**The Perfect Animal and Its Adaptations**

**Directions for Part 1 (pg. 2):**

1. Choose a partner.
2. Get a directions sheet and 4 pieces of plain white regular sized paper.
3. On each piece of plain white paper, one side will be your writing and one side will be your drawing with color.
4. Read about the four different environments listed on page 2.
5. Design the perfect imaginary animal to live in each of those 4 environments.
6. When designing each animal, make sure to answer 1-8 on page 2.

**Directions for Part 2 (pg. 3):**

1. Now imagine if the animal(s) you designed had a change in their environment.
2. Review the environmental changes on page 3 and answer the questions on page 3 for each of your animals.

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**Part 1:**

Introduction

In this activity, you will work with your partner to design an imaginary animal, basing it on a given habitat in which it must survive and thrive. Below are the possible habitats of your animal:

|  |  |  |
| --- | --- | --- |
| Type | Conditions | Special Needs |
| Desert | No water, too much sun, hardly any food (some insects and plants), hot days and cold nights | Needs to get water, needs to eat (how does the animal get food?), needs a home |
| Mountain | Very high altitude, tough footing, plenty of plants and small animals to eat, cold nights, there are bigger animals and hunters | Must have a way of breathing thin air, must be sure footed, must eat, must keep warm at night, needs protection from predators |
| Arctic | Very cold, not much to eat (some plants, insects, rodents and fish), storms are very severe, hunted by man | Needs to keep warm, What does it eat? Needs protection from the storms and from being hunted. |
| Ocean | Always in water, plenty of food, but is always hunted by bigger animals and man | How ddoes it move? how does it breathe? Needs protection from predators. |

When designing your animal(s), you can draw anything you want (that is school appropriate and that doesn’t have anything artificial like mechanical parts). Here are some things to think about.

For each of your animals answer the following questions:

1. Name of your animal
2. Shape of the body: is it big, small, fat, skinny, short, tall…etc?
3. Does it have hair? If so, what type of hair? If not, what covers the body?
4. Does the animal have arms, legs, feet, hands, fins….etc?
5. How does the animal move and at what speeds?
6. What does the animal look like? Describe it.
7. What and how does the animal eat?
8. Where does the animal live? Does it have a home?

**Part 2:**

Now that you have designed your animals to fit their environments, we are going to test what happens to your animal if there is an environmental change.

Environmental Changes:

|  |  |
| --- | --- |
| Desert | The desert got a lot hotter. A new animal moved into the desert and loves to eat your animal. Your animal needs to keep cool and stay away from the predator. Can it? |
| Mountain | All of a sudden the main food source of your animal has died. It has also started to rain a lot more. Your animal needs to live and stay dry. Can it? |
| Arctic | Your animal’s main source of food got sick of the cold weather and left. All of a sudden it got really dark in the winter. Now your animal needs a new food source. They need to see in the dark. Can it? |
| Ocean | More fisherpeople want to eat your animal. They need to go deeper in the ocean, but it is colder and darker down there. Your animal needs to keep warm and see. Can it? |

After the changes in your environments, what are your conclusions?

Answer the following questions:

1. Which of your animals would live?
2. Can an animal change how they look to adapt to an environment?
3. If an animal isn’t adapted to a new environment what happens to that animal?
4. Explain the term natural selection.