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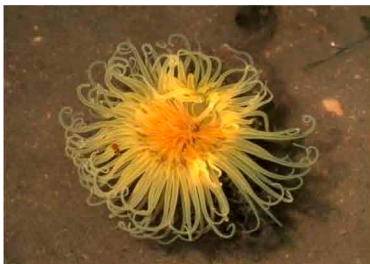
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A Trip to Chek Jawa

Welcome to Chek Jawa! Chek Jawa Wetlands is an extraordinary stretch of shore located on the eastern coast of Pulau Ubin that springs to life during low tide. Exploring Chek Jawa Wetlands is a one-of-a-kind experience as it is home to several ecosystems and a diverse population of animals.

This worksheet will guide you on your Chek Jawa Wetlands adventure by helping you to get to know its surroundings and inhabitants. At the end of this exercise, we hope you will understand why shores such as Chek Jawa Wetlands are such an exciting and essential part of our natural environment, and why it is so important for us to help conserve it.

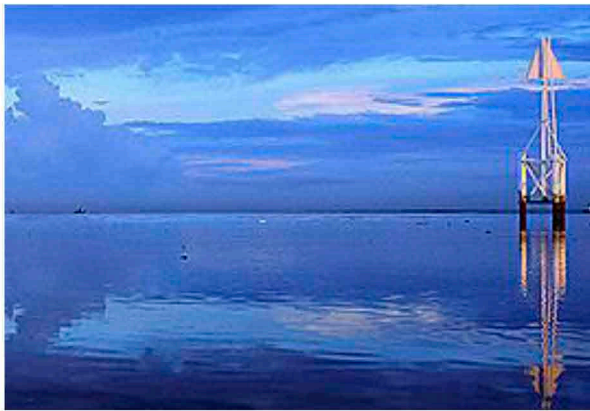
Note: This worksheet exercise is best conducted during low tide when the wetlands are fully exposed, making the animals more visible on the shore.



Life on the Shore

The ocean covers 72% of the earth's surface, not including rivers, streams, lakes and ponds. A shore is an area where seas and oceans meet land. Shores may be rocky, sandy or muddy. Due to these different conditions, you will find various species of animals and plants living there.

Life on the shore is challenging; at times it is cool and wet, and other times, dry with intense heat from the sun. Shore animals also face threats from predators such as fishes in search of a meal, or hungry birds swooping down when the tide goes out!



Chek Jawa at high tide



Chek Jawa at low tide

Animals and plants that reside here adapt to both aquatic (underwater) and terrestrial (land) environments in their own special ways.

What can be found on these shores? How are they grouped?

The following groups of organisms can be found:

- Invertebrates (animals without backbones, such as crabs, sea stars, jellyfish)
- Vertebrates (animals with backbones, such as fish, mammals, reptiles, birds)
- Plants (including seagrass and seaweed)

Inhabitants of the Wetlands

Here are some of Chek Jawa Wetlands' residents. Do you recognise them?



I am usually found among the rocks and am an ingredient in a local delicacy. What is my name?



One of my claws is larger than the other. Can you guess what my large claw is used for?



I am a mudskipper. Am I an amphibian, reptile or fish?



I am a mud-dweller that prefers to stay underground. I find my food in the mud and help regulate the nutrients in the dirt for other animals. What am I?

Which of the above animals are invertebrates? _____

The Food Chain

The term 'Ecosystem', short for 'ecological system', refers to inter-linked relationships between living things and their environment.

One of the main relationships in an ecosystem is that of the prey and predator. An animal may be the predator of one animal yet also the prey of another. This cycle is called the food chain. An ecosystem is formed by many inter-connected food chains.

Can you link up the correct predator-prey pairs below?

Fiddler Crabs



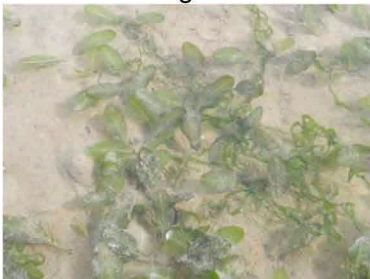
Barnacles



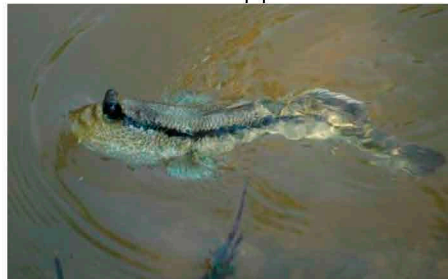
Drills



Seagrass



Mudskipper



Great-billed Heron



What do you think will happen in the following situations?

1) Seagrass disappears from Chek Jawa Wetlands.

2) No fish is left in the sea.

The Battle to Survive

Every creature at Chek Jawa Wetlands has adapted to the conditions of its environment as well as to its predators. These adaptations are either behavioural or structural in nature. An example of a **behavioural adaption** is when a Fiddler Crab dashes back into its hole upon spotting a lurking potential predator. An example of a **structural adaption** is the spiky body of a sea urchin which it uses to ward off potential predators.

Are the following adaptations behavioural or structural? Write your answers in the blanks below.



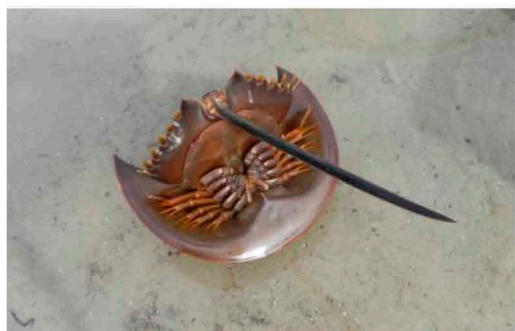
Small animals hide among mangrove roots to seek refuge from larger predators. Some animals also spawn or lay eggs here.

Adaptation: _____



I am in defense mode as I notice danger approaching.

Adaptation: _____



My powerful tail helps me hoist myself upright when I am overturned.

Adaptation: _____

Complete the passage below. Using the picture as a guide, fill in the blanks with the words in the boxes.

salinity

pincers

shells

myth

backbone

invertebrate

rocks

clap

I am a Thunder Crab and have no _____ . I am classified as an _____ .

During the day, I spend my time tightly wedged under _____. I eat almost anything I can get my powerful _____ on and I sometimes pry or break open live _____ .

How did I get my name? Well, there's a _____ that if I were to grip onto something, only a sudden _____ of thunder could make me let go. My large pincers are not just for show!



An Environment in Danger

There are many animals on Chek Jawa Wetlands that have yet to be discovered and identified. The natural habitats here provide nurseries for fishes, prawns and crabs. These habitats are, however, fragile and need to be conserved.

The pictures below show some badly damaged habitats of Chek Jawa Wetlands and how the animals which live there have been affected. Write down how you think littering affects the environment.

Marine Litter



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Chemical Spills



Marine litter and pollutants have a fatal impact on the environment. Eventually, these wastes end up in the food cycle that we are a part of. Discuss and write down in the box below how you can play a part to help protect the environment.

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Conclusion

Chek Jawa Wetlands showcases the abundance of its rich shore life during low tide. The variety of flora and fauna found here also creates learning opportunities for all of us. Its biodiversity provides resources for us to carry out research and studies on medical, biological and even global warming trends.

Chek Jawa Wetlands is one of the few natural nature areas left in Singapore. Therefore, it is our responsibility to conserve and protect it.

We hope your time spent at Chek Jawa Wetlands has been enriching and has given you interesting knowledge about our natural environment. We hope you have been inspired and will be an ambassador for the protection of our natural heritage by spreading the word or taking part in conservation activities!