# Science Year 2 – Term 1

**Animals including humans**

| Term 1 | Learning Question & NC Link | Substantive Knowledge<br>To know that… | Disciplinary Knowledge<br>I can… | Vocabulary | Assessment opportunity | Equipment & resources | Lesson ideas<br>***These are not lesson plans but suggested ideas for how to cover the objectives.** |
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| Session 1<br><br>**Asking simple questions and recognising they can be answered in different ways** | What does the word off spring mean?<br><br>What do offspring grow in to? | To know that animals have offspring that grow into adults.<br>To know what the word 'off spring' means.<br>To know and apply the scientific language to talk about what they have found out. | To be able to record data (tally chart).<br>To be able to record data (table). | Offspring - The child of an animal<br><br>Names of animals and their offspring | Questioning throughout task<br><br>Outcome of task<br><br>Pupil voice – record in books | Pictures of animals/offspring<br><br>Non-fiction books | <u>What different types of off spring can we name?</u><br><br>Have a collection of pictures or non-fiction books all about animals. Children create a tally chart and record using tally marks the different off spring that they see in the books/pictures.<br><br>Talk about the collection of off spring that they have found.<br><br>Can we name different off spring?<br>What are off spring?<br>What are the off spring of a cow?<br>What are the off spring of a cat?, etc.<br><br>Children could match adult animals to their young/offspring. |
| Session 2<br><br>**Observing** | **What are the stages of a life cycle?** | To know the stages of a life cycle of an animal and put these in order using the knowledge they have gained. E.g. a chicken, frog, dragonfly, butterfly life cycles.<br><br>To know what they have learnt following a visit and be able to share what they have learnt. (Possible visit later in the year). | To order the stages of an animals' life cycle.<br>To investigate the different stages of an animals' life cycle over time.<br>To be able to use observations to suggest answers to questions. i.e. how many caterpillars? Do any occur on more than one plant?<br>To be able to observe using simple equipment. | Life cycle - A series of changes that an animal or plant passes through from the beginning of its life until death<br>Stages of growth of many insects – egg, larva, pupa, adult<br>Names of some invertebrates – ladybirds, butterflies, dragonflies, etc<br>Names of some amphibians – smooth newt, common frog, toad<br>Classification –<br>Birds, fish, amphibians, reptiles, mammals and invertebrates<br>Classification - Carnivores, herbivores, omnivores | Questioning throughout task<br><br>Outcome of task<br><br>Pupil voice – record in books | Life cycles pictures<br><br>Videos | Observing and recording the lifecycle of animals.<br><br>Watch the video clips: discuss what we might be learning about?<br><br>https://www.bbc.co.uk/programmes/p011smwc<br><br>https://www.bbc.co.uk/programmes/p011m5ms<br><br>https://www.bbc.co.uk/programmes/p0117xbr<br><br>What do we already know about animals and their life cycles?<br><br>Have a collection of photos of animals and their life cycle. When looking at the photos, ask the children to work out the order of the animal's life cycle.<br><br>Recap animal groups from Year 1 – e.g. insects/reptiles/birds/amphibians/mammals/fish<br>And try to include life cycles from different groups e.g. frog, butterfly, chicken.<br><br>Observe and talk about the changes at each stage.<br><br>Eggs of minibeasts Egg hunt – Spring to late summer is a good time to try and find the eggs of minibeasts. Places to look include: soil, damp crevices, under bark, under branches and stones, the under surface of leaves, and where leaves join the stem. Observation children can record outside: • Are the eggs attached to anything? • Are they easy to see? • Are they found on their own or in groups? • Where in the wildlife area were they found? |
| Session 3<br><br>**Using their observations and ideas to suggest answers to questions.** | **What are the stages of human life and how do we change as we get older?** | To know the stages of human development and talk about how we change as we grow older. | To sort children's clothes from different ages of children and discuss the changes.<br>To order photos of children and their families and discuss the changes.<br>To draw the different stages of human life.<br>To measure body parts of different ages, using non-standard units.<br>To investigate relationships between the ages of children | Stages of life –baby, toddler, child, teenager, adult | Questioning throughout task<br><br>Outcome of task<br><br>Pupil voice – record in books | Lab coat<br><br>Science bag<br><br>Children's clothes at different stages/ages<br><br>Photos of humans at different ages | Stages of human development Visiting baby.<br><br>If possible, arrange for a mother and baby to visit. Children can discuss the differences between them and the baby. They begin to develop an idea as to how long it takes humans to develop.<br><br>Investigating children's clothes. Children can sort children's clothes from different ages of children and discuss the changes that have occurred.<br><br>Studying photos of humans of different ages - Photos of children and their families. Once again, the children can sort into order and then discuss changes.<br><br>Video - https://www.bbc.co.uk/programmes/p0117vfr |

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| | | | and the size of body parts. i.e. length of feet, handspan, etc.<br>To record their observations in a variety of ways i.e. a diary, pictures, photos, videos, etc.<br>To ask questions to a visitor about the stages of human development. i.e. a new mother and her baby. | | | | <u>Recording</u><br>Children could draw the different stages of human life.<br><br>Measuring body parts of children of different ages Investigate relationships between age of children and size of body parts. Children can investigate the length of a body part (e.g. feet) of children of different ages across the school.<br><br>Investigate – Do children in year 2 have the largest feet? Or Do the children in the class with the biggest feet have the biggest handspan?<br><br>Record findings in a simple chart or graph.<br><br>Fold a strip of paper so that there are different sections – draw and label humans at different ages/stages e.g. baby, toddler, child, teenager, adult, elderly. |
| Session 4<br><br>**Gather and record data to help in answering questions** | **What do humans need to survive?** | To know what humans, need to survive.<br>To know what the basic needs of humans are. | To be able to record data (flow diagram).<br>To be able to perform a simple test.<br>To be able to find out about and describe the basic needs of animals, including humans, for survival (water, food, air and shelter). | Diet - The food and water that an animal needs<br>Exercise - A physical activity to keep your body fit<br>Disease - Illness or sickness which affects people, animals or plants<br>Reproduce - When living things make a new living things.<br>Life processes – growth, nutrition (feeding), respiration (breathing is part of this) | Questioning throughout task<br><br>Outcome of task<br><br>Pupil voice – record in books | Lab coat<br><br>Science bag<br><br>Pictures for activity | Animals have basic needs. Discuss with the children what they think the needs are for every animal in order for it to stay alive. Ones they might identify: to maintain a comfortable body temperature, to avoid being eaten, to have space to grow, to have food, to be able to take in oxygen, to be able to have young in a place where they can survive.<br><br>Useful video clips:<br>https://www.bbc.co.uk/bitesize/topics/z6882hv/articles/zx38wmn<br>https://www.youtube.com/watch?v=hpUVUHOkXIc<br><br>  <br><br><u>What are the basic needs of an animal?</u><br>Choose an animal as in the above image. Children can work in groups to thought shower the needs of the animal. Each table can have a different animal. Report back and share findings. They can record using pictures or words.<br><br>(add an example to your science working wall)<br><br>The cards if you wanted to print and have the children sort are on the links below.<br><br>https://www.sciencebuddies.org/cdn/Files/13552/5/Pet-shopping-Pet-Animal-Cards-SL_190611.pdf<br>https://www.sciencebuddies.org/cdn/Files/13553/5/Pet-shopping-Animal-Basic-Needs-Cards-SLSDB_190619f.pdf<br><br>Establish that animals need: air, water, food and shelter to survive. |
| Session 5<br><br>**Gather and record data to help in answering questions** | **Which foods make a healthy diet?** | To know what a healthy lifestyle is and talk about it.<br>To know the importance for humans of eating the right amounts of different types of food.<br>(Links made in Year 2, Term 5- Food and Nutrition) | To classify which food make a healthy diet.<br>To discuss the importance of a of exercise.<br>To explore what happens to your body when you exercise.<br>To investigate which exercise make you puff the most. | Foods – healthy, grow, strong, energy | Questioning throughout task<br><br>Outcome of task<br><br>Pupil voice – record in books | Lab coat<br><br>Science bag<br><br>Lunch box and contents | <u>A healthy lifestyle</u><br>When discussing the needs of humans it is best to consider the bigger picture; i.e. What makes a healthy lifestyle? The children's ideas might be stimulated by the following video:<br>https://www.youtube.com/watch?v=UxnEuj1cosw<br><br>Classifying (refer to working wall posters) – **Which foods make a healthy diet?**<br><br>Show children an example of a lunchbox. Discuss with children why some food when eaten in too large amounts is bad for our health – e.g. sugar, salts and fats. With the children, classify the foods in the lunchbox: green for foods we can eat quite a lot of, amber for those we can eat quite often, and red for foods we can eat as treats.<br><br>Talk about food groups:<br>**The 5 main groups**<br>fruit and vegetables.<br><br>potatoes, bread, rice, pasta and other starchy carbohydrates. |

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| | | | | | | | beans, pulses, fish, eggs, meat and other proteins.<br>dairy and alternatives.<br>oils and spreads.<br><br>Look at a food pyramid.<br><br>Provide children with pictures or real lunchboxes with different contents. They can classify each one using the 'green, amber, red system'. They can decide what advice they would give to the owners of each of the lunchboxes.<br><br>Recording - Children could draw an unhealthy and a healthy lunchbox<br><br>Design a healthy meal – homework idea. They could even make it out of craft materials on a paper plate. |
| Session 6<br><br>**Performing simple tests** | **Why do we do exercise? How can we look after ourselves?** | To know the importance for humans of exercise.<br>To know the importance to humans of hygiene. | To carry out a survey linked to hygiene e.g. how often do we wash ourselves?<br>To keep a tally for how many times we complete daily tasks e.g. brushing teeth, washing hands, having a bath, washing hair, etc.<br>To present findings in a table. | Hygiene - How clean something is (to stay healthy and stop disease and illness spreading<br>Medicine - A drug or other substance used to treat disease, injury, pain or other symptoms | Questioning throughout task<br><br>Outcome of task<br><br>Pupil voice – record in books | Lab coat<br><br>Science bag | *This lesson could be done over 2 weeks if another lesson is required for a 7-week term.<br><br>**<u>Importance of exercise</u>**<br><br>Discuss with children why it is important to exercise. They might identify: to maintain a healthy weight, to be flexible, to have strong muscles, to make sure organs like the heart and lungs are in good shape, and to make yourself feel good.<br><br>Video - https://www.bbc.co.uk/bitesize/topics/zhbthcw/articles/zbvrcmn#:~:text=Physical%20activity%20makes%20your%20body,helping%20it%20to%20work%20better.<br><br>Explore - What happens when you exercise? The children could investigate what happens to their bodies when they try different forms of exercise. After exercise they could touch their foreheads to see whether they are warm, or feel their chests to find out whether their hearts are pumping faster and their lungs are working harder.<br><br>Investigate – Which exercise makes you puff the most? Children could decide three different exercises to try. After doing each exercise a partner can hold a sheet of paper in front of the child and count the number of breaths (the paper moving upwards).<br><br>Discuss with the children which exercise made their bodies work hardest.<br><br>Recording - The children could show on a table the different exercises and the number of breaths taken after each of them.<br><br>Survey – How often do we wash ourselves?<br><br>Children could find out from each other how often they have to clean themselves. Recordings a whole class or individual. Children could tally how many children perform particular cleaning activities each day: clean teeth, wash hands, have a shower, have a bath, wash hair, etc. Keeping food clean. Discuss the importance food hygiene with the children. |
| Notes | Visit – Wingham Wildlife Park, later in the year.<br>To know what they have learnt following a visit and be able to share what they have learnt.<br><br>*Arrange for a mother and her baby to come into visit the children – session 3.<br><br>Professor and science bag should be part of every lesson.<br>Please also include a recap/previous learning/knowledge check on plans for each lesson. These can be recorded on post-its and added to their books.<br>Please add key questions to LO stickers and assess the children's knowledge against these – add comments to science books along the way, rather than assessing at the end of a term. This will hopefully help you to make your termly judgements for science. | | | | | | |