

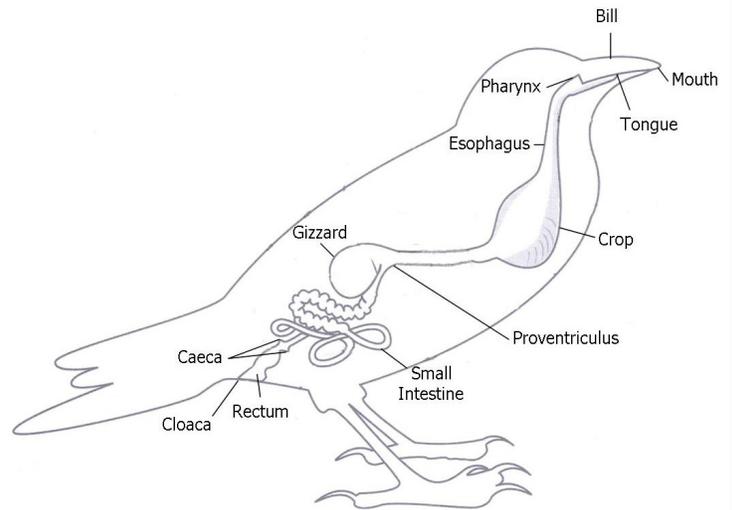
# Bird Digestive System

## "Digestive Activity"

Suggested instructions for using the bird digestive cards:

- 1) Copy the digestive parts and their definitions. Cut into strips along the solid line and fold in the middle along the dotted line .
- 2) Copy the complete bird digestive system drawing for each student in the class so that they can follow along with the explanation of the bird's digestive process.
- 3) Hand out the individual parts with their definitions to different members of your household and have them take turns reading aloud about their part of the bird's digestive process.

The digestive order is as follows: bill, mouth, tongue, pharynx, esophagus, crop, proventriculus, gizzard, small intestine, caeca, rectum, cloaca.



**Bill**

Bills come in all different sizes and shapes and are used for scooping, pecking, tearing and generally picking up the bird's food.

**Mouth**

The bird's mouth is the opening where the digestive process starts.

Fold

# Tongue

The tongue is used to direct the food item down the digestive tract and sometimes to help hold onto a wiggling worm or other insect.

# Pharynx

The pharynx (FAIR – ingx) is the part between the mouth and esophagus that helps the bird swallow the food item.

# Esophagus

The esophagus is the tube leading down from the pharynx to the crop.

# Crop

The crop is like a “doggy bag” when the bird eats. Many birds eat as much as possible when the opportunity for feeding presents itself. This food can’t possibly be digested this quick. The crop enables the bird to fill up and then the bird can do the digesting later when it has time to rest and avoid predators that may be lurking nearby while the bird is in the act of eating.

# Proventriculus

The proventriculus is the first part of the bird’s two-chambered stomach. The proventriculus secretes an acid used for breaking down food, and is best developed in birds that swallow entire fish or other animals containing bones which must be digested.

Fold

Fold

# Gizzard

The gizzard is the second chamber of the stomach and it consists of very tough muscles. These muscles are used to grind and digest various types of foods. The muscles don't do this process alone. Many birds pick up small pebbles, sand or grit while they are eating and these items end up in the gizzard. The gizzard then uses these grit-like items to help pulverize the food items to aid in digestion. Different bird species eat different food items and their gizzards are designed to work specifically on the types of food that they eat.

# Small Intestine

The intestines are where the nutrients from the food are absorbed and the waste products are sent further on through the digestive system. This is very similar to the human intestine function. Birds that eat easily digestible foods like fruit, flesh and insects have short lengths of intestines and those that eat seeds, plants and fish need longer intestines so that the food items have enough time for the nutrients to be absorbed.

# Caeca

The word caeca (SEE-kah) is plural for caecum (SEE-kum) because birds usually have two of them. The function of the caeca is to aid in the absorption of water and proteins, and the microbial decomposition of fiber.

# Rectum

The rectum is the end part of the intestine and no digestion or absorption of food takes place here.

# Cloaca

The cloaca (klo-A-ka) is the end of the digestive tract where waste from the digestive and urinary tract accumulate before being dumped. Many times the waste is a white liquid with a dark center. Uric acid is a by-product of the bird's digestive system.

Fold

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