



Knowledge and Skills Mind Map (Science)

Year 4 Autumn Term 2

Knowledge - 
Skill - 



Animals, including Humans

1. Can I identify and describe the main parts of the human digestive system?

- **Prior Knowledge (Year 3—Autumn 2):** Nutrients a human needs, balanced diet, classified foods into groups (e.g. protein, fats), bones in human skeleton, how muscles work, classified animals (carnivores, herbivores, omnivores)
- **Vocab:** Digestive System, Oesophagus, Stomach
- Know that the digestive system is a group of organs that work together to break down food.
- Know that the main parts of the digestive system include the mouth, oesophagus, stomach, small intestine and large intestine.
- Know that food travels through the digestive system in a specific order.
- Know that scientific diagrams and models can be used to identify and describe parts of the digestive system.
- *(note for teachers – suggested task: provide a diagram or model of the digestive system and ask children to label the parts, then physically act out the journey of food through the body to reinforce understanding.)*
- **Using straightforward scientific evidence to answer questions or to support their findings**
- **Records findings using simple scientific language, drawings, labelled diagrams, keys, bar**

2. Can I explain the function of each part of the digestive system using scientific language?

- **Prior Knowledge (last lesson):** identified and described the digestive system
- **Vocab:** Digest, saliva, absorb, intestine, nutrients
- Know that each part of the digestive system has a specific function in breaking down food.
- Know that digestion begins in the mouth where food is chewed and mixed with saliva.
- Know that the oesophagus moves food to the stomach, where it is broken down further.
- Know that nutrients are absorbed in the small intestine and waste passes through the large intestine.
- **Using straightforward scientific evidence to answer questions or to support their findings**

3. Can I identify different types of teeth and explain their functions?

- **Prior Knowledge (last lesson):** explained the function of each part of the digestive system
- **Vocab:** incisors, canines, molars
- know that humans have different types of teeth called incisors, canines and molars.
- Know that each type of tooth has a specific function, (e.g. incisors cut food, canines tear food and molars grind food).
- Know that teeth are an important part of the digestive system because they begin the process of breaking down food.
- Know that observing the shape of teeth helps us understand how they are used.
- **Identifying differences, similarities or changes related to simple scientific ideas and processes**

5. Can I construct and interpret food chains, identifying producers, predators and prey?

- **Prior Knowledge (last lesson):** compared different types of animal teeth and explained how they are adapted to diet.
- **Vocab:** producer, predator, prey
- Know that a food chain shows how energy is passed from one living thing to another.
- Know that a producer is a living thing (usually a plant) that makes its own food.
- Know that a predator is an animal that hunts and eats other animals and prey is the animal that is eaten, (e.g. a fox is a predator and a rabbit is its prey).
- Know that food chains begin with a producer and show a simple sequence of living things linked by feeding relationships.
- **Using straightforward scientific evidence to answer questions or to support their findings**

4. Can I compare different animals' teeth and explain how they are adapted to their diet?

- **Prior Knowledge:**
 - ⇒ **Year 3 Autumn 2:** classified animals into carnivores, herbivores, omnivores
 - ⇒ **last lesson:** Explained the functions of different types of human teeth
- **Vocab:** carnivore, herbivore, omnivore,
- Know that different animals have different types of teeth depending on what they eat.
- Know that carnivores have sharp teeth for tearing meat, herbivores have flatter teeth for grinding plants, and omnivores have a mix of both.
- Know that the shape and type of teeth are adapted to an animal's diet, (e.g. a lion has sharp canines while a cow has large flat molars).
- Know that comparing teeth helps us understand how animals survive in their environment.
- **Identifying differences, similarities or changes related to simple scientific ideas and processes**