**Subject area/course**: Science

**Grade level/band**: 4th

**Task source**: New Hampshire Task Bank; Author: Samantha Gesel

**Feature Creatures: Exploring Structures and Functions**

**STUDENT INSTRUCTIONS**

1. **Task context**:

Every organism has a unique set of traits that allow it to survive in its unique habitat. These traits are known as adaptations. Sometimes, a habitat can be threatened and damaged by human activities, such as developing cities and using natural resources. When habitats are destroyed, where can organisms go to find an ideal home where they are well-adapted to live? What adaptations are necessary to live in different habitats?

**Essential question:**  How do animals’ structures function to support survival, growth, behavior, and reproduction?

**Task:** Design an animal with specific internal/external structures and behaviors whose function is to support survival and growth!

1. **Final product**:

Step 1: **Pick a habitat**. The habitat that your Feature Creature lives in will have a direct effect on the structures and adaptations it has that help it survive! Research that habitat for important facts using books from the classroom!

Freshwater (Rivers) Marine (Ocean) Desert Forest

Rainforest Savanna/Grassland Tundra (Arctic)

Step 2: **Research other animals in that habitat.** What structures and adaptations do those

animals have that allow them to survive in their environment? You can find information about animals at the following resources:

* <http://www.enchantedlearning.com/biomes/> (habitat)
* <http://kids.nationalgeographic.com/animals/>
* **Any books in the classroom** – Ask before you take home to research! ☺

Step 3: **Decide specific information about your Feature Creature.** These should be both structures AND behaviors that help your animal survive in its specific habitat, modeled after real life examples from your research.

**\*Size:** How big is your animal (weight, height, length)?

\***Food:** Is your Feature Creature primarily a predator or prey? What does it eat? How does it get its food?

**\*Movement**: How does your animal move about its habitat?

**\*Shelter**: Where does your animal live within its habitat (Up in a tree, burrows, underground, etc.)? Does it live alone or with other members of the same species?

**\*Communication**: How does it send signals to other members of the same species (Dances, songs, scent marks, etc.)?

**\*Weatherproofing:** How does your animal keep warm or cool?

**\*Protection**: How does your animal stay safe from predators (Claws, antlers, camouflage, etc.)?

Step 4: **Design and name your animal and write up your explanations!** Be sure to carefully consider each structure and behavior and write about how it helps your animal survive in its habitat.

**Additional Information**

1. **Knowledge and skills you will need to demonstrate on this task:**

*Students will know:*

* What is a habitat?
* What animal structures exist for survival?
* What animal behaviors are adaptations for survival?
* The function of animal structures and behaviors.
* How are animal structures and behaviors are related the animal habitat?

*Students will be able to:*

* Research information about a variety of topics and synthesize that information for verbal and written communication.
* Construct an argument that animals have structures that function to support survival, growth, behavior, and reproduction.
* Demonstrate an understanding that these structures are influenced by habitat.
* Apply their understanding to a novel situation (creating a Feature Creature).

1. **Materials needed:**

* Word Wall Words
* Science Anchor Charts
* Websites/Books about habitats and animals that live in them
* Student Task Sheet: Feature Creature Project
* Student Research and Planning Packet
* Student Report Pages (3 pages)
* Feature Creature Rubric
* Computers or Devices (for research)
* Habitat books (for research)
* Pencil
* Coloring Items

1. **Time requirements:**

This task can be completed in about six 45-minute long sessions, depending on scheduling.

Your teacher will provide you with more information about the timing of each portion of the task.

1. **Scoring:**

Your work will be scored using the Feature Creature rubric. You should make sure you are familiar with the language that describes the expectations for proficient performance.