# Science Learning Journey

# Year 2 Autumn 2



#### Theme Overview

The children should be taught to notice that animals, including humans, have offspring which grow into adults

To find out about and describe the basic needs of animals, including humans, for survival (water, food and

To describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways.

## **Project Outcomes**

To talk about different stages of growth and say what is unique to each.

To know that there are 5 humans needs.

To be able to talk about a balanced diet.

To understand where the heart is and what it does. To investigate how their heart beat changes with different exercises. To record data and to make conclusions based on what they have found out.

Vocab the children should have the opportunity to hear and use: growing, growth, life cycle, basic need, water, air, food, shelter, elderly, baby, toddler, teenager, adult, healthy, unhealthy, needs, shelter, air, water, exercise, heart, food groups, protein, carbohydrate, fruit, vegetables, minerals, vitamins, dairy, heart beat,

#### Skills Focus

#### Main Skills Focus:

Asking simple questions and recognising that they can be answered in different ways.

Observing closely, using simple equipment.

Performing simple tests.

Identifying and classifying.

Using their observations and ideas to sugaest answers to auestions.

Gathering and recording data to help in answering auestions.

#### Linked Skills Focus:

Recap - Human bodies from Autumn 1 Year 1, naming body parts.

PSHE - healthy eating. PE - being active

### Sequence of Learning

#### Lesson 1

**LI** I know the different stages of the human lifecycle

Use the slides to explain the human life cycle. A cycle goes round and round, just like the wheels on a bike. Look at life cycles of animals quickly to recap what the life cycle is. What are the different stages of being a human? Give chn time to Think Pair and Share,

Then show the picture of the lifecycle of a human. What are people like at different stages of their life? What can they do? What can't they do?

**Activity:** chn to work in mixed ability partners and fill in the grid-what can and can't they do at each stage of life?

Plenary: Were you right? Go over some of the slides to check chn's answers.

#### Lesson 2

LI: I know that humans need air, water and LI: I know the 5 basic needs of humans food to survive

(slide 3) Can you remember the order of the human lifecycle? (slide 4) Can you remember thing that toddlers are able to do? (slide 5) What 3 things do all animals need to survive? (slide 6) Do you think this is the same for humans? Yes! Although there are lots of things that will make us happy, e.g. being loved, we are able to survive without them. Read the slide which reiterates that humans need the same basic three things as animals – food, air water. What would happen if we didn't get these three things?

Could we only live off junk food? No. we need nutritious food to give us the vitamins and minerals we need to survive. (slide 7)However, humans also have two more basic needs – sleep and shelter. Why do you think these are also basic needs? Explain the

#### Lesson 3

I know the basic food groups and why each is important

can you remember the 3 basic needs of animals and the 5 basic needs of humans?

Go through the slides to explain the basic needs of humans – food, air, shelter, water, sleep. Why do we need each one of these? Discuss the importance of each and why we need it.

Then use the second ppt (food groups) to talk about the different food categories. Remember to discuss food choices – healthy foods are needed because they contain vitamins and minerals. Show the different food groups on the slides and explain the proportion of leach we need to eat and what each food

# Learning about Scientists: William Harvey info for teachers

# Teaching science skills and techniques at Mrs Bland's Infant School.

- we encourage the children to think that we can all be scientists.
- We are curious, we share ideas, explore our environment and ask questions to find out the answers to things we don't not know yet.

What are the similarities and differences between each stage of the cycle?

importance of these. Can you think of any other wants for humans?

#### Activity:

Chn to go off in mixed attainment groups to complete needs and wants sorting activity. (work in small groups)

**Plenary:** Share your work with another pairdid you get them same answers? Why?

group gives us. It is an interesting ppt because it looks at food from different countries which would be good to discuss. Discuss the given questions on each slide.

**Activity:** Children to work on group tablessort foods into the given categories-protein, vegetables, fruits, dairy.

**Plenary:** Was there anything surprising that you sorted? Is it ok to eat unhealthy foods?

# Lesson 4- part 1

**LI** I can describe the importance of exercise for humans

I can name different organs inside the body and find out more about the heart.

Either in table groups or as a class, have a big piece of paper on the floor/table. Draw around someone (if doing it as a class) and ask someone where they think the heart is on the body? Can they come and draw it on? What else is inside the body? Can you draw it? Can you label them? Look at a picture of the inside of the human body (slide 3 of PPT). Were you right? Was there anything which surprised you? What does the heart look like? Where is it in your body? Look at a picture of the real thing! There is a good video to watch – (SEE link)

# Lesson 4 - part 2

**LI** I can describe the importance of exercise for humans

I can conduct an investigation

**Pre-investigation task** – Recap the position and function of the heart. Why is it important to keep it healthy? How can we keep it healthy? (follow recap questions on slide 8).

**Explaining the investigation:** We are going to be investigating which activity will make your heart beat the fastest. Ask them to write the title in their book and then a prediction – use the slides and given sentence stem. The activities will be sitting, walking, skipping and running. Explain how we are going to be collecting the results of the investigation – get chn to stick in results table.

Place your hand over your heart. Can you feel your heartbeat? Demonstrate to chn that you can feel your pulse in your wrist and your neck. Get them to choose whatever one is stronger and easier to feel. What does it feel like? Can you tap to the beat of your heartbeat? Practise counting how many pulses are in 30 seconds and then doubling it to find out how many bpm.

Explaining the investigation: Ask each child to make a fist. This is how big your heart is. It is an essential organ, vital for keeping you alive. Have a sponge ball and a tennis ball. Squeeze the tennis ball. Your heart contracts and pushes the blood around the body. Now do the same with the tennis ball. Is it easier or harder to squeeze? Its harder. The more exercise you do, the more you heart can contract (squeeze) easily, just like the sponge ball. Therefore exercise is vital to keeping this organ healthy.

(slide 7) Ask chn to describe what physical activities they do. How does your body change when you exercise? Use existing knowledge and experiences to answer the question. (sweat, heart beats faster, get hot etc.)

**Plenary:** What can you remember about the heart? Can you remember any facts from the video we watched? Why is it important?

**The investigation:** The investigation will need to be conducted. Everyone to do each of the activities and measure own heartbeat for 30 seconds. (use smart watch or fitbit for accurate measurement. Everyone to do activity for one minute, class teacher to count for 30 seconds whilst chn count their pulse then record the results in their table.)

Conclusion- which activity made your heat beat the fastest. Were you right? Chn to use the sentence stem to write up their investigation conclusion.

**Plenary:** What can you suggest to people about the exercise they could do to live a healthier life?