

Monday 6th July Morning Challenge

immense

vast

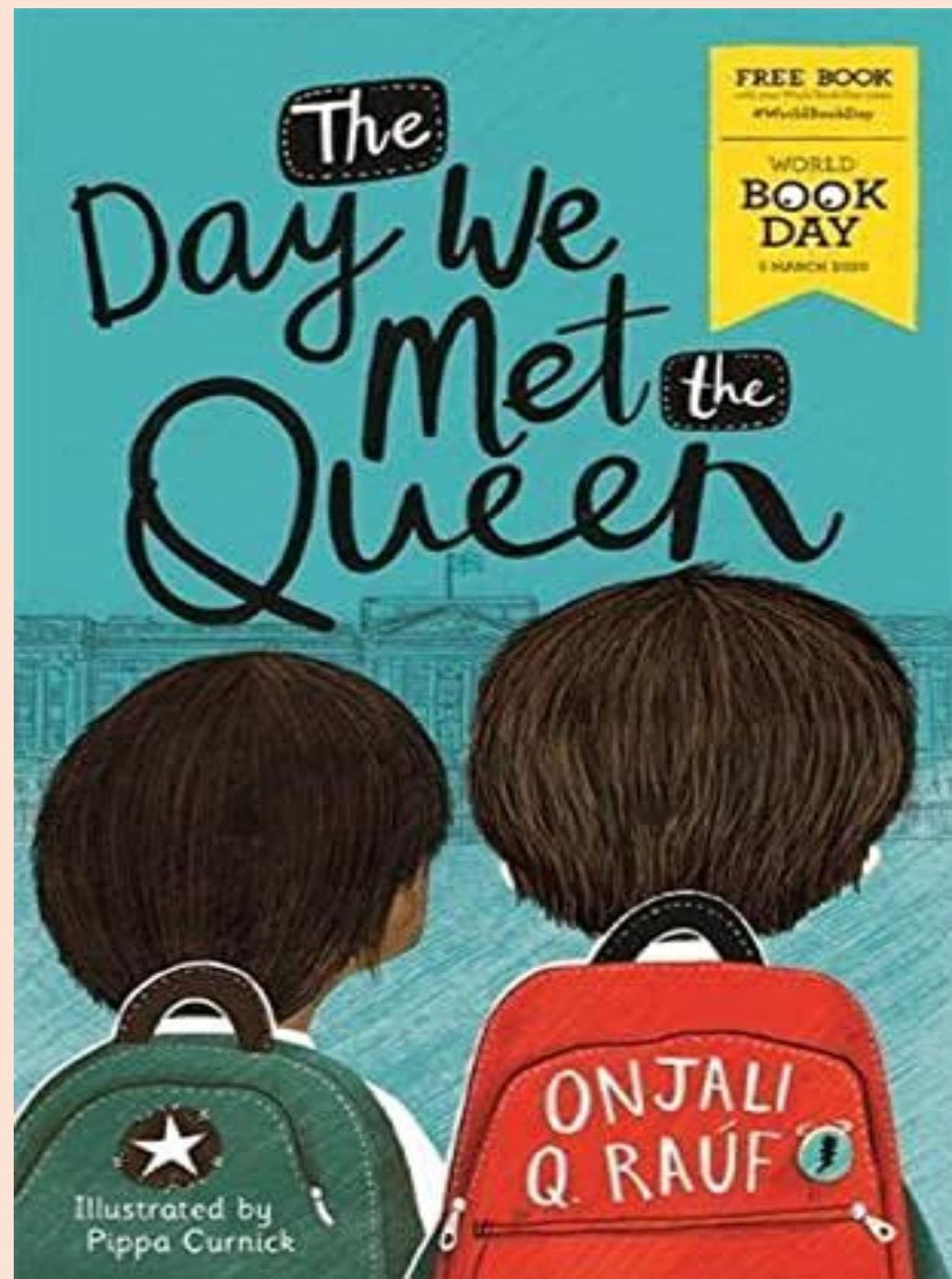
gigantic

gargantuan

mammoth

Challenge – Use each word in a sentence including dashes for parenthesis.

Toast and Class Novel



Monday 6th July

KQ: What are the threats to coastal habitats around the world?
Knowledge Quiz

Which of these are advantages to being a maritime nation? Tick 2 correct answers

- ☐ natural defence - can help protect from invasion
- ☐ isolation from other countries
- ☐ provides food (fishing)
- ☐ it is harder/more expensive to transport items to and from other countries

A coast is a strip of land made of rock, sand, mud or gravel, that meets the... Fill in the blank

The UK is surrounded by the North Atlantic Ocean, the North Sea, Irish Sea, and the... Tick 1 correct answer

- ☐ Pacific Ocean
- ☐ Scottish Channel
- ☐ English Channel

Sometimes a spit grows across a bay joining two _____. This is called a bar. Tick 1 correct answer

- ☐ headlads
- ☐ bars
- ☐ beaches

Order the processes that form a spit. Use numbers to show the correct order



	Sediment is carried by longshore drift.
	When the waves meet a change in direction of the coastline they lose energy.
	The transported material is deposited.

What forms behind a bar? Tick 1 correct answer



- ☐ saltmarch
- ☐ spit
- ☐ lagoon

Keywords

ecosystem

An **ecosystem** is a natural environment and the plants and animals live and interact within that environment.

habitat

Habitat is the natural home or environment of an animal, plant or other organism.

pollution

Pollution is anything that makes the environment dirty or unhealthy.

organism

An **organism** is a living thing.

Why are coastal habitats important?

Coastal **habitats** are widely diverse, from shallow sea water, to dunes and beaches, to rock pools and coves. There are different plants and animals that are suited to live there.



Why are coastal habitats important?

The living **organisms** that inhabit coasts form part of a special **ecosystem**. These animals and plants have to cope with extreme weather conditions, salty water, tides and waves.

For this reason, many coastal **organisms** do not live anywhere else.



Why are coastal habitats important?

Coastal **ecosystems** not only provide **habitats** for these coastal creatures, they are also important for the health of the planet.

Some examples of unique coastal habitats are:

- mangroves
- coral reefs
- estuaries



Mangroves

Mangroves are trees or bushes that grow in thick clusters along seashores and riverbanks. They have a thick tangle of roots that stick up through the mud. These roots help to keep waves from washing away the silt and sand of the coastline. This helps to prevent coastal erosion.



Mangroves are found in parts of Asia, Africa, Australia and the Americas where temperatures are warm all year round, as they cannot withstand freezing temperatures.



NASA Earth Observatory images created by Jesse Allen, using data provided by Chandra Giri, U.S. Geological Survey. Caption by Michael Carlowicz and Laura Rocchio.



Mangroves can grow in places where very few other trees can. For example, they can grow in salty water because they are able to filter out the salt.

They can stand in soft, wet soil because of their strong roots.



sea turtle



manatee

Their root system also makes these **habitats** attractive to fish and other **organisms** seeking food and shelter from predators.

Many fish and shrimp use the mangrove tree roots as a nursery to shelter younger creatures.

Mangroves provide **habitats** for thousands of species including sea turtles, manatees, crab-eating monkeys and Bengal tigers.

Why are coastal habitats important?



Check

Why are mangroves important?

a

Their roots help to prevent coastal erosion.



b

They cannot withstand freezing temperatures.

c

They provide a **habitat** for thousands of species.



d

Their roots shelter young creatures like a nursery.



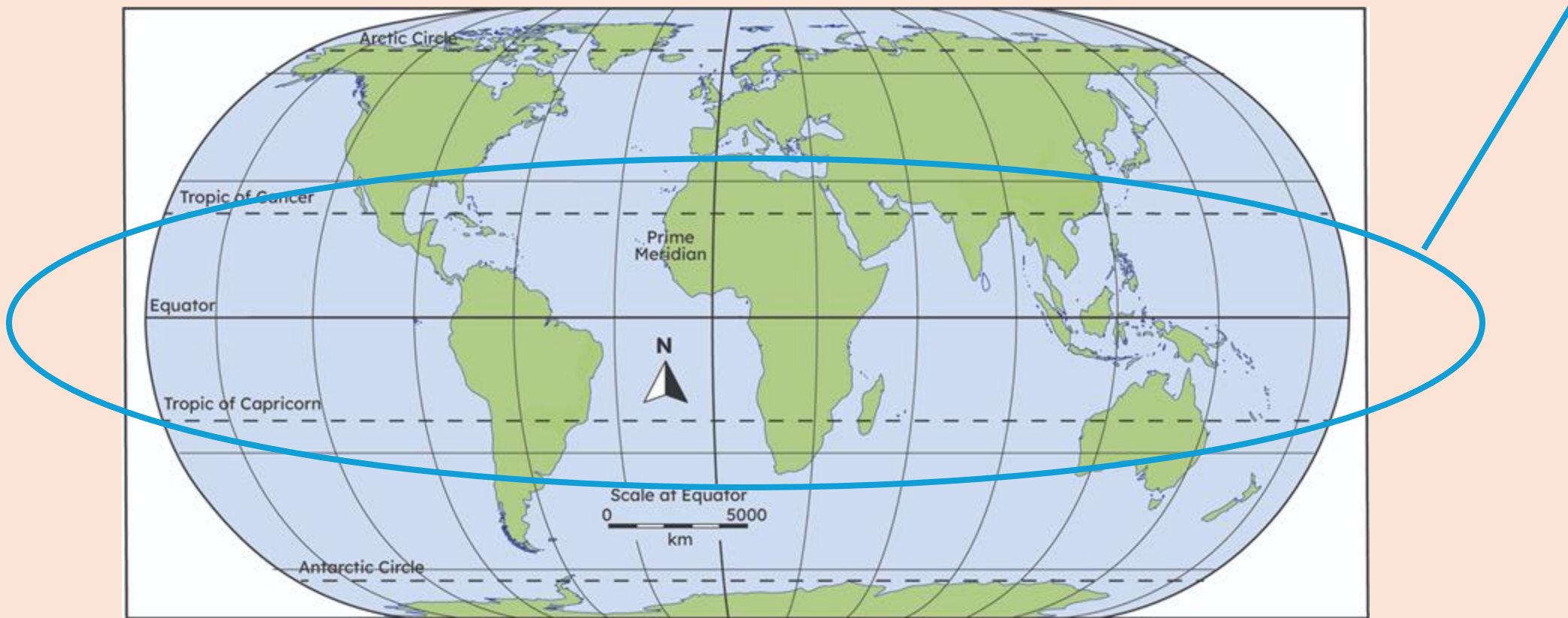
Coral reefs

Coral reefs are living underwater structures created by tiny sea creatures called coral polyps.

Coral reefs are formed by these tiny calcium producing **organisms**. By making a skeleton that they live inside, they grow together to form a reef. Reefs are a haven for thousands of life forms. Some of the oldest reefs began growing about 25 million years ago.



Coral reefs need warm, shallow tropical waters for oxygen, nutrients and calcium for their skeleton. The majority of reef building corals are found within tropical and subtropical waters.





The Great Barrier Reef is the biggest coral reef and is located just off the coast of Queensland, Australia.

It is the world's largest reef system and the biggest structure made by living **organisms**. It's so large, you can see it from space. It became a world heritage site in 1981.

Why are coral reefs important?

- Coral reefs cover less than 0.2% of the ocean floor, but are home to approximately 25% of the ocean's species.

They rival tropical rainforests as one of the most diverse **ecosystems** on our planet.



- They help stop the ocean water from becoming too acidic, which in turn protects life in the oceans.
- Corals protect shorelines by breaking up wave action.
- They serve as nurseries for growing fish and offer food, shelter and protection to a variety of marine species.
- They are a source of protein in the diets of local people, provide jobs through fishing and tourism, and are regarded as a potentially important source of new medicines.
- Their beautiful underwater world is a source of endless fascination.

Which of these statements about coral reefs are true?

- a** They are home to approximately 25% of the ocean's species. ✓
- b** Corals protect shorelines by breaking up wave action. ✓
- c** They are mainly found near to the Arctic Circle.
- d** They are a source of new medicines. ✓

Estuary

An estuary is the area of a river just before it reaches the ocean, where fresh and saltwater mix. Estuaries are normally wide and flat.

The river in an estuary is tidal so the amount of water in the estuary changes with the tides. When there is less water, the river deposits silt to form mudflats and salt marshes.



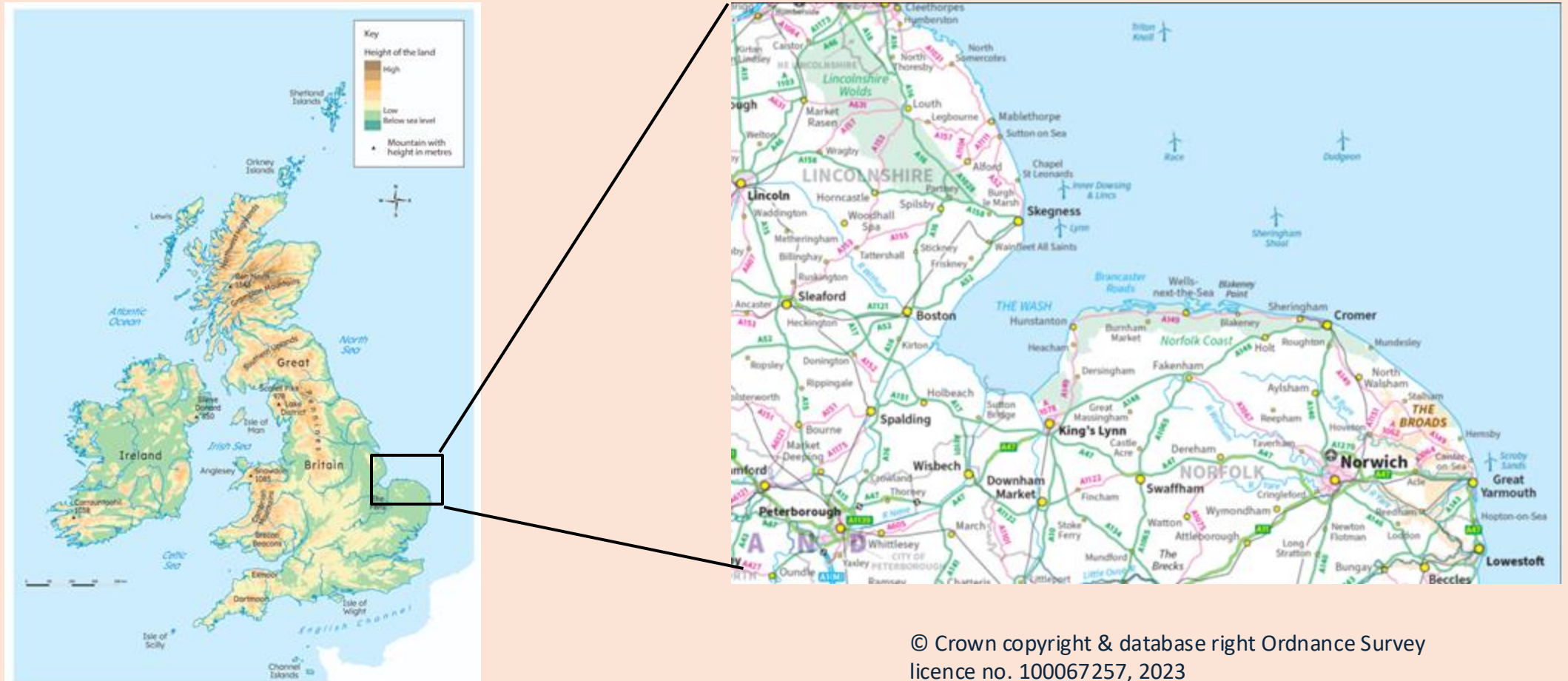
The muddy Rio de la Plata is the estuary of the River Paraná and River Uruguay.

Why are coastal habitats important?



Explanation

The Wash is a vast estuary in the UK that stretches for over 100 square miles from Skegness to Hunstanton.



The Wash coastal wetland is made up of huge intertidal banks of sand and mud, salt marshes, deep channels and shallow waters that offer a rich range of wildlife.

Estuaries are often called the “nurseries of the sea” because many **organisms** rely on these coastal **habitats** for nesting and breeding.



Saltmarshes are one of the most important natural **habitats** in England, with around 10% of the country's saltmarsh found in the Wash. It's a vital **habitat** for migrating birds like pink-footed geese. It is also home to one of the largest populations of common seals in England.





Why are estuaries often called the “nurseries of the sea”?

Estuaries are often called the “nurseries of the sea” because many species rely on these coastal habitats for nesting and breeding.

Task A

Why are coastal habitats important?



Choose one of the coastal **habitats** and complete the table.

Type of coastal habitat	
Location	
Describe what it is like	
How was it made?	
What kind of animals live here?	
Why is it important for the health of the planet?	

Task A

Why are coastal habitats important?



Feedback

Type of coastal habitat	Coral Reefs
Location	tropical and subtropical waters
Describe what it is like	bright and colourful underwater structures made of animals called coral polyps
How was it made?	built over thousands of years by tiny sea creatures
What kind of animals live here?	fish, lobsters, clams, seahorses, sponges and sea turtles
Why is it important for the health of the planet?	• home to approximately 25% of the ocean's species • help stop the ocean water from becoming too acidic • protect shorelines by breaking up wave action • are regarded as a potentially important source of new medicines

Unfortunately coastal **habitats** and their unique **ecosystems** are under threat from human activity.

The main threats come from:

- climate change
- **pollution**
- farming and fishing
- tourism

Climate change

Global sea temperatures have risen. This can cause corals to become stressed and gives the reef a 'bleached' appearance. This may eventually kill the coral.



Scientists predict that we could lose over 90% of our coral reefs by 2050 if we don't reduce our greenhouse gas emissions.

Staghorn coral
bleaching

Sync Rapeephat/Shutterstock.com

Pollution

Coastline settlements and industries have an effect on natural **habitats** and their wildlife. Litter, sewage and chemicals going into the water can all damage fragile coastal **ecosystems** if they are not carefully managed.



River estuaries can be hot spots of **pollution** emptying into the oceans.

Farming and fishing

Coastal **habitats** can be destroyed by overfishing and the use of damaging equipment.

Mangrove plants are often used as building materials. The cleared land is then sometimes used in the farming of fish and shrimps.



Tourism

Coastal **habitats** are often very beautiful and attractive to tourists. However, thoughtless tourism can threaten these **ecosystems**.



Coral reefs can be damaged when people anchor and ground boats on them, step on them, drag dive gear over them and chop them down for jewellery or ornaments.

What are the threats to coastal habitats?



Check

Match the types of threat to the correct definition

climate
change

tourism

pollution

Litter, sewage and chemicals all can damage fragile coastal **ecosystems** if they are not carefully managed.

Global sea temperatures have risen. This can cause corals to become stressed and gives the reef a 'bleached' appearance.

Coral reefs can be damaged when people anchor and ground boats on them, step on them, drag dive gear over them and chop them down for jewellery or ornaments.

Protecting coastal habitats

Some areas of the coast and sea are protected by law because they are very special places for wildlife.

Marine Protected Areas (MPAs) are similar to nature reserves. They are set up to protect specific species or whole habitats. MPAs can reduce destructive activities and protect and recover wildlife.



What are the threats to coastal habitats?

Eco-tourism can also help to protect these habitats. This is a way of trying to reduce environmental damage by working in ways that are good for wildlife.

Eco-tourism in Indonesia involves people exploring, planting, and caring for the mangrove forests. This helps tourists understand the importance of coastal **ecosystems**.



What is eco-tourism?

a

a way of trying to reduce environmental damage by working in ways that are good for wildlife.



b

a holiday to a coral reef

c

a form of tourism that encourages deforestation and carbon emissions

Task B

What are the threats to coastal habitats?



Using the information gathered about a coastal ecosystem in Task A, create an informative presentation.

You should try to include :

- Why is this coastal **ecosystem** important?
- What threats does it face?
- What we can do to protect it.

Your presentation could be on Powerpoint, a podcast or a poster.

Make your presentation easy to understand and engaging.

Which coastal **ecosystem** did you research?

Did your presentation help to explain:

- why this coastal **ecosystem** is important,
- the threats that it faces.
- what we can do to protect it?

I made a Powerpoint presentation about Coral Reefs. I used the first few slides to explain that coral reefs are home to about 25% of the ocean's species, that they help to stop the ocean water from becoming too acidic, protect shorelines by breaking up wave action and that they could be an important source of new medicines. I explained how climate change, pollution and tourism affected coral reefs and finished my presentation by suggesting what we can all do to protect this precious ecosystem.



- Coastal **habitats** and their unique **ecosystems** are under threat from human activity and climate change.
- Coastline settlements and industries impact on natural **habitats** affecting wildlife populations.
- River estuaries can be hot spots of **pollution** emptying into the oceans.
- Eco-tourism is a way of trying to redress environmental damage by working in ways that are good for wildlife.

KQ: What are the threats to coastal habitats around the world?

Exit Quiz

1 _____ is a natural environment and the plants and animals live and interact within that environment. Tick 1 correct answer

- ☐ A habitat
- ☐ A human feature
- ☐ An ecosystem

2 Match the keyword to its definition. Write the correct letter in each box

a	pollution
b	habitat
c	organsm

	the natural home or environment of an animal, plant or other organism.
	anything that makes the environment dirty or unhealthy
	a living thing.

3 Which three of these are examples of coastal habitats? Tick 3 correct answers

- ☐ mangroves
- ☐ coral reefs
- ☐ mountains
- ☐ estuaries

4 Why are mangroves important? Tick 3 correct answers

- ☐ Their roots help to prevent coastal erosion
- ☐ They cannot withstand freezing temperatures.
- ☐ They provide a habitat for thousands of species.
- ☐ Their roots shelter young creatures like a nursery.

5 Which of these statements about coral reefs are true? Tick 3 correct answers

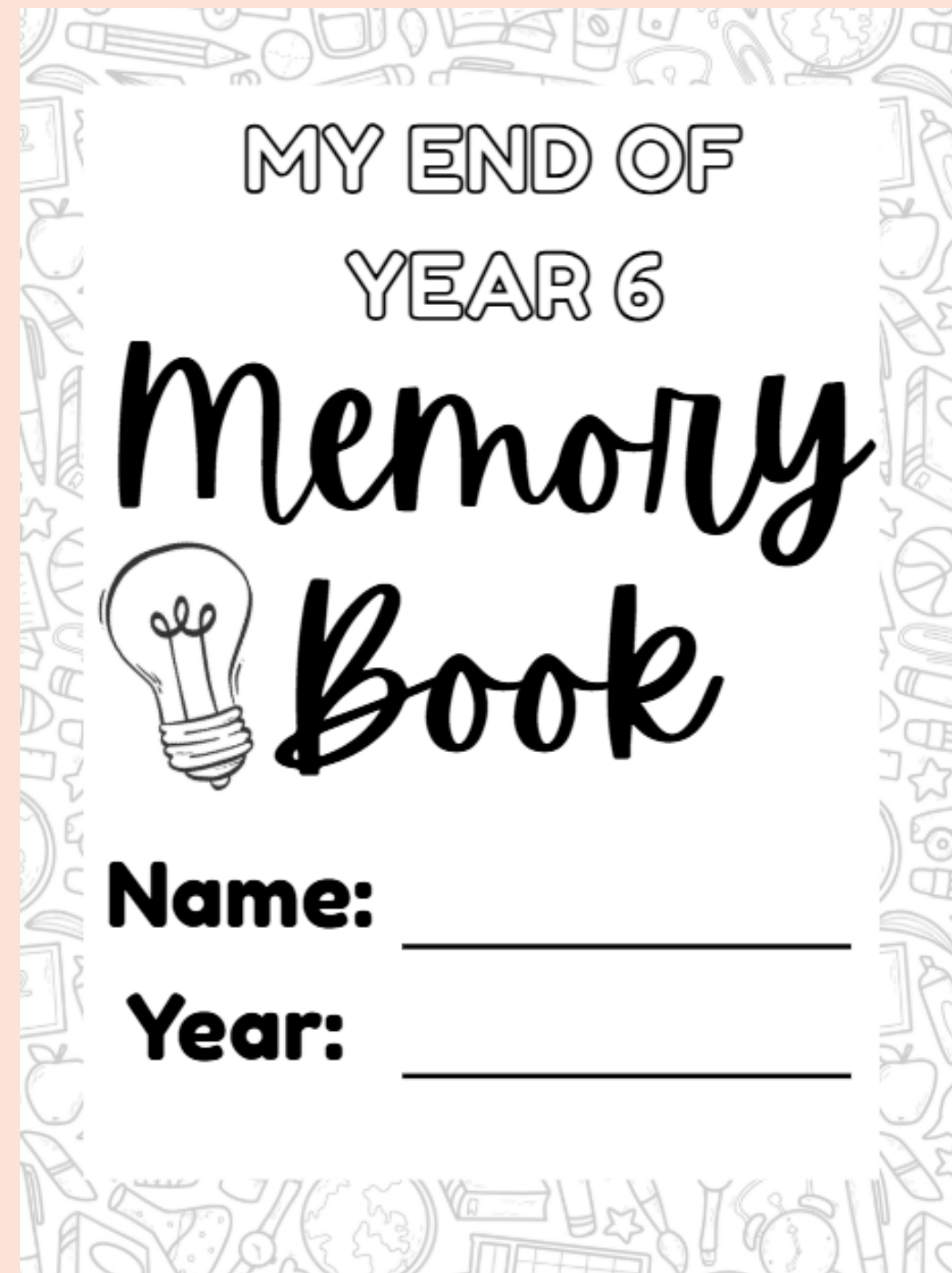
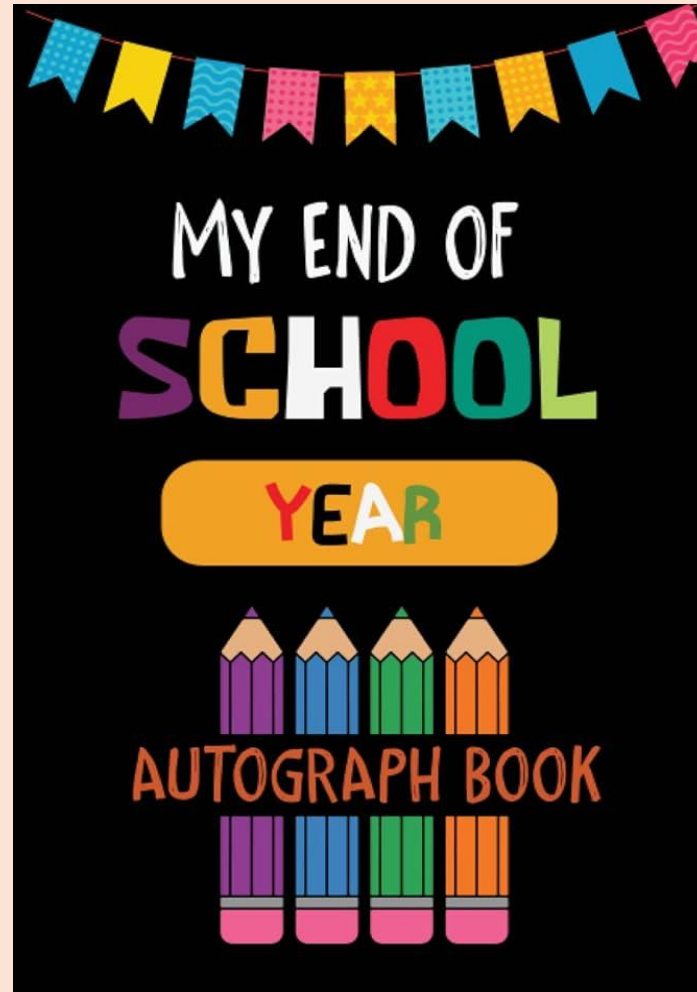
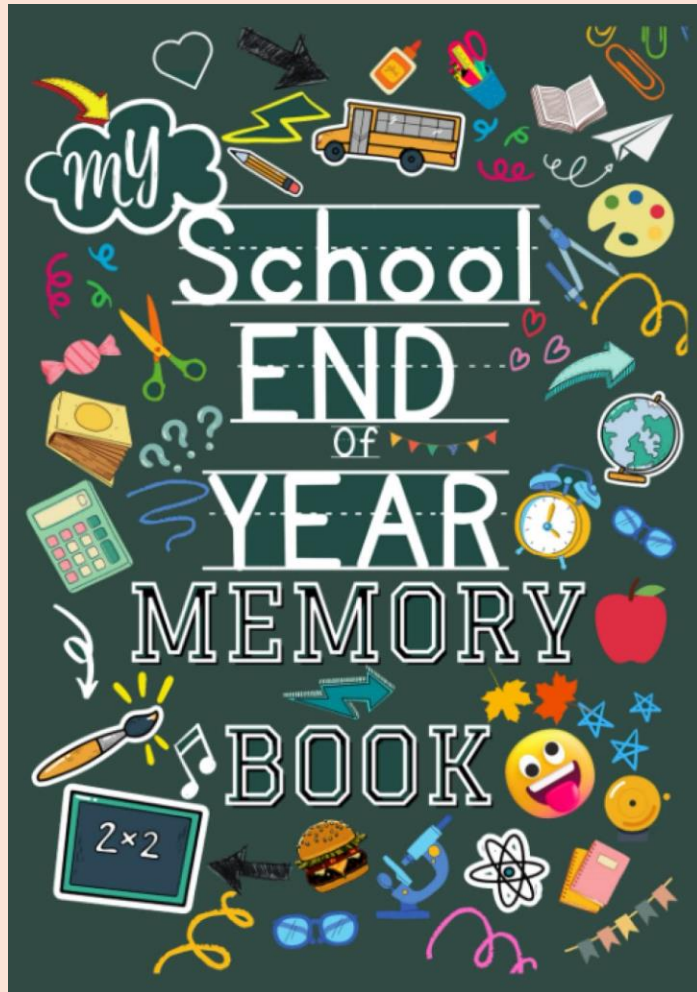
- ☐ They are are home to approximately 25% of the ocean’s species.
- ☐ Corals protect shorelines by breaking up wave action.
- ☐ They are mainly found near to the Arctic Circle.
- ☐ They are a source of new medicines.

6 Estuaries are often called the “_____” because many species rely on these coastal habitats for nesting and breeding. Tick 1 correct answer

- ☐ incubator of the sea
- ☐ daycare for fish
- ☐ nurseries of the sea

Celebration Assembly

Design the front of your
memory book.



Matilda Dress Rehearsal

