**END OF WEEK TWO**

🌞 You have had your chicks for two weeks now. Continue providing supplemental heat, but raise the heat lamp a little. Your chicks can tell you by their behavior what adjustments need to be made. Chickens “talk” with actions rather than words. If your chicks huddle near the heat lamp, they are too cold and the heat lamp should be lowered. If your chicks are trying to get as far away from the lamp as possible, and possibly panting, they are too hot and the heat lamp should be raised or the wattage of the bulb reduced.

**HOW DO CHICKENS EAT THEIR FOOD?**

If you look closely at the mouth of a chicken, you will notice that they do not have any teeth. So how do they chew their food?

The digestive tract of chickens is very different from ours (Figure 1). A distinctive feature of birds is the absence of lips and teeth. Instead, the bird has a hard **beak** that can be used for grasping, tearing, and scooping food. Food enters the mouth and travels via the esophagus to the **crop**. The crop, located in the lower neck region, provides storage for food materials. The ability to eat its food and leave the area quickly is one of the bird’s survival factors. While in the crop, the food is moistened and softened, but very little digestion takes place. The food moves from the crop into the glandular stomach (**proventriculus**) where the first digestive juices are secreted. The feed then passes, with added digestive juices, into the muscular stomach (**gizzard**) where physical breakdown of the food occurs. The gizzard is a highly muscular organ that grinds and mixes feed. Leaving the gizzard, the food passes into the **duodenal loop** of the **small intestine**. Bile, which is produced in the **liver**, is secreted from the **gall bladder** and is important in fat digestion. Here in the duodenal loop digestion continues as the **pancreas** secretes digestive enzymes that aid in the breakdown of proteins into amino acids, carbohydrates into simple sugars and fat into glycerol and fatty acids. In the remaining area of the small intestine the digestion process is completed and absorption of the nutrients takes place. The major functions of the **large intestine** are storage of undigested waste material and absorption of water from these intestinal contents. This process provides birds with a mechanism for recycling and for very efficient utilization of this important nutrient, water. The **ceca** consists of two pouches that fill and empty from the same direction. Their main function is associated with the breakdown of fiber. Although chickens cannot utilize large volumes of fiber in the diet, this mechanism makes possible the breakdown of small amounts of fiber commonly associated with some poultry diets. The undigested material (feces) passes out through the **cloaca**.

An understanding of the structure and function of the digestive system of the bird is important to understanding the need for highly specialized diets: low in fiber and containing all necessary nutrients in adequate amounts that are relatively easily digested.
Figure 1. The digestive system of a chicken

ACROSS
2. secretes digestive enzymes into the duodenal loop
5. glandular stomach
7. muscular stomach
8. aids in fat digestion
11. primary site of water absorption
12. used for grasping, tearing or scooping food

DOWN
1. carries food from mouth to crop
3. where digestion and nutrient absorption takes place
4. temporary food storage site
6. end of the digestive tract
9. produces bile
10. site of fiber digestion