

Pocket Ecosystem

What's The Plan?

Why don't frogs live on the top of mountains? Or butterflies at the bottom of the sea? Because these creatures aren't *adapted* to those *habitats*! You'll pick a *habitat* and create a brand-new creature specially designed to live there! Then you'll head outside for supplies and create a diagram of your *habitat* and its new inhabitant!

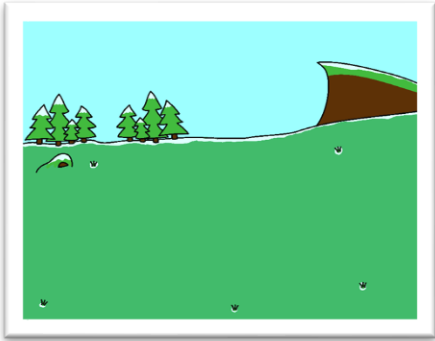
What You'll Need:

Here's a list of everything you'll need! Don't have something exactly? Get creative! Some of our suggested swaps are listed in Grey.

- Paper | White, Coloured
- Pencil/Marker/Crayon
- Modelling Clay | Playdough, Craft supplies
- Small Box | Shoebox, Tissue box (with one side cut off), Jar
 - Sticks, Grass, Leaves, etc. from outside on the ground!

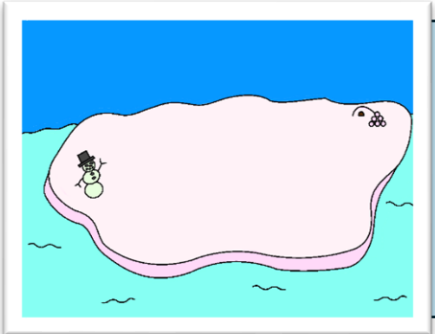
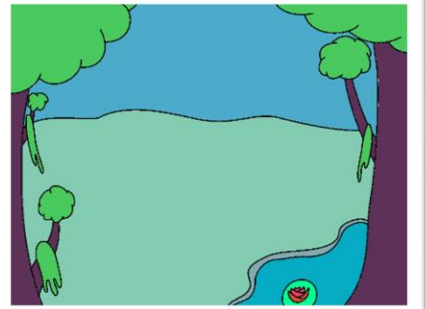
What To Do:

1. Start by picking a habitat, here are some suggestions, but you can research or think of your own real-life habitat too!



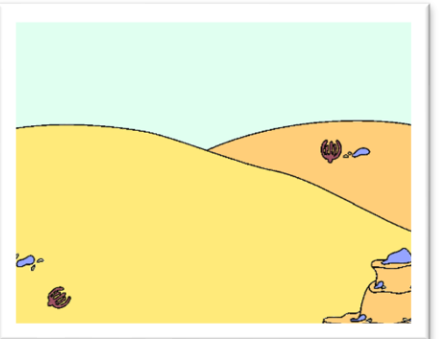
In this snowy forest habitat water is no problem! It gets hot in the summer and cold in the winter, so the animals who live here need to be ready for both! Many animals in these places spend the winter *hibernating* or *migrating*.

In a tropical rainforest it is very hot and humid, so lots of plants grow here. This means there is tons of food for the animals, bugs and birds that live there! It also means that many creatures here live in the trees! It rains almost all the time here, so creatures need to be able to withstand very high heat, and lots of water!



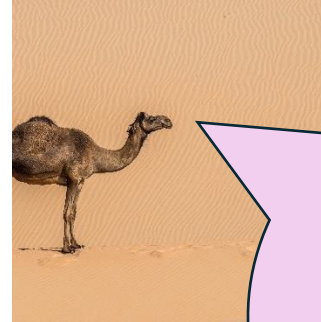
In the southern frozen tundra of Antarctica it is so cold it hardly ever snows. Getting fresh water is hard here, and almost no plants grow as food. Many creatures that live here are adapted to find food in the water and usually have big fur coats! There is lots of ice to walk on so many creatures have wide feet or claws to help them grip!

In the hot desert there is very little water or shade. Creatures are usually small and like to dig holes to live in. Thin fur helps keep them cool in the sun, though most creatures would rather sleep their day away, coming out in the cool night! The sand is tricky to walk on, so animals like camels have big feet to help them!



2. Now draw your creature. What are three *adaptations* that your creature has that makes it perfectly suited for the *habitat*? Make sure you point them out on your drawing! Here are some examples:

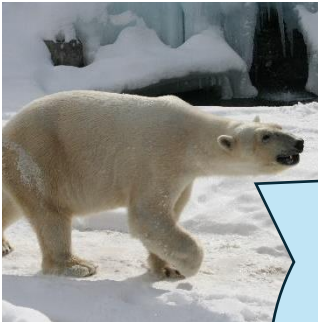
I'm A Canada Goose! I fly south when it starts to get cold, and my waterproof feathers help me stay warm even when I'm wet! My beak is the perfect shape for picking up my favourite food - grass!



I'm a dromedary camel! I use my big, padded feet to roam the desert. I keep water and fat stored in my hump! I also have big eyelashes to keep the sand out of my eyes and a poof of hair on top of my head to give me some shade!



I'm a red-eyed tree frog! My big eyes help me see all around, even at night! I also have sticky fingers that help me climb trees so I can stay away from anything that wants to eat me! Water rolls right off my smooth skin, which helps keep me cool!



I'm a polar bear! I have a thick layer of fat called blubber on my body that keeps me warm, along with my thick skin and double layer of fur! My big claws help me grip onto the ice and swim faster underwater - that's where I find my food!

3. Time to get outside! Go on a nature hunt for fallen leaves, sticks, pinecones, rocks, or other cool pieces of nature you can find. Be sure not to pull anything that is still living off trees, instead collect your items from the ground!

4. When you're back inside, turn your small empty box into a full habitat by gluing or taping the *foliage* you found outside, into the box. You can cut out extra pieces made of paper or draw in other parts of the habitat to make it feel alive!
5. Now that you have a habitat, it's time to make your creature! Grab some modelling clay and start sculpting the creature you drew. You could also build your creature with craft materials.
6. Place your built creature into the habitat you created! Now you have a home-made friend ready to remind you all about *adaptations!*

Why Did We Do It?

Here is a list of important words we use during the project!

- *Adaptation:* An adaptation is anything that helps a creature or plant stay alive easier. These can either be physical, something on the plant or animal, like colour changing skin or big amplifying ears, or the adaptations can be behavioural, something the plant or creature does to survive easier, like sleeping through the cold winter or coming out to explore at night! No matter what the adaptation is, it helps the creature or plant get food, collect water, avoid predators, or stay safe from the outdoor elements like sun and snow!
- *Habitat:* The place where a plant or animal lives! We usually classify these habitats based on how hot or cold they are, how much precipitation (rain and snow) falls, and the type of land found around.

- *Migration:* This adaptation is often found in places where winter happens! The changing of seasons, dropping of temperature and falling of snow tells some animals it's time to leave! They fly or travel south where it is warmer and hang out in the sun all winter! Then they return home in the north in the spring!
- *Hibernation:* Another wintertime adaptation, animals who hibernate spend the fall collecting extra food and getting a comfy place ready for them to rest. Then when it gets to its coldest, the creatures slow their whole bodies down and go to sleep! Some creatures can sleep for months, while others occasionally will wake up and go searching for food, then go back to sleep! When it warms up in the spring most of these creatures return to their normal lives.
- *Foliage:* When a bunch of different parts of plants are all gathered together, we call it foliage!

How Did It Go?

We'd love to hear about all the amazing STEM projects you're doing! Show us your finished projects on any of the following social media platforms by tagging us!

Twitter: @MyMindsInMotion
Facebook: @mindsinmotion2014 || @ucactiveliving
Instagram: @ucalgaryactive



Let us know how you felt about the project! Please [click here](#) or scan the QR code above to fill out a short survey!