

# CURIOSITY AT HOME

## ADAPTATION ARTISTRY



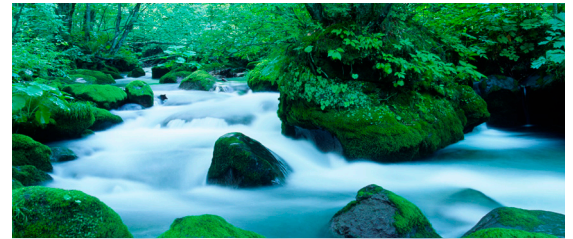
*Imagine you are able to visit the future. What do you think the Earth will look like in 100 years? 1,000 years? One million years? Design your very own future habitat and living creature. Discover the amazing ways that animals adapt to their surroundings, and then let your imagination go wild as you create your own creature and a world for it to live in!*

### MATERIALS

- Colored pencils, crayons, or markers
- Scissors
- Glue
- Colored paper
- Additional craft supplies (pipe cleaners, cotton balls, craft foam, clay, paper clips etc.)
- Scrap paper, tissue paper, or magazine clippings

### PROCEDURE

- Think about what your future habitat will look like. For example: Is it cold or warm? Is it wet or dry? Are the trees made of cotton candy? Do people drive hover crafts instead of cars? Are the rivers filled with chocolate instead of water? Did gravity disappear and you can float around in the air? Are there humans living in your world or are there robots?
- Once you have an idea for a future world, think about the kinds of animals that would can live in it.
- Start brainstorming ideas for your own creature!
- Ask yourself these questions to help you brainstorm features for your creature: What does it eat? What eats it? What are its defenses against its predators? Where does it live? Does it like to live by itself or in groups? How does it move? What does it need to survive? (Food, water, shelter)
- When you are ready, use art supplies to start building your creature! Be creative and use whatever art supplies you have on hand. Don't forget to name your creature!
- Share your creature with someone! Be sure to share its name, where it lives, and how it survives.



*Experiment continued on next page...*



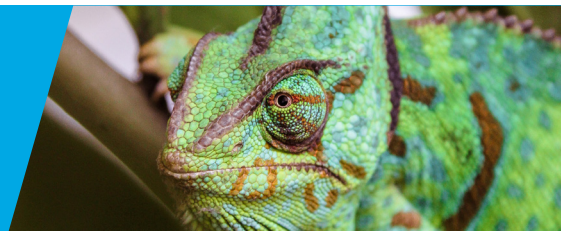
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### TRY THIS

- Are animals the only things that can adapt to their surroundings? What about plants? What kinds of adaptations do plants have that help them survive?
- Create a plant to live in your future world!

### DID YOU KNOW

Adaptation is the way that plants and animals change over time in order to live in a particular environment. Each habitat is suitable only to the life forms that are adapted to their ecological conditions. Organisms are adapted to their environment in ways that enable them to survive and maintain their populations. After a few generations to thousands of generations later, depending on the circumstances, such traits are passed down and become common in the population. The result is a population that is better adapted to some aspect of the environment than it was before.

There are three main types of adaptations. The first type is structural adaptations. These are physical features, like color, body shape and body structure. The second type is physiological adaptations. These are adaptations that usually do not show on the outside, such as body chemistry and metabolism. The third type is behavioral adaptations. These affect how organisms act, such as migration or hibernation.



1-Bear, 2-Wolf, 3-Cougar, 4-Moose,  
5-Duck, 6-Rabbit, 7-Crow, 8-Squirrel



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### K–2 GRADE EXPLORATION

Here are some questions you can explore together.

- Do humans adapt to their surrounding environments as well? What if you went on a science expedition to somewhere like Hawaii or Alaska? If we all went to Alaska right now, could we wear what we are wearing right now? What about Hawaii? Draw 2 pictures of yourself, one in each location.
- What about if you were going out to play basketball? What would you wear? Would you wear the same thing if you were to go swimming after?
- What if it gets dark outside? What would you do to adapt?



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### 3–5 GRADE EXPLORATION

Explore the following questions and write your observations in your science notebook.

- Behavioral adaptations affect how organisms act, such as migration or hibernation. Can you think of any organisms with behavioral adaptations?
- Biomimicry is when people solve problems with ideas from nature. Lots of things around us are inspired by nature. For example, the seeds of a cocklebur plant can attach to the fur of animals, so it can be moved from place to place by the animal. Scientists saw this and invented Velcro, where one piece of fabric has tiny hooks to stick to fuzzy material on another piece of fabric. Can you think of any other examples of biomimicry? Come up with your own invention that is based off of some thing in nature. Where did you get your inspiration?



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### 6–8 GRADE EXPLORATION

Explore the following questions and write your observations in your science notebook

- Do plants and animals from the past look the same as the ones we have now? How are plants and animals from 100 years in the past the same or different? 1000 years ago? A million years ago?
- Do humans have an impact on the environment? What are some examples of ways humans can change the environment?
- Can you think of ways plants and animals have had to adapt in order to live in urban environments?
- How can we reduce our negative impact on surrounding environments? Make a plan and share it with a friend.



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