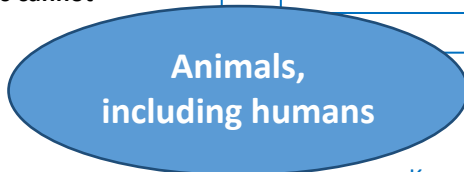




Knowledge and Skills Mind Map (Science) - Year 3 Autumn Term 2

Knowledge - 
Skill - 



1. Can I identify the different types of nutrients humans need and explain why they are important?

- **Prior Knowledge (before half term):** Light (shadows, reflection)
- **Vocab:** nutrients, carbohydrates, protein
- Know that humans need different types of nutrients to stay healthy, including carbohydrates, proteins, fats, vitamins and minerals.
- Know that different nutrients have different roles in the body, (e.g. carbohydrates give energy and protein helps the body grow and repair).
- Know that humans cannot make their own food and must get nutrients from what they eat.
- Know that foods can be grouped based on the nutrients they contain.
- **Use straightforward scientific evidence to answer questions or to support their findings.**
- **Identifying differences, similarities or changes related to simple scientific ideas and processes**

2. Can I use evidence to explain what makes a balanced diet and why humans cannot make their own food?

- **Prior Knowledge (last lesson):**
- **Vocab:** balanced food groups, energy
- Know that a balanced diet includes the right types and amounts of different nutrients to keep the body healthy.
- Know that humans cannot make their own food and must eat a variety of foods to get the nutrients they need.
- Know that different food groups provide different nutrients and too much or too little of one type can affect health.
- Know that scientific evidence can be used to explain healthy eating choices, (e.g. identifying foods that provide energy compared to those that help growth and repair).
- **Using straightforward scientific evidence to answer questions or to support their findings**
- **Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions**

3. Can I classify foods into groups and present my findings in a clear way?

- **Prior Knowledge (last lesson):** used evidence to explain what makes a balanced diet
- **Vocab:** food group, classification,
- Know that foods can be grouped into categories based on the nutrients they contain, such as carbohydrates, proteins, fats, vitamins and minerals.
- Know that classifying foods helps us to understand how different foods contribute to a balanced diet.
- Know that data can be presented in different ways to help answer scientific questions, (e.g. using a table or chart to show how foods are grouped).
- Know that clear recording of results helps us to compare and explain findings.
- **Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions**
- **Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables**

6. Can I classify animals as carnivores, herbivores or omnivores and explain how this links to their diet?

- **Prior Knowledge (last lesson):** investigated how muscles worked with bones
- **Vocab:** carnivore, herbivore, omnivore
- Know that animals can be grouped based on what they eat: carnivores eat meat, herbivores eat plants and omnivores eat both.
- Know that an animal's diet helps it get the nutrients it needs to survive and stay healthy.
- Know that classifying animals helps us identify similarities and differences between them.
- Know that results can be recorded to show how animals are grouped, (e.g. sorting animals into a table or chart).
- **Identifying differences, similarities or changes related to simple scientific ideas and processes**
- **Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions**

5. Can I investigate how muscles work with bones to help the body move?

- **Prior Knowledge (last lesson):** key bones in the human skeleton
- **Vocab:** muscle, contract, relax
- Know that muscles work with bones to help the body move.
- Know that muscles can only pull (contract) and cannot push.
- Know that muscles work in pairs to create movement, (e.g. when one muscle contracts, the other relaxes to bend or straighten an arm).
- Know that simple enquiries can be used to observe how muscles work, (e.g. feeling muscles in the arm as it bends and straightens).
- **Setting up simple practical enquiries, comparative and fair tests**
- **Making systematic and careful observations**

4. Can I identify and name key bones in the human skeleton and explain their functions?

- **Prior Knowledge (last lesson):** classified food into groups
- **Vocab:** skeleton, bones, protection
- Know that humans have a skeleton made up of bones that supports the body and helps it to stand upright.
- Know that some bones protect important organs, (e.g. the skull protects the brain and the rib cage protects the heart and lungs).
- Know that there are different bones in the human body with specific names, (e.g. skull, ribs, spine, femur).
- Know that labelled diagrams can be used to identify and record the names and functions of bones.
- **Using straightforward scientific evidence to answer questions or to support their findings**
- **Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables**