



Catmose Primary School
3i Knowledge Organiser

Blue Abyss Year 4 Term 6

What do I want to learn about?

Music

Music appreciation:
Listen to and appreciate music from other cultures and traditions.
How does the music make you feel?
How can music help us to feel calm?

Oceans and seas

Just over two thirds of the Earth's surface is covered with water. Most of this water is found in oceans. There are 5 oceans: Atlantic, Pacific, Indian, Arctic and Southern Oceans. Each ocean has its own climate, depending on its location in the world. Seas are smaller than oceans and can be surrounded by land.

Ocean layers

The ocean has five different layers: the sunlight zone, the twilight zone, the midnight zone, the abyss and the trenches. As the depth increases, the temperature and light levels fall, and the pressure rises making it a difficult place to live. Oceans are home to hundreds or thousands of marine species, each specially adapted to live at specific depths. Scientists are still discovering new species that they have never found before in the deepest parts of the oceans.

sea level				sunlight zone	most sunlight, plants grow
200m	dolphin	shark	manta ray	twilight zone	some sunlight, no plant growth
1000m	jellyfish	octopus	squid	midnight zone	no sunlight
4000m	anglerfish	oarfish	gulper eel	abyss	dark and cold, little food, high pressure
6000m	sea pig	basket star	sea spider	trenches	pitch black, very cold, little food, extremely high pressure
11,000m	tubeworm	starfish	cusk eel		

Great Barrier Reef

Corals are marine invertebrates that live in large groups called colonies. Some species produce a hard exoskeleton that forms into a coral reef. The Great Barrier Reef, on the northeastern coast of Australia, is the longest and largest coral reef in the world, with over 600 types of coral. Corals are at risk of being destroyed by climate change, pollution and consumers.

Computing

Digital Literacy and ICT-
Data
Sort and organise information collected.

Use paint to create own sea creatures.

RE- Judaism

Shabbat

Art

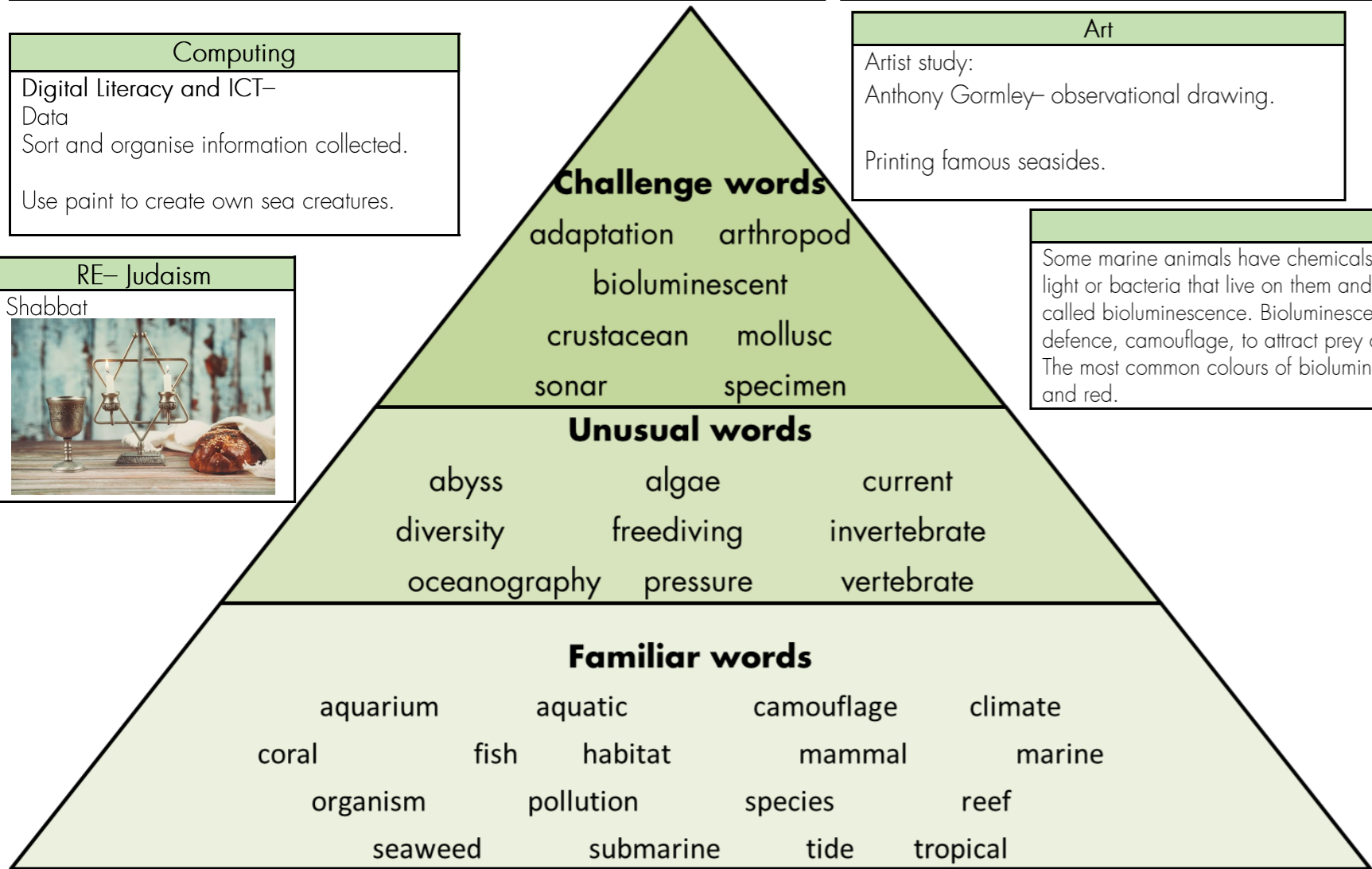
Artist study:
Anthony Gormley- observational drawing.

Printing famous seascapes.



Bioluminescence

Some marine animals have chemicals in their cells that make light or bacteria that live on them and produce light. This is called bioluminescence. Bioluminescence can be used as defence, camouflage, to attract prey or to see in the dark. The most common colours of bioluminescence are blue, green and red.



Ocean exploration

Diving
Ocean diving can be dated back to 4500BC when people in the coastal areas of Greece and China dived for food. Jaques Cousteau (an explorer, television presenter and inventor) invented the aqualung which meant divers could take air with them. As a result, they could spend more time under the water and go deeper than ever before. Cousteau used the aqualung to explore and film the underwater world more freely. His films showed people what was in the ocean for the first time.

Submarines
In 1620, Cornelis Drebbel built the first submarine. He tested it in the River Thames up to depths of around 4.5m for up to three hours. Today, submarines are used for exploring the deep oceans. They are built to withstand the extreme pressure and have robotic arms to collect marine creatures and samples from the bottom of the ocean.

Oceanography
Between 1872 and 1876, the Royal Navy ship *HMS Challenger* took part in a four-year expedition around the world. The crew collected information and carried out investigations into the world's oceans. The results were published in *The Challenger Report* and became the basis of modern oceanography.