

Coral

Think

- What is this?
- What colours can you see?
- Where in the world might you see this?
- What do you think it feels like?



Respond

Who or what could come out of the coral and what might happen next?



Reimagine

Draw a creature that could live inside the coral.



Discuss

Where do oceans start and stop?



Solve

In every square metre of reef there are approximately 6 crabs. If the reef is 243m^2 , estimate the number of crabs. There are approximately 14 fish per m^2 . Estimate how many on the reef. There are approximately 36 coral per m^2 . Estimate how many on the reef.



Discover

Fact: Corals are alive! They are ancient animals related to jellyfish and anemones.

Question: What can you find out about corals? Where is the Great Barrier Reef and what is it?



Ship

Think

- Is this real? Why/why not?
- Where do you think it is?
- When do you think it is?
- Who might be on the boat? Why?
- What might they be doing?
- Where do you think they are travelling to?



Respond

Imagine you were on the ship in this weather with a friend, how would you be feeling? Role play the dialogue you might have.



Reimagine

Zoom out from what you can see and draw the bigger picture.



Discuss

Have pirates been romanticised
- made to seem more exciting and glamorous than they really are?



Solve

The hull and the sails of this ship weigh 7935kg in total. The sails weigh half as much as the hull. What do the sails weigh? How much does the hull weigh?



Discover

Fact: Part of the Mariana Trench in the Pacific Ocean, east of the Philippines, has been measured at a depth of 10 971m. Despite the Mariana Trench being the deepest part of the world's oceans, some parts of the Arctic Ocean seabed are closer to the centre of the Earth.

Question: Why is the Mariana Trench not the closest point to the centre of the Earth?



Diver

Think

- Where is this person?
- What equipment has he got?
- Is he alone?
- Is this his job?
- What is this person trying to do?
- Would you like to do this? Why?
- Is he safe?



Respond

Write a report of what is seen and filmed by this diver.



Reimagine

Draw what the diver is recording.
Think about what they can see.



Discuss

Is diving safe?



Solve

The diver has a 15 litre oxygen cylinder. He has been underwater for 45 minutes and used 60% of his tank. How many more minutes of oxygen does he have?



Discover

Fact: The world record for the deepest scuba dive is 332 metres.

Question: What is the world record for the deepest free dive (when the diver has no oxygen)? Who holds the record?



Lionfish

Think

- What is it?
- Where is this?
- Is it male or female?
- Is it alone?
- What is it doing here?
- Is it safe?



Respond

If fish could talk, what would this one be saying?



Reimagine

Design a different pattern for this fish.



Discuss

Do fish only belong in the sea?
Should people catch fish?



Solve

This fish eats plankton and seaweed in the ratio of 2g of plankton to 3g of seaweed. If the fish eats 45g of food in a day, how much plankton will it eat?



Discover

Fact: The various fish groups account for more than half of all vertebrate species. There are almost 28 000 known species, of which almost 27 000 are bony fish, with 970 sharks, rays, and chimeras and about 108 hagfish and lampreys.

Question: What sort of fish is this? What is the biggest fish in the world? What is the smallest fish in the world?



Wave

Think

- Where might this be?
- Is it near to where we are now?
- What is the weather like?
- What caused the wave?
- How can we tell the size of the wave?
- How might it feel to be in the sea when this wave breaks?



Respond

Lots of poems have been written about waves and the ocean. Write a poem that conveys the movement of the waves?



Reimagine

Draw your own wave. How are you going to capture the action?



Discuss

Is the ocean alive? Why do we need to respect the ocean?



Solve

The height of this wave is 28.6m. What is the height in cm? What is the height in mm?



The next wave to break reached a height of 1940cm. What height was this as a percentage of the first wave to one decimal place?

Discover

Fact: The highest wave ever recorded was during a tsunami in 1958 in Alaska - it was over 34m high.

Question: Can you find something that is 34m high to get a sense of the scale? Perhaps a building or a number of large objects or animals stacked on top of each other?

