

Project 5.1.4 Digestion Murals

## Purpose

You have studied the terms and parts of four digestive systems, but many questions remain unanswered. What do the differences in anatomy look and feel like? How do birds overcome their lack of teeth? How are four compartments of the ruminant stomach different in size, structure, and texture?

Structure of digestive parts plays an important role in ability of the part to digest feed and absorb nutrients. Features, such as villi, increase the surface area of the part enabling greater nutrient absorption. Texture is important as well. The texture of a ruminant's omasum assists in the breakdown of food particles. Lastly, size affects how an animal eats and digests food. An avian stomach may be small but the crop stores food until it can move further along the digestive tract. What types of materials can you use as a visual reference for the different parts of a digestive system?

## Materials

### Per student:

- Computer with Internet access
- Modern Livestock and Poultry Production textbook
- *Activity 5.1.3 Student Worksheet*
- 1 sheet of poster board
- Assorted digestive parts
- Rubber cement
- Index cards
- Colored pencils
- Black marker
- Pencil
- *Agriscience Notebook*

## Procedure

For this project, you will work independently to construct a model of a digestive system that uses household items to replicate the features of the system. You will remain in your group from the previous activity, but each individual will make a model.

1. Return to your group from *Activity 5.1.3 My Stomach's Bigger!* Pick a digestive system different from the one you researched in *Activity 5.1.3 My Stomach's Bigger!*
2. Research the structure, shape, and texture of each digestive organ on the diagram from *Activity 5.1.3 Student Worksheet* of your assigned species. You should determine the type of digestion that occurs in your animal, such as mechanical, chemical, biological, or a combination.
3. With the sheet of poster board provided, design a model of the digestive system using the objects provided. The model should be designed to demonstrate the form and function of the digestive system.
4. Label each organ with the name and a brief description of the function of the organ within the system.
5. Use *Project 5.1.4 Evaluation Rubric* as a reference of assessment expectations.
6. Upon completion of the mural, present your project to your group.
7. During the presentation, discuss the modes of digestion and unique properties of the digestive system represented with your model.

