

Correct
Do Now

Task
Write the date & title in your book.
In the centre of your page, write 'Coral Reefs' and make a mind map of what you already know about them.

What might you know?
Location? Plants? Animals? Climate? Opportunities (human uses)? Threats?

DON'T WORRY ABOUT GETTING IT WRONG
This is learning! We will correct and add to your information in purple pen...

1

Key Idea:
Coral reef ecosystems have a range of distinctive characteristics

AO1
Describe the location of the coral reef biome

AO1
Describe the characteristics of the coral reef biome

AO2
Explain how plants and animals are interdependent in the coral reef biome

2

Key Information:
Coral reefs are one of the most important ecosystems in the world, and have been called 'the rainforests of the sea' owing to the diverse range of plants and animals that they support. Although **they cover less than 0.1% of the world's ocean surface**, they provide a home for at least **25% of all marine species**.



3

New Information
So what is a 'coral reef'?


Coral reefs form at **depths not exceeding 25 metres** and need **warm water between 20 to 28 degrees Celsius**. Reefs grow faster in **clear water** that allows sunlight to penetrate. A coral reef is made up of millions of **coral polyps**. These are tiny **animals**, but they contain **plants called algae**. The algae convert **sunlight** into energy for the reef itself. The coral polyps make hard calcium carbonate which builds up over thousands of years to form reefs.



4

New Information
Why are coral reefs important?

- Coral reefs are important, not only are they important in terms of worldwide **tourism**, but for other reasons as well.
- Coral reefs serve as **indicators of the health of our planet**. They represent how effectively we are caring for our world.
- Importantly, they serve as **protection for coastlines**.
- In addition, they are an **essential source of food and protein for millions of people** throughout the world. No wonder 500 million people live within 50 miles of coral reefs!
- Coral reefs provide **medical benefits** to us as well. A chemotherapy drug used to treat leukemia is derived from sponges that live on the reefs. Antiviral drugs are also derived from sponges.



5

Task: Work in your map. Use the map and an atlas to describe the global distribution of the coral reef biome.



Notes:

- Use the **5R's** and explain why about the general **Pattern**, give named **Regions**, detail and **Assesses** (examples which don't follow the general trend).
- Use compass directions.
- Name oceans and seas.

Further Thinking
Explain why the coral reef biome is located between 30° north and 30° south of the Equator. Hint: Look to what you know about the high biodiversity of the biome, nutrient cycle and how the Equator is closest to the sun!

6

Review & Reflect

Task: Use the WAGOLL to improve your answer. Give yourself WWW and EBI.

WAGOLL
The coral reef biome is distributed in the oceans and seas between 30° north and 30° south of the Equator. Most coral reefs are located to the east of continents, for example the New Caledonia and Great Barrier Reef is located to the east of Oceania and South East Asia, and the Mesoamerican, Florida and Andros coral reefs are located to the east of Central America. Most coral reefs are located close to coastlines, where the sea is shallow, however there is a large concentration of coral reefs in the Pacific Ocean to the east of Australia.

Further Thinking
Which biome lies along a similar latitude? Why?
Can you think of any threats some of these areas face?



Developing Understanding

BLUE PLANET II
Take a deep breath

Task: Work in your 4-question team and read through the questions to prepare for the documentary clip.



Review & Reflect
Introducing Coral Reefs

Task: Turn back to the mindmap you made at the beginning of the lesson.

In **purple pen** add at least 5 new facts you have learned about coral reefs! – And correct any misunderstandings you had!

What might you know?
Location? Plants? Animals? Climate? Opportunities (human uses)? Threats?

We can turn to the introductory slides to see if you have missed anything!

