

Dad is taking his children on a trip to the Ocean World museum to experience the story of our oceans, and along the way they discover the very beginnings of life on Earth...

NICHOLLS • RABEI

Who Makes an Ocean?

ANDERSEN PRESS

SALLY NICHOLLS

CAROLINA RABEI

Who Makes an Ocean?

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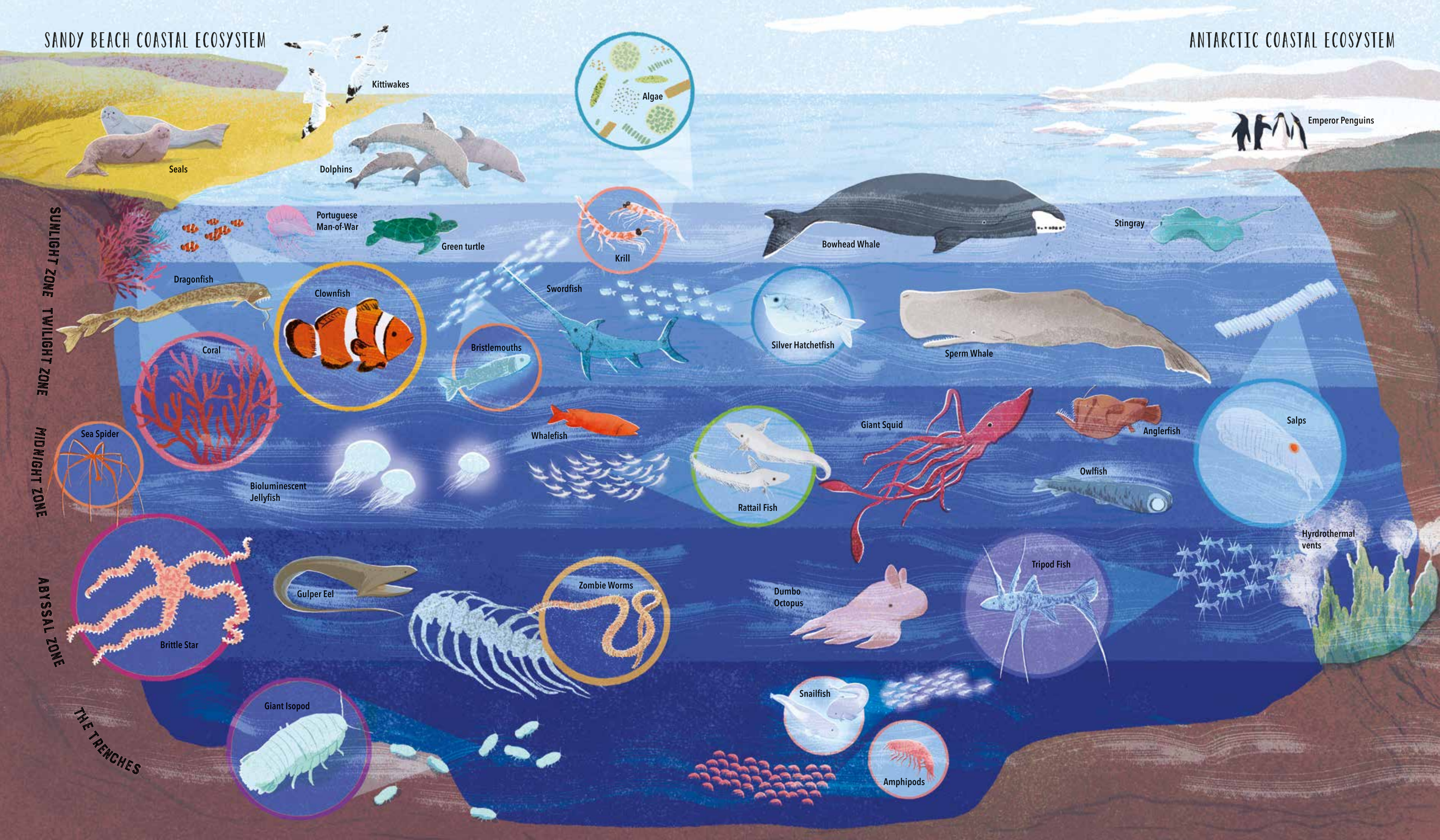
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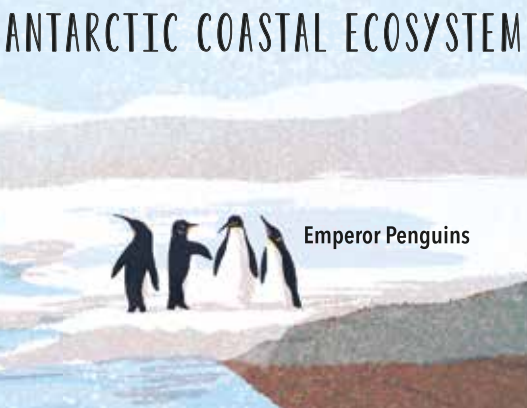
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SANDY BEACH COASTAL ECOSYSTEM

ANTARCTIC COASTAL ECOSYSTEM



SUNLIGHT ZONE
TWILIGHT ZONE
MIDNIGHT ZONE
ABYSSAL ZONE
THE TRENCHES



Algae



Portuguese Man-of-War

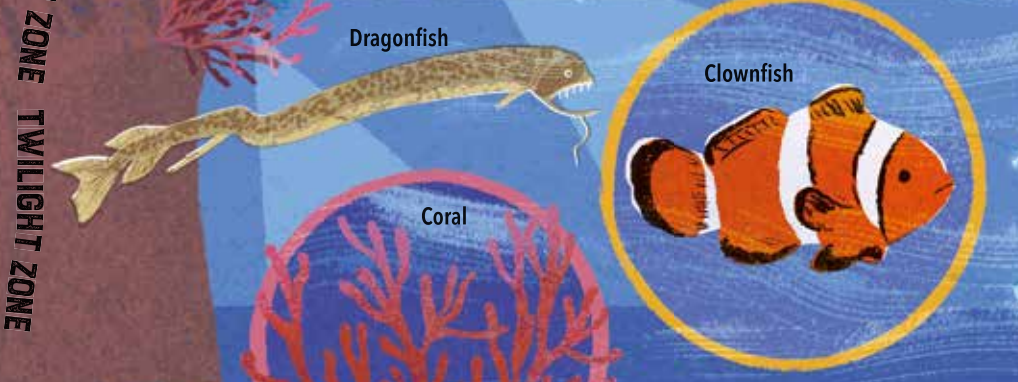
Green turtle

Krill



Bowhead Whale

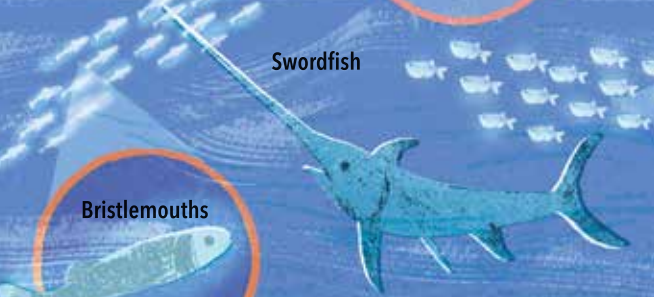
Stingray



Dragonfish

Clownfish

Coral



Swordfish

Bristlemouths



Silver Hatchedfish



Sperm Whale



Sea Spider



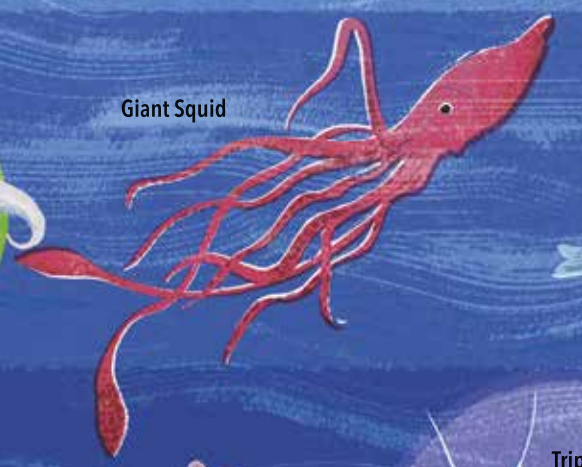
Bioluminescent Jellyfish



Whalefish



Rattail Fish



Giant Squid



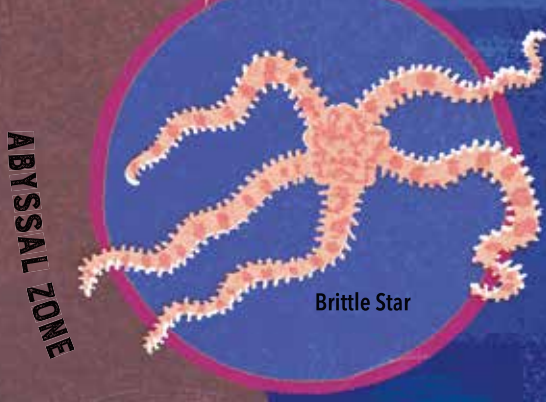
Anglerfish



Salps



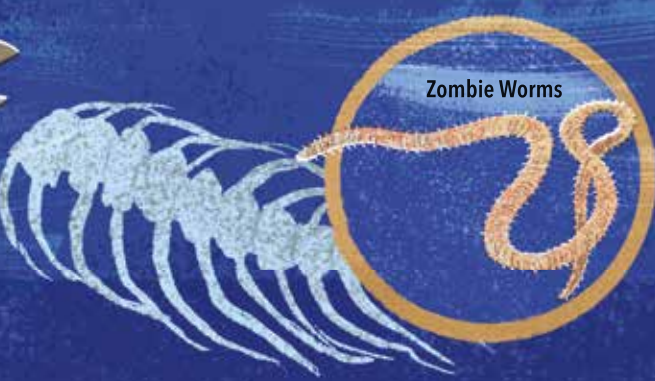
Owlfish



Brittle Star



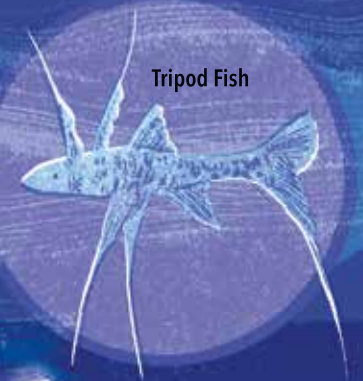
Gulper Eel



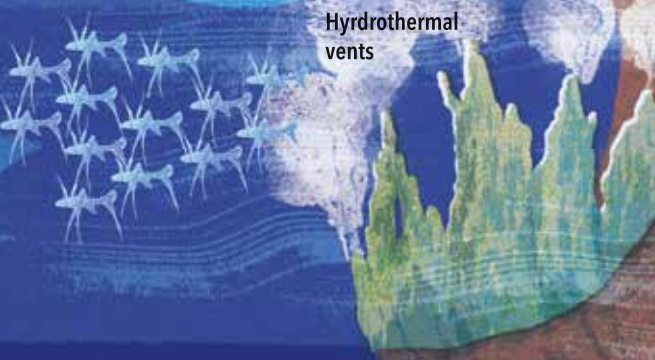
Zombie Worms



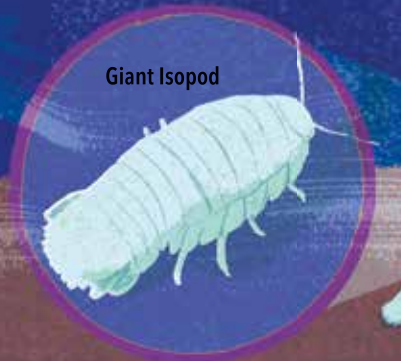
Dumbo Octopus



Tripod Fish



Hydrothermal vents



Giant Isopod



Snailfish



Amphipods

OUR OCEANS

Do you know why Earth is known as the Blue Planet? Earth has more sea than land by area, and with over two-thirds of its surface taken up by ocean, it appears blue from space!

It's thought that life on Earth started in the oceans, 3–4 billion years ago, alongside hydrothermal vents deep at the bottom of the sea. Now, the oceans are home to a vast array of life, from microscopic organisms in their billions to Antarctic blue whales, Earth's largest animals. Different types of plants and animals live in different parts of the ocean depending on their needs. The ocean can be divided up into six basic ecosystems:

COASTAL ZONE Coastal habitats around the world include estuaries, rocky shores, sandy beaches, coral reefs, mangroves, kelp forests and more. These are rich and diverse in life, and are very different depending on their geography and location.

SUNLIGHT ZONE Up to 200m deep, there's plenty of light and oxygen here, and it's fairly warm, which is perfect for a lot of animals and plants. It's thought that around 90% of marine life lives here.

TWILIGHT ZONE At 200–1,000m deep, it's darker and cooler here, and the pressure is higher than at surface level. Creatures that live here often have large eyes to help them see.

MIDNIGHT ZONE At 1,000–4,000m deep, no light can reach this far down so it's completely dark, it's cold, and the pressure is even higher. Many creatures that live here create their own light. This is called bioluminescence.

ABYSSAL ZONE Around 4,000–6,000m deep, it's completely dark, near-freezing, and the pressure is very high. Much of the seabed is in the Abyssal Zone, and many of the animals here feed on the remains of larger animals from the higher zones.

THE TRENCHES These are the deepest, darkest and coldest parts of the ocean, where the pressure can be 110 times that of the surface. The deepest trench is the Mariana Trench in the Pacific Ocean, at 11,000m deep! There is life here, but only creatures highly adapted to withstand the temperature and pressure can thrive.

Earth has five named oceans: the Pacific, Atlantic, Indian, Arctic and Southern Oceans. Although each of them has their own characteristics, all of the world's oceans are interconnected. It's estimated that these oceans are home to between 50% and 80% of all life on Earth, and with less than a fifth of their waters already explored, there's much more to discover...

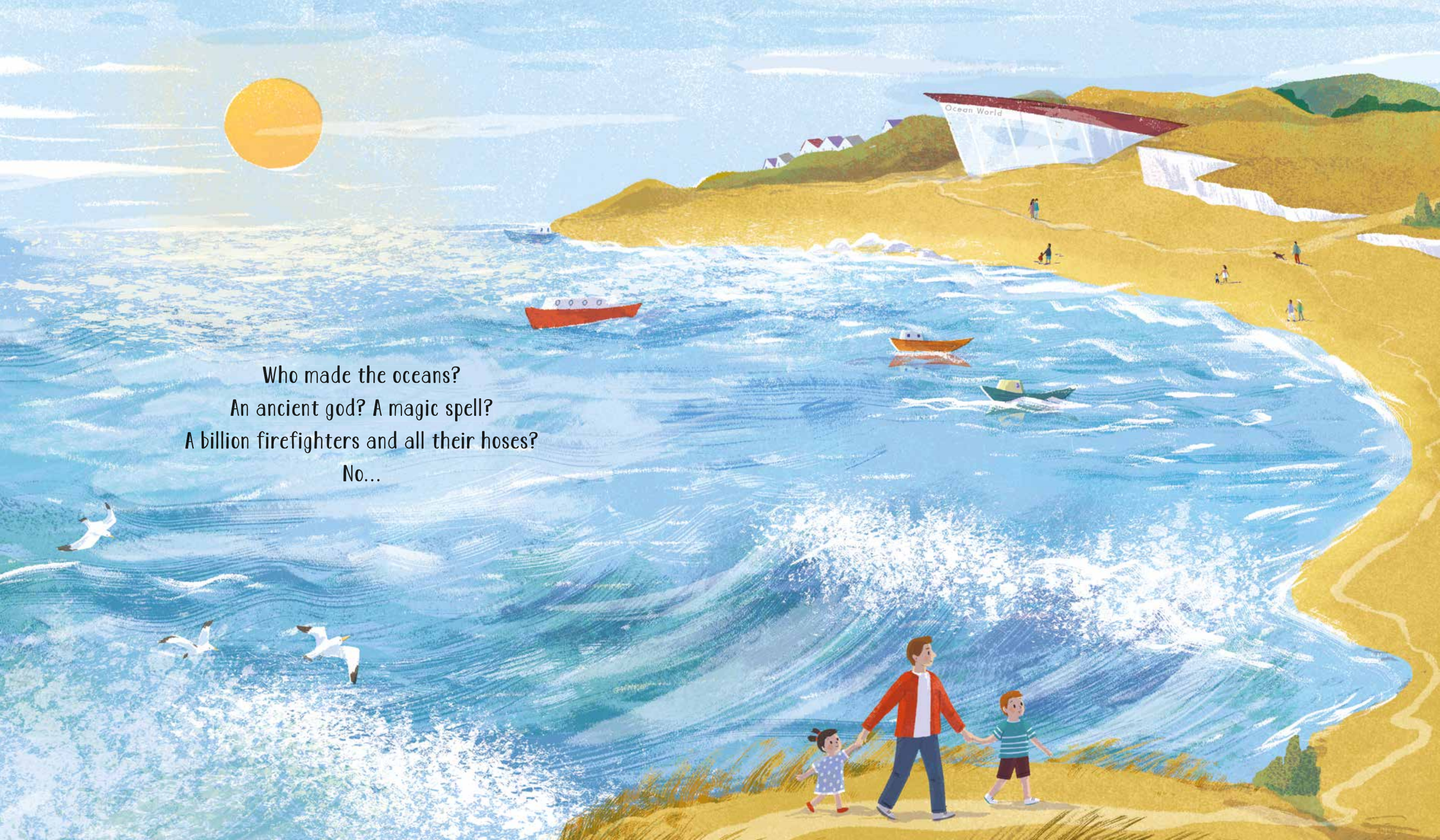


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Who made the oceans?
An ancient god? A magic spell?
A billion firefighters and all their hoses?
No...