



Build a Bird Workshop

Bird Adaptations:

Background & Summary

All birds are created differently. There is no 'right way' to be a bird, and it is these differences that allow birds to survive and thrive in their role in the ecosystem. Students will learn about some of the different adaptations of various bird species and design their own unique bird.

Procedure

*The following lesson is based on the question: **What makes birds unique?** It can be easily adapted by adjusting the bird species used during the lesson. This can be completed in the classroom or outdoors.*

Introduction

- 1. Presenters briefly introduce themselves and the Fish and Wildlife Service/National Wildlife Refuge (NWR) System. Explain what a NWR is, why they are important to wildlife, and what people can do there.*
- 2. Inform students what their role will be during programming. Hold a brief discussion about the topic and what the group activity will include. Begin the program by having each individual student give their name and answer the question of the day.*

Question of the day:

“What is one trait you like about yourself?”

Birds



Grade:

K-5

Time:

30-45 Minutes

Season:

All

Objectives:

Student will be able to...

-Understand what an adaptation is

-Understand bird adaptations and their importance

Key Concepts:

-Adaptation

-Bird Adaptations

Materials:

-Build a Bird Kits

-Tape

-Markers

-Bird Field Guides

(Optional)

TEKS:

Science

Grades K-5

2,3,4,5,9,10



Lesson

We know that different species of birds have different traits and adaptations which make them unique and help them survive. Some of the traits/adaptations that vary among birds include body size, wing shape, beak shape, feet/toes, and color patterns. These help birds fulfill their important role in the ecosystem. As an example, birds with a beak that is flat and wide at the base are good at catching small insects. This is important because they help control insect populations. Birds that are scavengers, like buzzards, have really good eyesight and a strong sense of smell. Those adaptations help them locate rotting carrion, which they like to eat. This is important because they keep the ecosystem free of dead animals and they help break down organic matter.

Activity: Build a Bird Instructions

1. Separate students into small groups.
2. Give each group a build-a-bird kit which will include an information sheet of the different types of features and the pros/cons of each, as well as an example of each option.
3. Students will then put different pieces together to build their own unique bird.
4. Once groups are done, they will explain why they chose the parts they did, what type of life their bird is adapted to, how/where it lives, what it eats, what purpose it serves in its ecosystem etc.

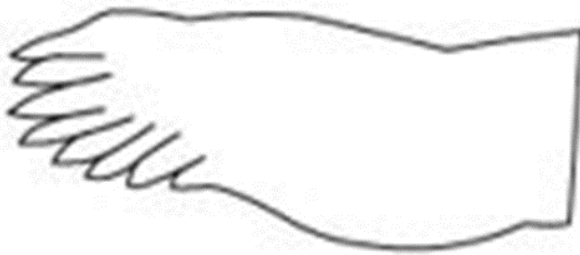
Conclusion

These adaptations are what allow each bird to survive and fill an important role in an ecosystem. Differences are important, because if all birds were the same, there would be certain roles in ecosystems that would not get filled. These differences help ecosystems function and ensures all niches are filled.



Adaptations Cheat Sheet

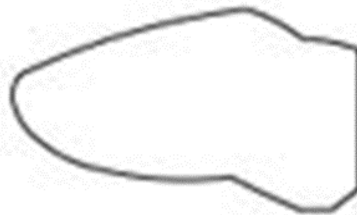
Use this sheet to help you understand the different features of birds and their various adaptations. If you have questions, feel free to ask! Be creative!



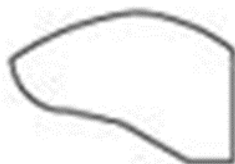
Slotted-wing: Strong wing that allows the bird to carry heavy things (such as prey). These wings can soar high above the ground. Allows for somewhat quick take-offs.



Long soaring wing: Can soar in the air for a long time by using wind currents instead of flapping their wings. It means slow take offs and landings and diminishes maneuverability.



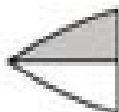
Elliptical compromise wing: This is the 'in between' of other wings. Fast for short distances and good maneuverability. Good for escaping predators.



Delta wing: Made for speed! Very fast, good for chasing things and diving. Has some soaring ability.



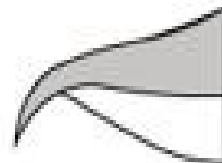
Insect Eater



Seed Eater



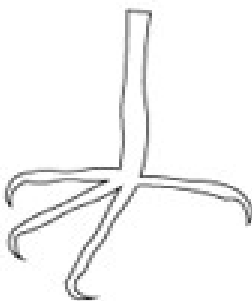
Fisher



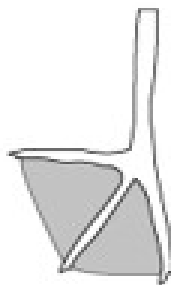
Meat Eater



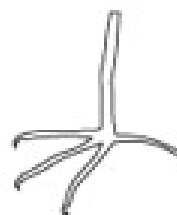
Water Plant Eater



Raptor: large curved claws for grabbing



Waterfowl: webbed feet, great for swimming



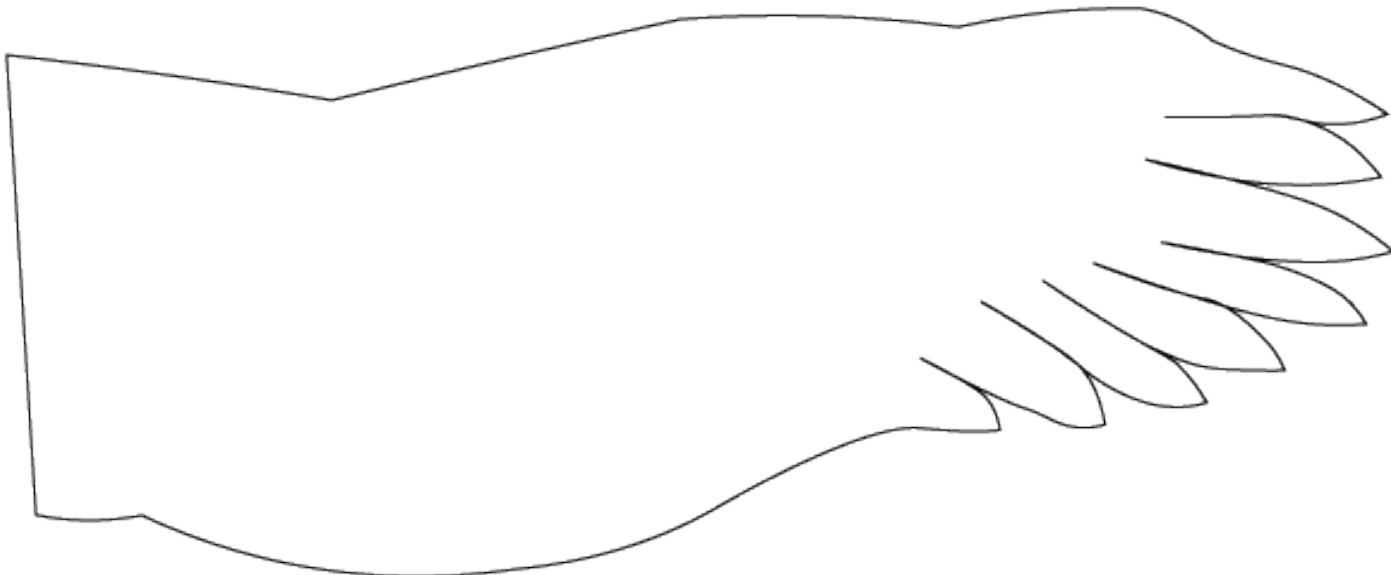
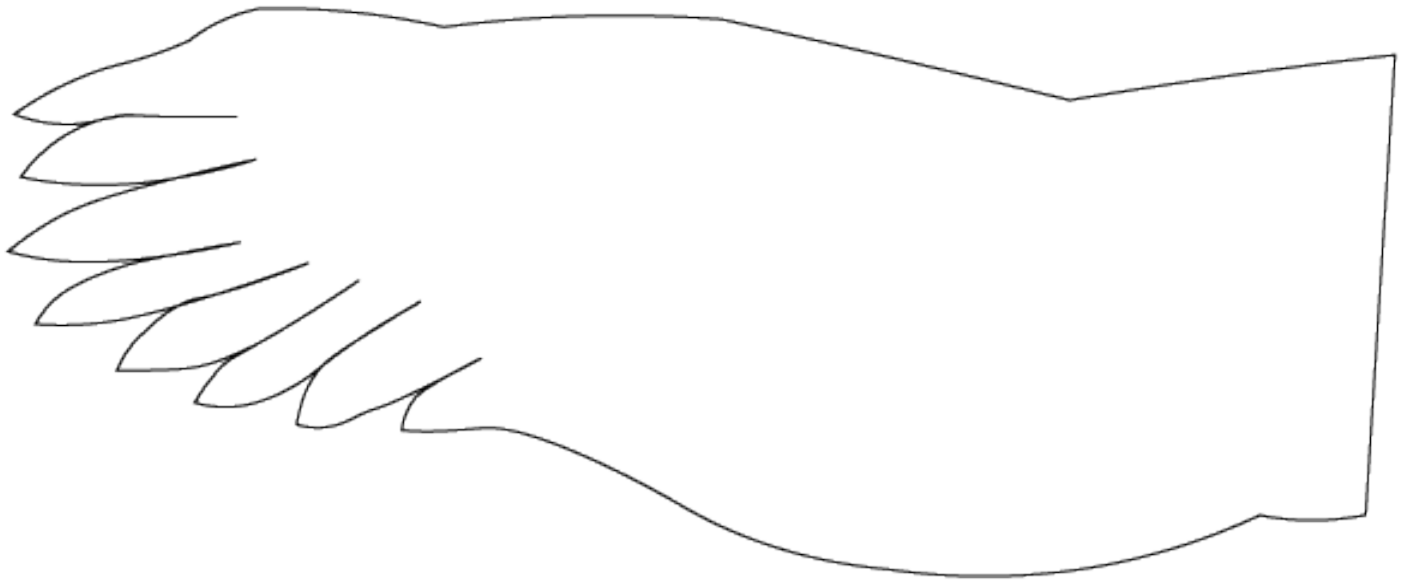
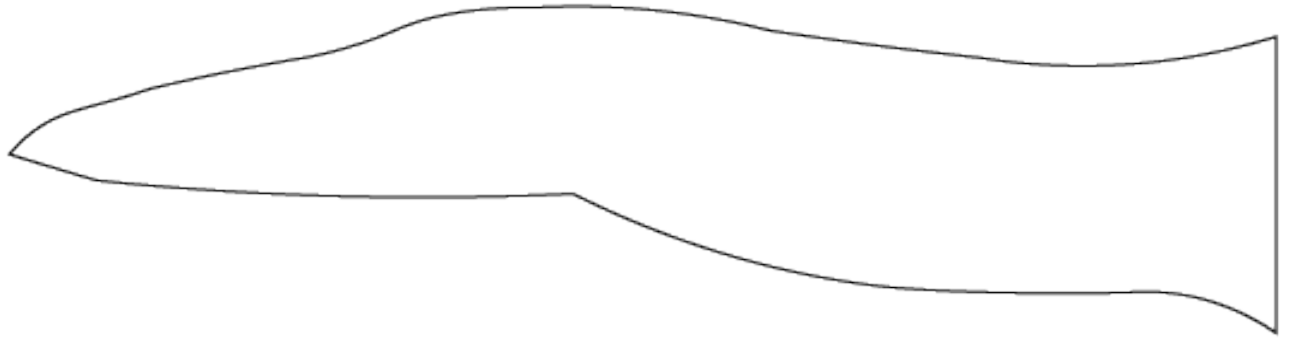
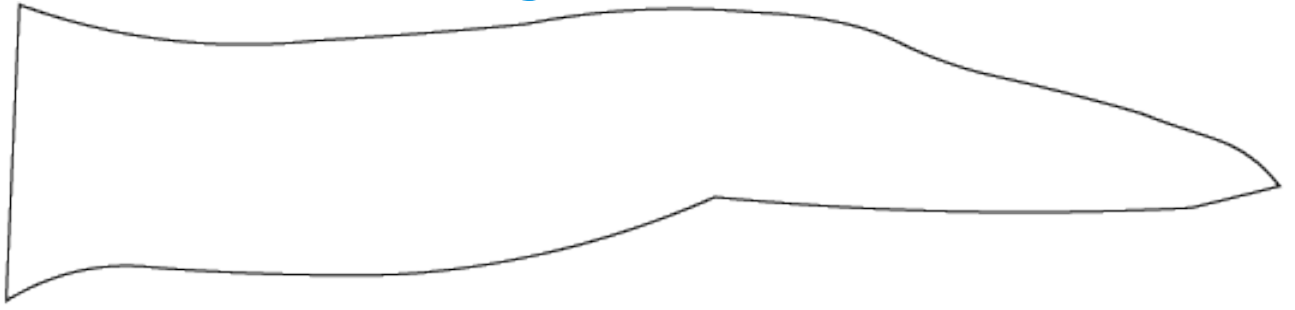
Perching: great for standing on branches, fences, etc.



Climbers: back toes make it easy to climb up trees, bark, etc.

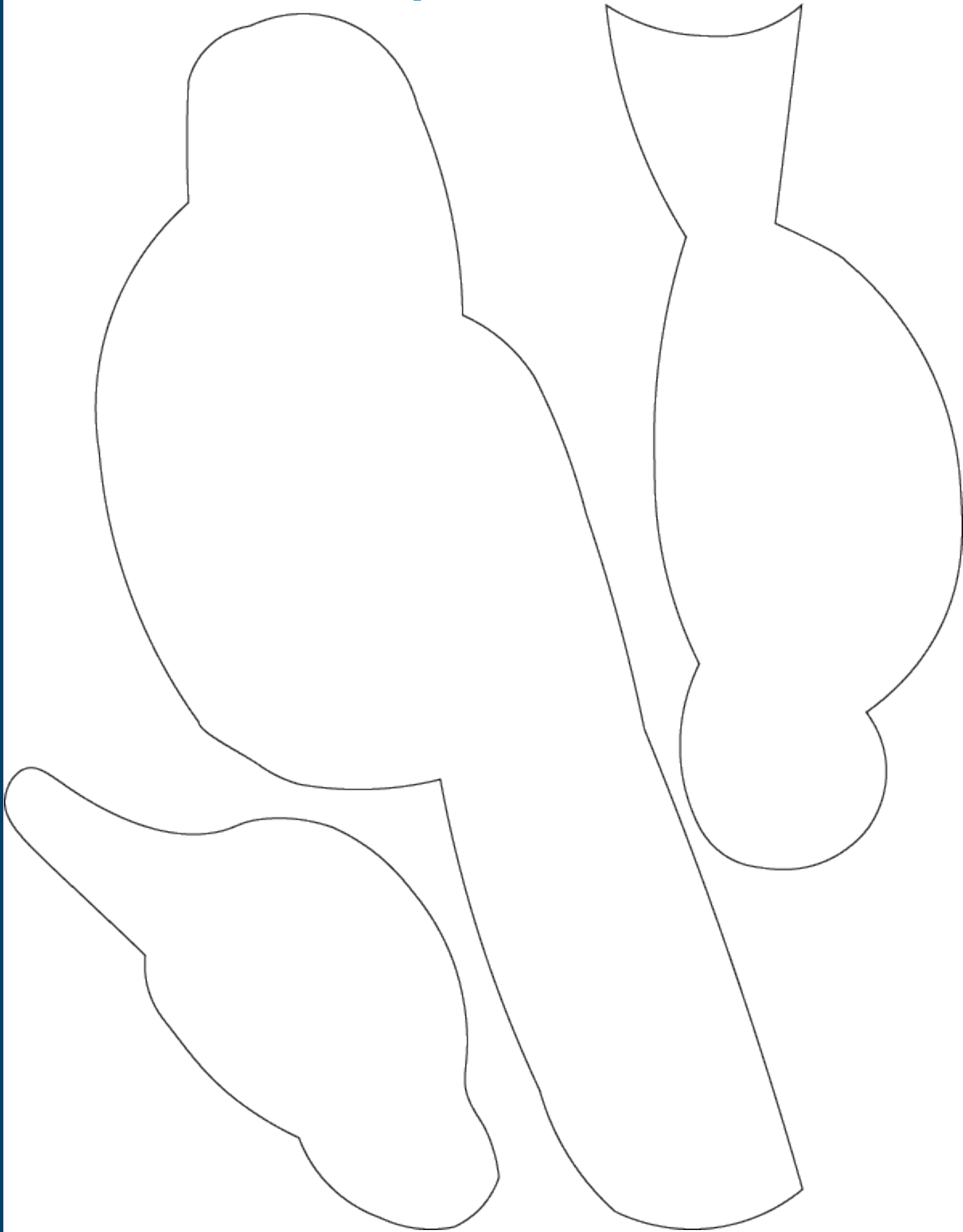


Wing Cut-Out



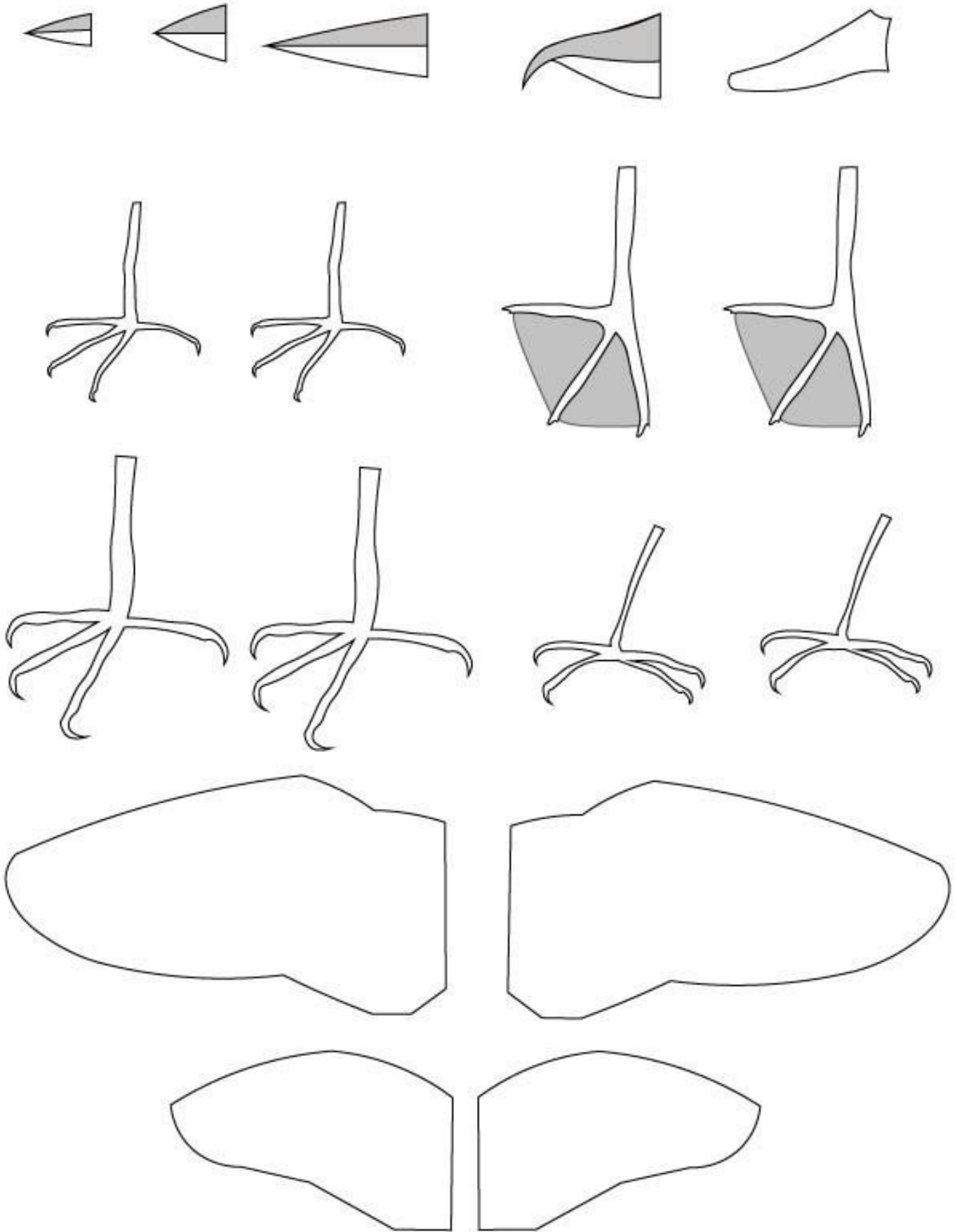


Body Cut-Out





Beak & Feet Cut-Out





TEKS

Science

3.13 - Organisms and environments. The student knows that organisms undergo similar life processes and have structures that function to help them survive within their environments. The student is expected to:

- (A) explore and explain how external structures and functions of animals such as the neck of a giraffe or webbed feet on a duck enable them to survive in their environment

4.12 - Organisms and environments. The student describes patterns, cycles, systems, and relationships within environments. The student is expected to:

- (B) describe the cycling of matter and flow of energy through food webs, including the roles of the Sun, producers, consumers, and decomposers

5.12 - Organisms and environments. The student describes patterns, cycles, systems, and relationships within environments. The student is expected to:

- (A) observe and describe how a variety of organisms survive by interacting with biotic and abiotic factors in a healthy ecosystem
- (C) describe a healthy ecosystem and how human activities can be beneficial or harmful to an ecosystem.

5.13 - Organisms and environments. The student knows that organisms undergo similar life processes and have structures that function to help them survive within their environments. The student is expected to:

- (A) analyze the structures and functions of different species to identify how organisms survive in the same environment; and
- (B) explain how instinctual behavioral traits such as turtle hatchlings returning to the sea and learned behavioral traits such as orcas hunting in packs increase chances of survival.