Biology – Ocean Literacy Principle 5

The ocean supports a great diversity of life and ecosystems

Classification and food webs activity:

Almost all life on Earth is dependent on photosynthetic organisms, not just on the land but also in the ocean. This dependency not only influences the direct connections from one trophic level to the next, but coastal waters are so closely interlinked with the land that there is a high connectivity between the two environments. This activity

allows students to explore and visually represent the importance of caring for all biodiversity on Earth and in the ocean.

Start this activity by assigning one animal from the Seychelles food web to each student, and giving them a set period of time to research their animal. Use the Animal worksheets below to ensure that they gather all of the correct information.

Once all information has been gathered, the students can start making a life size food web. Place two producers at one end of the space and then starting with the consumers and working up the trophic levels, students should join into the food chain as representatives of their assigned animal. Energy transfer can be shown using tape or string.

When the food web is complete, introduce the Environmental Challenge cards found below,

Activity Learning Objectives:

Students will be able to describe the connectivity of marine and terrestrial animals, and how all life on Earth is fully interconnected through one giant food web. They should be able to explain the different trophic levels of the food change and the transfer of energy.

What you will need:

- Seychelles food web
- Animal worksheets
- masking tape or string

Further work:

Now ask students to further research the effect that humans are having on the marine environment and how this will add further pressure to such delicate ecosystems. Consider topics such as:

- the effect of plastic pollution
- bioaccumulation of toxins
- habitat degradation at coastal areas
- discuss how we can make positive

Biology links to other Ocean Literacy Principles:

Principle 1:

Use the features of each ocean to identify the main species that live there. Research migratory animals and track their journeys through the ocean, and the features that they use along the way.

Principle 3:

Identify the groups of animals that live in the ocean that rely on calcium carbonate to build their shells. Discuss how climate

change will affect them.

Principle 5:

The importance of genetic variation within species and how gene banks can be used to maintain biodiversity.

SEYCHELLES FOOD WEB

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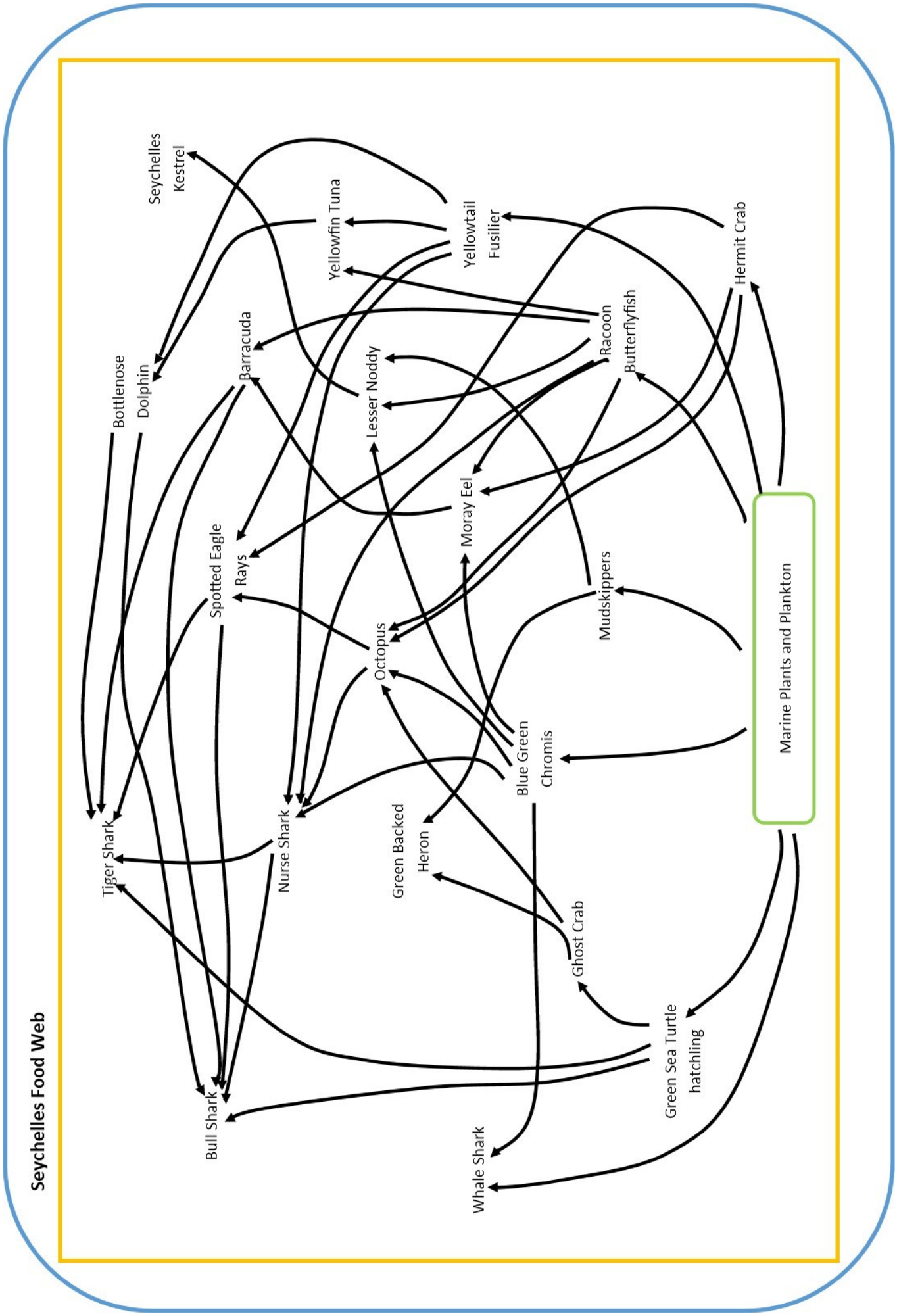

Animal Worksheet- **Common Name-** _____ **Latin Name-** _____

Scientific Drawing:		Geographic Range:
		Habitat and Ecology:
Predators:	Prey:	Life Cycle:
Ecological Threats		Conservation Actions:

ANIMAL WORKSHEET

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Environmental Challenge Cards -

Increased coastal development has caused lots of sediment to run into the water. There is less light available for photosynthetic organisms.	Climate change has caused the seas to warm. The coral reef habitat is damaged leaving no nursery habitats for juvenile fish.
Smaller marine organisms have been ingesting plastic polluted by toxins. These toxins have been passed up the food chain wiping out the top predators.	There has been a cargo ship incidents nearby causing oils to leak into the surrounding water. The oil on the surface is harming seabirds.