditional plastic bags, which can hang around for up to 1,000 years.

In 2015, Napper and her team buried a range of biodegradable and compostable shopping bags in a university garden. They tested them at regular intervals, and found that even after three years, the biodegradable bags were still strong enough to hold 2 kilograms of shopping items. The compostable ones held together for 27 months, but had become too weak to carry anything. Another set of bags of the same type were left out in the air, and they broke down into fragments after about nine months. A third set were kept in

seawater. They disappeared after three months – although it's not clear how long the smaller fragments will last in the water.

The study concludes that none of these bags would break down completely within three years in all environments, raising questions over whether these bags are as good for the environment as people think.

Every bag – paper, plastic or reusable – has an environmental impact, but many can be recycled or broken down if they are properly disposed of. *The Week Junior* is delivered in a recyclable wrap known as LDPE. Many of our readers have been in touch to ask if we are going to replace it with something more sustainable. We are currently looking into a range of alternatives to see what would be the best solution. In the meantime, please ensure that the LDPE wrap is recycled by disposing of it responsibly. For more information, go to recyclenow.com



Floating bags are a threat to animals.



PLACE OF THE WEEK

Dunluce Castle, County Antrim, N. Ireland

Visitors to Dunluce can learn a lot about its long history. Situated on dramatic cliffs in northern Antrim, the castle was built by the McQuillan family around 1500. It was captured by the MacDonnell clan in the 1550s, but abandoned in 1639

after the kitchens fell into the sea. Today, people are digging up more of the castle's past, and there are rumours of a ghost called a banshee haunting the castle. A free smartphone app can help guide you around the site.

Find out more at tinyurl.com/TWJ-dunluce



Rockpools on the nearby coast.

Biodegradable Bags?

Read the article and then try the following activities...



Hold a debate

Even if these new compostable and biodegradable bags take a little longer than expected to break down, why worry? It's still a lot better than the 1,000 years that plastic bags used to take to decompose. Perhaps we would be better at being ecologically friendly if we weren't always so hard on ourselves about it...

Writing challenge!

Choose one of the following writing warm-ups.

1 How many words can you think of that start with the prefix 'bio-'? Write a brief definition of each. If you can think of fewer than three, use a dictionary to help.

or

2 Write a five-sentence story of a plastic bag from shop to decomposition. Use sequencing conjunctions to make the order in which things happen clear.

Investigate

The article says that biodegradable bags can still hold 2kg of shopping after three years. But what does 2kg of shopping look like? Ask your parent or carer first, then have a look in your food cupboards at home. Every packet should have the weight marked on it. Find three different ways of making 2kg (to within 100g).

Example

1kg of flour + 500g sugar + 500g butter = 2kg.