#### Animals including humans

# Science Knowledge organiser

Strand: Biology

Class: Year 4

### **Previous Knowledge**

Animals, including humans, need the right types and amount of nutrition, they cannot make their own food; they get nutrition from what they eat. Humans and some other animals have skeletons and muscles for support, protection and movement.

## **Project Hook or 'Wow' memory**

Make a model of human digestive system

Learning Steps	Kev Knowledge (answers)
What are the names and functions for all the organs in the digestive system? (Identifying and classifying)	Each part completes a different function— teeth chew the food, oesophagus transports food down to the stomach, acid in the stomach breaks the food down, small intestine nutrients are absorbed into body, large intestine—water is absorbed, rectum stores stools, anus where stools leave body.  Working model, POO experiment, junk model of digestive system
In our class are omnivores taller than vegetarians? (Comparative testing)	*Data set may ned to be expanded—ask staff Diet does not directly equate to height growth. Graphs produced reflect this.
How has a visit to the dentist changed over time? (Changes over time) How do dentists fix broken teeth? (Research)	Modernised equipment—drills, anaesthetics, antibiotics  Fillings, caps, crowns, bridges - sometimes removal is necessary  Using BBC horrible history complete a leaflet about dentistry over time
How can we organise teeth into groups? (Identifying and classifying) Week How does the amount of sugary drinks affect the decay of our teeth? (Fair testing)	Canines, incisors, pre-molars, molars, carnassial.  Teeth in different animals are dependent on their diet.  The greater the exposure to sugary drinks the more decay occurs.  The shell of the egg is dissolved when in a sugary solution.  Squash experiment—eggs
What are the producers, prey and predators in a food chain? (Identifying and classifying)	Identify and classify different producers, prey and predators. Know that all plants are producers. That a food chain starts with a producer All living things fit into a food chain Food chain art work, time lapse video on food chains and food web
How does a food chain/web for the jungle compare with that of a woodland? (Pattern Spotting)	All food chains begin with a producer—end with a predator Producers are dependent on the environment they are in. Living things depend on the food they eat to survive Comparison tables

### The key skills we want pupils to use during this topic:

**Ask** relevant **questions** and use different types of scientific enquiries to answer them. Set up simple practical investigations, **compare** things and make **fair tests**. Make careful **observations** and take **accurate measurements** using the right units using a range of equipment.

Gather, record, sort and **present data** in a variety of ways to help in **answering questions**. Record findings using simple **scientific language**, drawings, labelled diagrams, keys, bar charts and tables.

Report findings by talking and writing about them, displaying or **presenting results** and **conclusions**. Use results to draw simple conclusions, make **predictions**, suggest **improvements** and ask more questions. **Identify differences**, **similarities or changes**. Use clear **scientific evidence** to answer questions or to support my findings.

	Key vocabulary	
	Digest	Break down food so it can be used by the body
	Oesophagus	A muscular tube which moves food from the mouth to he stomach
	Stomach	An organ in the digestive system where food is broken down with stomach acid and being moved around
	Small intestine	Part of the intestine where nutrients are absorbed into the body
	Large intestine	Part of the intestine where water is absorbed from remaining waste food. Stools are formed in the large intestine.
	Rectum	Part of the digestive system where stools are stored before leaving the body through the anus.
	Canines, Incisors, Pre- molars, Molars, Car- nassial	Different names of teeth—each with a different function—see additional vocabulary  LING'S STANKING

Statutory Requirements

Describe the simple functions of the basic parts of the

Identify the different types of teeth in humans and their

Construct and interpret a variety of food chains, identify-

digestive system in humans

ing producers, predators and prey

simple functions