



Cornish Seal Sanctuary



Our Plastic Problem

Answer Book

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Introduction

The Cornish Seal Sanctuary is a charity that rescues and rehabilitates seal pups from around the Cornish Coastline.

Did you know that we've been rescuing sick and injured pups since 1958?!

The Sanctuary started in the winter of 1958 when a baby seal, only a few hours old, was washed up on the beach at St Agnes. Ken Jones lived with his wife Mary next to the beach, he picked up the pup and took it back to his small garden.

For many years, he ran a rescue centre for seals, with just one pool, at St Agnes. The news of his work with seals spread, and he received more and more calls about injured seals. Ken realised he needed more room, as the single pool at St Agnes was just not big enough. Ken had to find a larger site to build a permanent rescue centre and was offered land by the beautiful Helford River in Gweek.

Each season, the Sanctuary rehabilitates between 50 to 70 seal pups each costing £2,000 to be rehabilitated. The Sanctuary also provides a permanent home to animals that need special care from their team of marine animal experts.

When visiting the Sanctuary, you can experience wonderful marine animals up close and personal and learn all about their individual stories.

There's plenty to learn too! We offer guided tours, school workshops and school holiday clubs. Plus, you can head over to Discovery Cove, mixing learning with play, you can enjoy a variety of activities which are both fun and educational.

Hi! My name's Lily!

**I am the learning buddy for the
Cornish Seal Sanctuary.
If you see me in your workbook, I
might have a handy hint for you!**



True or False

How much do you know already? Answer true or false to the facts below.

- 1) Half of all plastic created still exists today.

True

☐

False

☒

Almost all plastic ever created still exists

- 2) 50% of the plastic in the ocean comes from the land

True

☐

False

☒

80% of plastic in the ocean comes from the land

- 3) We produce 330 million tonnes of plastic each year

True

☒

False

☐

- 4) 90% of sea turtles have plastic in their stomach.

True

☐

False

☒

Recent research found that 100% of sea turtles have plastic in their stomachs

- 5) Plastic debris can get lodged in coral and affect the health of reefs

True

☒

False

☐

- 6) Half of our plastic is recycled.

True

☐

False

☒

Only 7% of the plastic we use is recycled

The World's Oceans

Most of the world is covered by vast seas called 'oceans', in fact almost 70% of the Earth is covered in water!

Can you name the 5 different oceans of the world?

1. *Pacific*
2. *Atlantic*
3. *Indian*
4. *Southern*
5. *Arctic*

Can you label the oceans listed above on the map below?



Come and visit us at the Cornish Seal Sanctuary in Cornwall

Seas are usually smaller than oceans



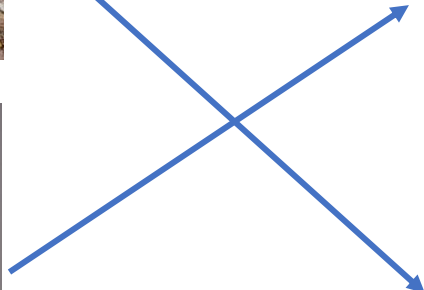
Plastic Pollution

Over 80 per cent of pollution comes from land-based activities as our waste eventually flows into the sea. Each year 8 million tonnes of plastic waste is dumped in the ocean, and this amount is set to double by 2025. In May 2018, a plastic bag was found more than a kilometre down on the sea bed in the world's deepest ocean trench!

Can you think of different plastic items we use?

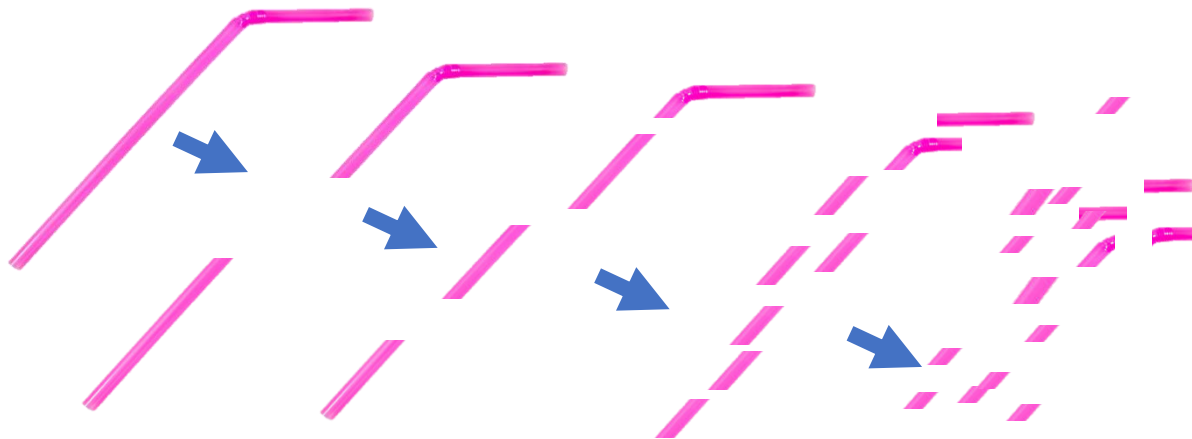
- *Water bottle*
- *Plastic bag*
- *Straw*
- *Toothbrush*
- *Clingfilm*

Plastic affects all marine animals, can you match the animal and the plastic that causes the most issues?



Micro plastics are also a big problem!

Micro plastics are essentially very tiny pieces of plastic. There are different types of micro plastic too. One type comes from broken down plastic and the other is plastic pellets, the raw material before it is melted down and turned into a product.



See how over time the straw breaks down to smaller and smaller pieces. These are the perfect size for many marine animals to eat!

Can you think of any animals that live in the oceans that might eat micro plastics?

- *Fish*
- *Seals*
- *Dolphins*
- *Whales*
- *Turtles*

Seals and Plastic

Say Hello to Brian May, one of the Grey Seal pups who we rescued in 2018.



He was found very weak and suffering from an infection.

Whilst in the Seal Hospital he spent a lot of time sleeping and had trouble swallowing fish



He pooped out bits of plastic. He had eaten a plastic bag! After that he began to feel much better

In the water plastic bags can look
a lot like something else ...

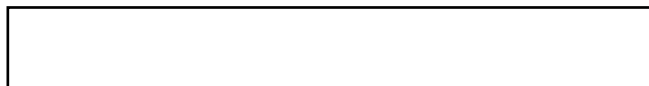
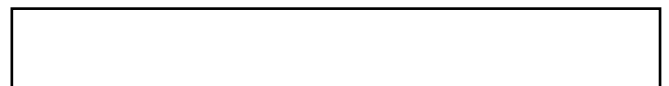
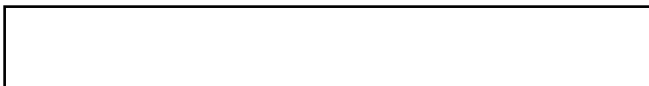
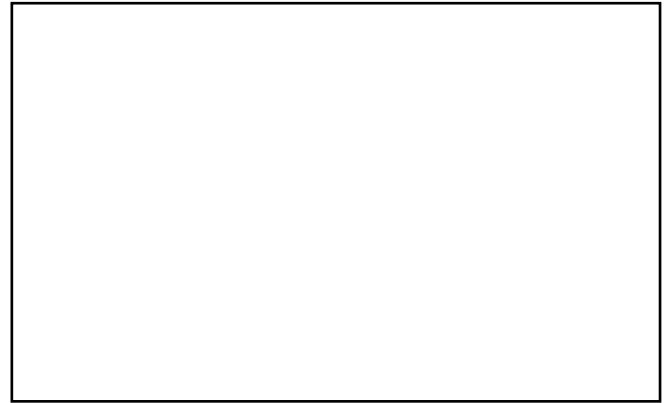
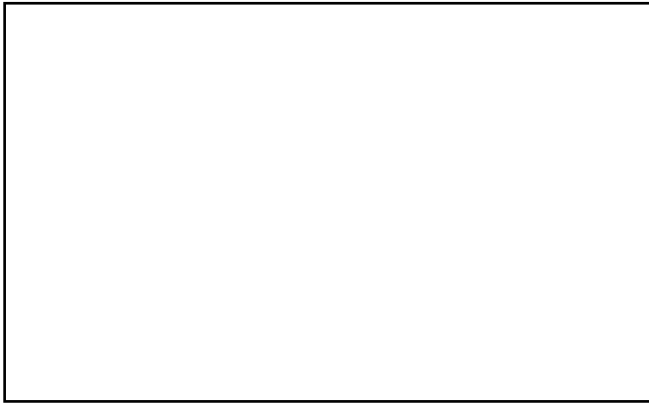


Seals sometimes like to eat jellyfish
as a tasty treat... and the bag
looked just like it!



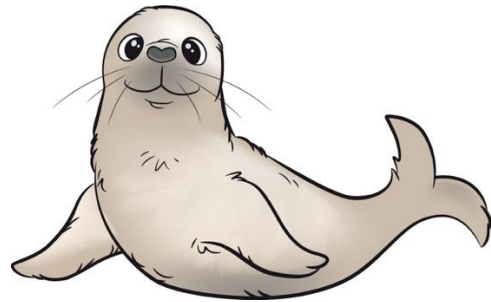
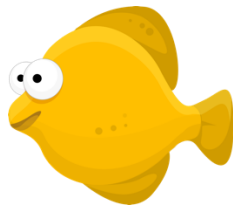
Thanks to the Cornish Seal Sanctuary, Brian May was returned to the
wild on 28th December 2018.

Use the story board to write how Brian May found himself at the Sanctuary
Email your story to us at The Cornish Seal Sanctuary to be featured on our Facebook and
Instagram: Georgina.shannon@sealifetrust.com



Food Chains

Food chains are cycles of what eats what. All living things, plants and animals, need energy to survive. Plants (like seaweed) create energy from sunlight. This is then transferred to fish which eat the seaweed. Predators (such as seals) then eat the fish and the energy is transferred once more. These transfers of energy are what we call food chains.



Look at the food chain above, can you draw the arrows to show energy transfer?

What is the producer?

Seaweed

What is the prey?

Fish

What is the predator?

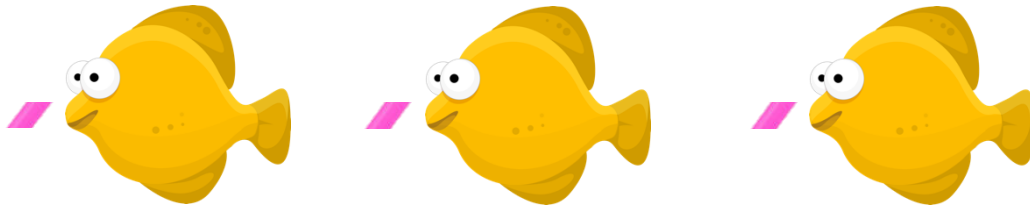
Seal

A producer can usually make
their own food



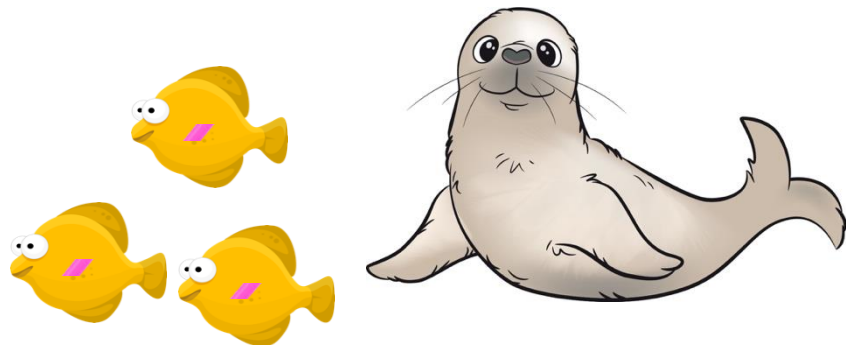
Let's have a think about how micro plastics could affect the food chain...

You're a fish in the ocean and see something the perfect mouth size, you're probably going to eat it.



Now let's imagine you're a seal out in the ocean looking for some dinner.

You spot a group of fish; these fish have all eaten micro plastics and you eat all the fish.



All the micro plastic that was in the fish is now in you, the seal.

Why do you think this could be a problem?

Plastic contains toxic chemicals, which can increase the chance of disease and affect breeding in seals. After ingesting micro plastics, seals, may suffer for months or years before they die.

Activity Time!

Jellyfish in a Bottle Craft:

You will need:

- Food dye
- Plastic bag
- String
- Scissors
- Clear Plastic Bottle

How to:

1. Fill the bottle with water
2. Add food dye to the water
3. Put the lid on the bottle and shake to mix
4. Cut the bag to make tentacles
5. Push the jellyfish bag into the bottle
6. Add more water and food dye until full
7. Put the lid on the bottle
8. Turn the bottle upside down to move the jellyfish

Can you see why Brian May was a little confused?



Jellyfish are a seal's favourite treat!



Making a Difference

Plastic pollution is a BIG problem for all marine animals.

We need to make a change now to make a difference.

There are plenty of plastic free alternatives:

- Reusable water bottle
- Metal straw
- Beeswax wraps
- Bamboo toothbrush

Think about the plastics you used this week, what could you have used instead?

Item	Alternative
<i>e.g. Water bottle</i>	<i>Reusable bottle</i>
<i>Clingfilm</i>	<i>Beeswax wraps</i>
<i>Plastic knife and fork</i>	<i>Bamboo cutlery</i>

We sell plenty of plastic alternatives in our shop



Activity Time

Design a poster to tell people about how plastic affects seals and what they could do to help,

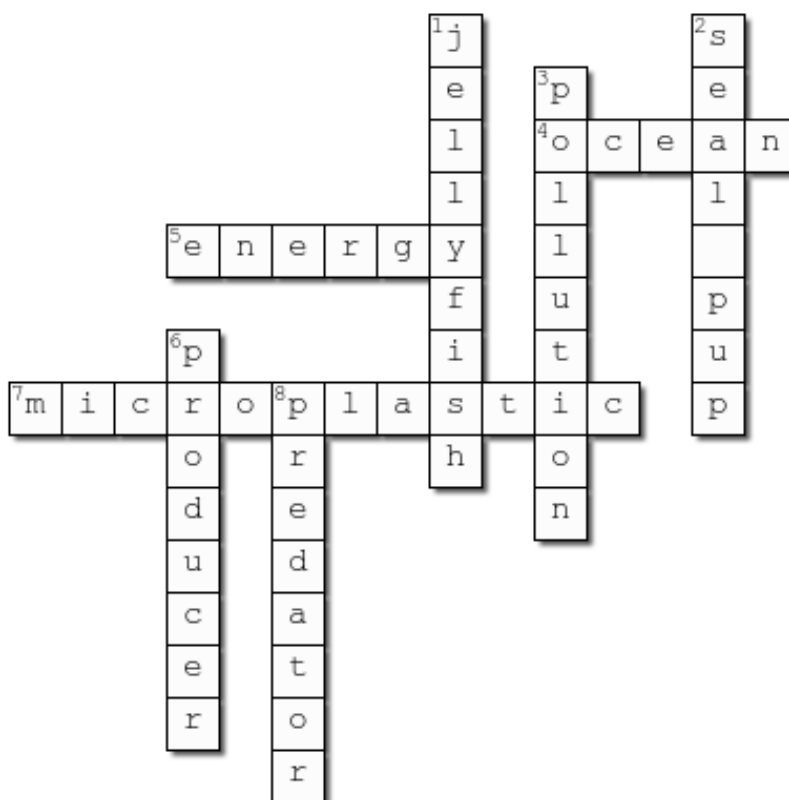
Send your posters in to us at The Cornish Seal Sanctuary to be featured on our Facebook and Instagram: Georgina.shannon@sealifetrust.com

Plan your poster and then use the next page for your final piece:

-
-
-
-
-
-
-

Activity Centre

Solve the clues to fill the words in the crossword



Created using the Crossword Maker on TheTeachersCorner.net

Across

4. There are 5 of these on the Earth (**ocean**)
5. This is what is transferred in a food chain (**energy**)
7. Tiny pieces of plastic (**microplastic**)

Down

1. A seal's favourite snack (**jellyfish**)
2. The name of a baby seal (**seal pup**)
3. What happens when the environment is contaminated, or dirtied, by waste, chemicals, and other harmful substances. (**pollution**)
6. First part of food chain (**producer**)
8. Top of the food chain (**predator**)

If you get stuck, check back through the lesson



Learn More at The Cornish Seal Sanctuary



There's plenty more to explore. Combining active learning with fascinating talks and an opportunity to have a close encounter with a variety of animals.

Want to learn more? Calling All Ocean Lovers!

Take part in jam packed sessions during School Holidays and discover all about:

- Seals and Sea Lions and the environment they live in
- Seal pup rescue, rehabilitation and release
- Our resident animals and how we care for them
- Local wildlife
- Marine conservation

Support the Sanctuary

Enjoyed learning with The Cornish Seal Sanctuary?

Did you know that we're a charity?

Every year, we rescue seal pups in need of care from around the coastline. Each pup costs £2,000 to rehabilitate and that doesn't include those that need specific operations. We also care for lots of animals who can't be released.



We are grateful for any donation received. Your money could go a long way to helping our animals get the care they really need.

To help text SEAL 5 to 70085 to make a £5 donation.
Or donate on our website: sealsanctuary.sealifetrust.org

Thank you for your support, we would not be able to do this vital work without you!

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