**How do animals obtain and digest food?**

**~~Target:~~** ~~Identify the different ways animals obtain and digest food.~~

**WHAT ANIMALS EAT**

**~~Key concept:~~** The different ways that an animal obtains food depends on what it eats, and its adaptations for getting food.

~~Animals are grouped based on what they eat.~~ Most animals are **carnivores, herbivores, and omnivores**.

\*Carnivore is an animal that only eats meat. They have sharp pointed teeth.

**Example:** crocodile, wolf

\*Omnivore is an animal that eats both plants and animals. They have pointed and flat teeth. **Example:** Bear, gorilla

\*Herbivore is an animal that eats only plants. They have flat teeth. **Example:** zebra, cow

**ADAPTATIONS FOR OBTAINING FOOD**

Animals have an amazing variety of adaptations for obtaining food. These include structures and behaviors.

Typically, animals have a mouth for food to enter the body. **Structures** such as beaks and claws allow food to enter the mouth.

An example of **behaviors** would be a spider making a web to catch prey.

**ANIMAL DIGESTION**

The process that breaks food down into small molecules is called digestion.

Some types of animals digest food mainly inside their cells, but **most digest food outside their cells.**

Digestion inside the cells AKA **intracellular digestion.** Example: sponges digest food then it diffuses into other cells.

Digestion outside cells AKA **extracellular digestion.** This occurs due to a digestive system. **A digestive system** is an organ system that has specialized structures for obtaining and digesting food.

Internal body cavity, the simplest kind of digestive system. Food enters and waste exits through the same opening. Cnidarians and flatworms have this type of digestive system.

**Digestive tube**: complex animals have a system that consists of a tube with two openings. One for taking in food and one for wastes to leave the body. A digestive system with two openings is more efficient than a system with one opening.

**How do animals obtain oxygen?**

**~~Target:~~** ~~Explain how animals exchange oxygen and carbon dioxide with the environment.~~

**WHY ANIMALS NEED OXYGEN**

Animals need oxygen for a process known as cellular respiration.

**Cellular respiration** is the process in which cells use oxygen and digested food molecules to release the energy in food. This occurs in every cell in an animal’s body. The waste product of this process is carbon dioxide.

**Breathing and cellular respiration are not the same thing. All animals have cellular respiration, but not all animals breathe.**

**~~Key concept~~**~~:~~ Animal cells exchange oxygen and carbon dioxide with their surroundings by diffusion across the outer coverings, or membranes, of cells.
The structures that an animal uses to exchange gases with its surroundings make up the **respiratory system**. This includes gills, skin, and lungs. This depends on where the animal lives and how complex it is.

\*Animals that exchange gases across their skin live in water or in moist places on land.

\*However, most animals that live in water have gills.

\*In contrast, most animals that breathe air, have lungs.

**What are the two types of circular systems?**

**~~Target:~~** ~~Describe the two types of circular systems.~~

The **circulatory system** transports needed materials to cells and takes away wastes.

**Key concept:** Complex animals have one of two types of circulatory systems: open or closed.

|  |  |  |
| --- | --- | --- |
| open | similarities | closed |
| Blood does not always travel inside vessels The heart pumps blood to the head and organs. Then the blood flows into the spaces around the animal’s organs.Most invertebrates | Both include blood, vessels, and a heart.  | Blood always stays inside the heart and vessels. Large vessels lead away from the heart to the organs.All vertebrates |