St Mary's Horsforth/Holy Name – Science Animals including humans knowledge map

Year 3 | **Strand: Biology**

What should I already know?

- All animals need water, air and food to survive.
- The different ways in which humans can be healthy.
- Examples of healthy and unhealthy food choices.
- The parts of the human body and what they do.
- There are five types of vertebrates (mammals, fish, reptiles, amphibians, birds)
- Vertebrates are animals that have a backbone.
- Invertebrates are animals that do not have a backbone.

What will I know at the end of the unit?

- Humans cannot make their own food like plants do - we need to eat plants and animals to get our energy.
- Healthy, balanced diets lead to healthy, active people.
- **Protein** foods help the body to grow and repair
- **Carbohydrates** give us energy
- **Fats** give us energy (we should eat this in moderation)
- **Vitamins & minerals** keep our bodies healthy
- **Fibre** helps our food digest
- **Water** helps to move nutrients in our body and gets rid of waste that we don't need.

Muscles and Skeletons

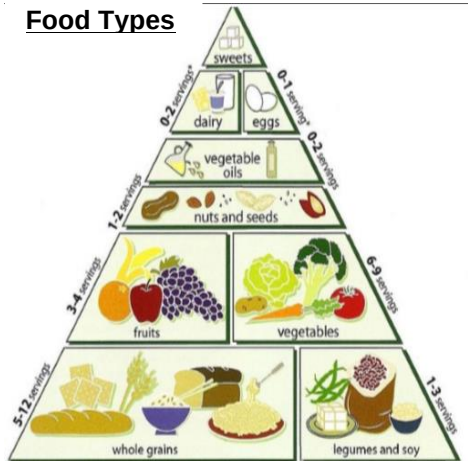
- The three most important things a skeleton does are: support, help you to move and protect your organs
- The are 2 types of skeleton- exoskeleton or endoskeleton (inside) We are endoskeleton!
- Joints are where bones meet - they allow our bodies to move.
- Muscles contract and relax.
- Muscles are connected to bones by tendons.

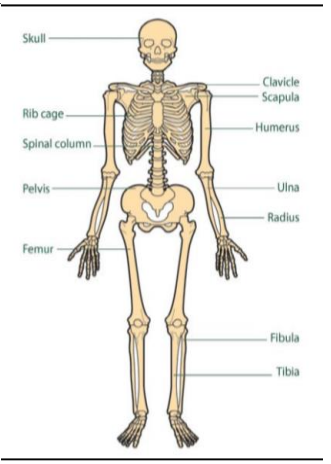
Scientific Language

nutrients	substances that help plants and animals to grow
starchy	foods that contain a lot of starch (a nutrient which gives you energy
energy	ability and strength to do physical things
healthy	well and not suffering from any illness
exoskeleton	is a covering/shell that supports and protects animals e.g. crabs
endoskeleton	the skeleton is on the inside of the body (humans, vertebrate animals)
backbone	the column of small linked bones down the middle of your back (spine).
bone	the hard parts inside your body which form your skeleton
elbow	the bend or joint between the upper arm and the lower arm
joint	the junction between two or more bones
muscle	something inside your body which connects two bones and which you use when you make a movement
organ	a part of your body that has a particular purpose
protect	to prevent them from being harmed or damaged
tendons	a strong cord in a person's or animal's body which joins a muscle to a bone
contract	to make smaller by drawing together; shrink or make tighter.
relax	when you relax it, your muscles become less stiff or firm

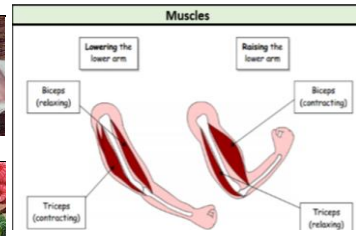
Diagram/ Key.

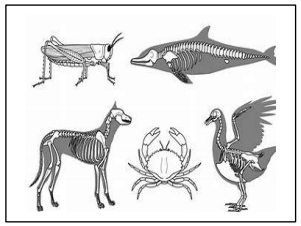
Food Types





Fats in moderation





Research questions to investigate.

- How do the skeletons of different animals compare? (Identify and Classify)
- How does our skeleton change over time? (from birth to death) (Observation over time)
- Do male humans have larger skulls that female humans? (Pattern seeking)
- Why do different types of vitamins keep us healthy and which foods can we find them in? (Research)
- How does the angle that your elbow/knee is bent affect the circumference of your upper arm/thigh? (Comparative testing)
- How does the skull circumference of a girl compare with that of a boy? (Comparative testing)

Cross curricular links.

P.E.- exercising impact
PSHE- healthy body, healthy mind
Music- feel the beat
Maths- measure.

Scientist/ Inventor

Adelle Davis

20th Century Nutritionist

Recommended books