



Name: _____

What's In A Habitat?

> **Section A) What Is Your Habitat?**

In the space below, draw a picture of yourself in the centre.
Surround your picture with all the things you need to survive.

Hint:

Think about
what you eat and
drink and where
it comes from.

What do you
need for shelter?
Are there things
in the air or
the ground that
you need?



**> Section B) More on Habitats**

A plant or animal's habitat is its home. This includes all the places they need to live to survive. Our habitat provides us with food, water, shelter, sunlight and protection from threats such as predators. When we describe a habitat, we include the landscape, the weather, and all the plants and animals that share it and depend on each other.

Plants and animals choose habitats that can provide all the things they need to live. However, sometimes plants and animals must also change to fit into their habitats to increase their chances of survival. Animals that live in cold places may grow thicker fur. Birds who live near water develop webbed feet for swimming. Desert plants develop waxy leaves that seal in water and keep it from evaporating. We call this adapting. Plants or animals may change their physical structure to suit their habitat. Sometimes these changes occur over many generations. Or, they may change their behavior to suit their habitat.

If a habitat changes too quickly, plants and animals don't have time to adapt. They must leave to find new homes or they die off. A habitat could change quickly because of a flood or a forest fire. Human activities can also change a habitat, such as when we clear land to farm and build, or when we pollute the air, land or water. When humans change the landscape suddenly, we must pay attention to how we are changing habitats for the plants and animals around us. We have to protect the habitats of other creatures so they don't become endangered or extinct. We must remember that we share our habitat with other living creatures that we depend on, and who depend on us to use the Earth's resources responsibly.



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> Section C) What Happens When A Habitat Suddenly Changes?

Here's an experiment that will allow you to observe the effects that sudden habitat changes can have on plants.

Start with three identical plants, placed on a sunny windowsill.

- Plant #1 should be given enough water to simulate a healthy habitat.
- Plant #2 should be given no water to simulate a sudden drought.
- Plant #3 should be over-watered once a day to simulate a sudden flood.

After two weeks, observe the plants and record any changes in the boxes below.

Drawing of Plant #1: Healthy Habitat	Written Observations





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Drawing of Plant #2:
Sudden Drought

Written Observations

Drawing of Plant #3:
Sudden Flood

Written Observations

Conclusion: Write one or two sentences about the effects that a suddenly changing habitat had on Plants #2 and #3 by comparing them with Plant #1.





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> Section D) Plants and Animals: We Rely on Each Other

1. Living things rely on non-living things to survive. List four non-living things that animals and plants depend on to live.

i) _____

ii) _____

iii) _____

iv) _____

2. Living things also rely on each other to survive. Many humans and animals rely on other animals for food. And many living creatures rely on plants for shelter, for food or to provide oxygen to breathe. In turn, plants rely on animals to provide them with carbon dioxide to survive.

i) Choose an animal and describe how it depends on plants for shelter.

ii) Choose another animal and describe how it depends on plants for food.

iii) Choose an animal and describe how it depends on another animal for food or shelter.





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3. What plants are important to your habitat?

Look around your home for plants or items that are made from or contain plant products in the ingredients.

In the kitchen:

1. _____
2. _____
3. _____

In the bathroom:

1. _____
2. _____
3. _____

In your bedroom:

1. _____
2. _____
3. _____

In the yard or on your street:

1. _____
2. _____
3. _____





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4. What would we do without plants?

Check all the things that plants do for us from the list below:

- | | |
|--|---|
| <input type="checkbox"/> Absorb carbon dioxide | <input type="checkbox"/> Provide us with medicine |
| <input type="checkbox"/> Provide us with oxygen | <input type="checkbox"/> Provide us with steel |
| <input type="checkbox"/> Provide us with food | <input type="checkbox"/> Provide us with paper |
| <input type="checkbox"/> Kill off predators | <input type="checkbox"/> Provide us with oils |
| <input type="checkbox"/> Provide us with glass | <input type="checkbox"/> Provide us with diamonds |
| <input type="checkbox"/> Help purify our water | <input type="checkbox"/> Give us shelter |
| <input type="checkbox"/> Provide us with furniture | <input type="checkbox"/> Give us shade |

5. Imagine you woke up one day and all the plants around you had disappeared overnight. Without plants in our habitat, could humans survive? Why or why not?

> Section E) How We Adapt

It's amazing how different life forms learn to live in almost every place on Earth. Creatures find ways to live in even the harshest conditions. Penguins live in freezing cold temperatures that humans wouldn't be able to endure. Desert iguanas laze all day under tropical sunlight that would burn our skin.

Plants and animals can adapt by changing their bodies or behavior to suit an environment. For instance, iguanas living in the desert have developed a thick skin to protect them from the hot sun. Penguins living in Antarctica have learned to snuggle up to each other to keep warm.





Name: _____

1. Research two animals that have adapted to live in a cold habitat. Draw them in the boxes below. Label parts of their bodies that have adapted and explain how they have changed to suit their environment.

i)

ii)





Name: _____

2. Research two animals that have adapted to live in a hot habitat. Draw them in the boxes below. Label parts of their bodies that have adapted and explain how they have changed to suit their environment.

i)

ii)





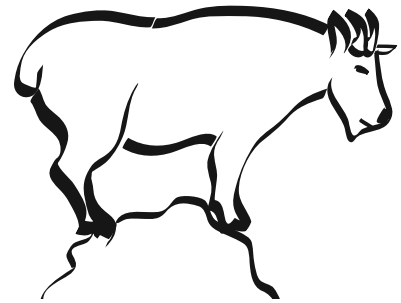
Name: _____

> **Section F) Research**

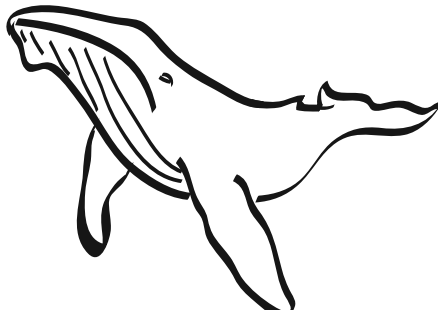
1. Choose one of the following animals or plants and research about how it's adapted to its habitat.



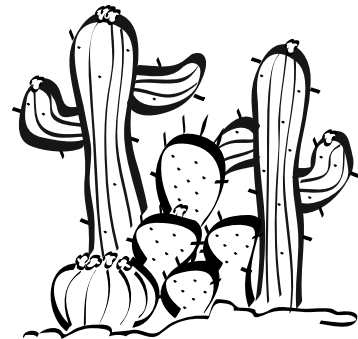
Tubeworms
living on the ocean floor



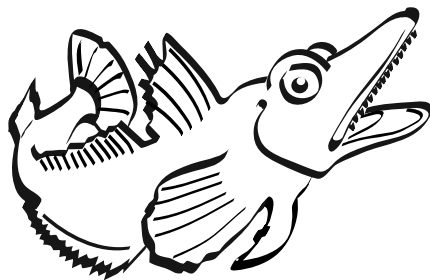
Mountain goats on high
alpine peaks



Humpback whales in the ocean



Cacti living in the desert



Ice fish living in Antarctic waters



Anglerfish in the
darkest depths of the ocean

Canon



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2. In a shoebox, build a diorama to recreate your plant or animal's habitat. Sculpt your plant or animal out of modeling clay. Then, use paint, markers, pencil crayons, or anything else you can think of to recreate its habitat. Include and label all the things that your plant or animal needs to survive. Are there other plants or animals that it depends on, or that depend on it for survival? Include those in your diorama, too.





Answers: What's In A Habitat?

Section A) What Is Your Habitat?

Open – Must include sources of water, light, shelter, sources of food, air, and other species they interact with.

Section D) Plants and Animals: We Rely on Each Other

1. Soil, air, sunlight, water
2. i) Open – Should be specific.
 - Could be a creature that lives in a marsh or in a tree.
 - Could be an insect that lives on a stem.
 - Or a deer that lives in a forest.
2. ii) Open – Should be specific.
 - Like a monarch butterfly that relies on milkweed.
 - Or a squirrel that eats nuts from a tree.
 - Or a cow that eats grass.
2. iii) Open – Should be specific.
 - Could be a barnacle on a whale.
 - A hermit crab who uses the discarded shells of other animals as its home.
 - Remora fish that suction themselves to sharks to hitch a ride and then eat the shark's scraps.
 - Polar bears that eat seals.
 - Wolves that eat deer or moose.
3. Open – Could include vitamins or medicines made from plants, any fruits or vegetables, trees for shade or beauty, or as a source of food, or to clean our air and water.
 - In the kitchen: Herbs for seasoning, canned soup, fresh and frozen fruits and vegetables in the fridge, dried beans, peas or grains, bread products, cleaning products, paper packaging, paper towels or napkins, wooden furniture, coffee
 - In the bathroom: Medicines, beauty products, paper packaging, toothpaste, cleaning products, toilet paper, Kleenex, cotton for towels

Canon



Answers: What's In A Habitat? (continued)

- In the bedroom: cotton, rayon or hemp for sheets and clothing, wooden furniture, Kleenex, books, boxes, house plants for beauty
- In the yard, on your street: Plants and trees to beautify the yard, for shade and to play in, vegetable gardens, trees to support local wildlife

4. What would we do without plants?

Circle all the things that plants do for us from the list below:

- | | |
|------------------------|---------------------------|
| Absorb carbon dioxide | Provide us with furniture |
| Provide us with oxygen | Provide us with medicine |
| Provide us with food | Provide us with paper |
| Kill off predators | Give us shelter |
| Help purify our water | Give us shade |

5. Open – Should say no, we need plants to clean our air and our water. We also rely on plants for medicine and food, both directly and indirectly.

Section E) How We Adapt

1. Open

- Could be blubber on whales or seals.
- Thick fur on polar bears or arctic foxes.
- Water birds like geese and swans with oily, waterproof feathers.
- Penguins who have learned to balance their eggs on their feet to keep them from freezing.

2. Open

- Could be reptiles or insects, like scorpions or snakes that burrow in the cooler ground.
- Reptiles like snakes, lizards and turtles who are cold blooded, and slow moving to keep from overheating.
- Small desert mammals, like rodents who are nocturnal to avoid the hot sun.
- Succulent plants in the desert with thick skins to retain water.



Answers: What's In A Habitat? (continued)

3. Open

- Could include any tree, weed or plant in a garden.
- Algae, fungus or mould in the house, bathroom or fridge.

4. Open

- Could include insects like ants, roaches, flies, fleas, bees, wasps.
- Could include spiders.
- Could include mice, rats, possums, squirrels, chipmunks, skunks, porcupines, raccoons, deer, foxes, bears, coyotes, bobcats or any other wild animal that is found living in houses or towns.

Section F) Research

1. Open – Should touch on ways that these creatures have adapted to extremes.

- Tubeworms rely on hydrothermal jets for heat energy and feed off of the chemicals that emerge from the jets.
- Ice fish have blood that works like anti-freeze.
- Cacti conserve water for long periods of time, and have thick, waxy skin to protect them from burning in the sun.
- Whales rely on sonar where there is no light in the deep water, allowing them to close their blowholes and hold in air for deep dives.
- Anglerfish have protruding lower jaws to help them scoop food, and have a luminescent protrusion on their heads to attract prey in the dark waters.
- Mountain goats have thick coats for living at high altitudes, and rubbery hooves that cling to the rocky incline.

2. Open – Should elaborate on what the student has learned about what makes up a habitat. Look for:

- An awareness of the basic elements needed for survival – water, food, shelter, air, etc.
- Inclusion of other interesting weather, land, air, water features in the habitat.
- Inclusion of species that the chosen life form relies on, or who rely on it for food or shelter.

Canon



Answers: What's In A Habitat? (continued)

- Inclusion of any special behavioral or physical traits that the species has developed to become better suited to their environment.
- Awareness of the health of the species. Is its population healthy and thriving?
- Is it endangered? If so, what is responsible for upsetting the balance in its habitat?
- If so, are humans working to preserve or restore its populations?

Canon