Caring, Successful, Happy Learners

# Learning Organiser Science: Heroes & Heroines

Year 2

Spring Term

| British and School Values | | | | Basic Skills (Reading & Communication) | Personal Development Positive mental and physical well being | Wonderful Words (Vocabulary & Quality Texts) | Memorable Experiences |
|---|---|---|---|---|---|---|---|
| respect | caring | safety | best | | | | |

## Working Scientifically

| Questioning | Testing | Gathering & recording data | Identifying & classifying | Suggesting answers to questions |
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| -To explore the world around them and raise their own questions using scientific language. | -To recognise the different ways in which they might answer scientific questions.<br>-To predict the outcome of an investigation, sometimes being right. | -To measure using standard units.<br>-To present results in a simple table with headings initially provided by the teacher. | -To group and classify in different ways with support. | -To use their observations and ideas to suggest answers to questions. Talk about what they have found out and how they have found it out with support.<br>-To use scientific vocabulary competently and appropriately with support. |

| Key Substantive "sticky" Knowledge I know… | Key Disciplinary Knowledge & Skills I can… |
|---|---|
| **Animals including humans**<br>-To stay alive all animals, including. humans have three basic needs for survival: air, water and food.<br>-The importance of exercise for human.<br>-Know the importance for humans of exercise, eating the right amounts of different types of food and hygiene. | -Know that good hygiene helps to prevent infections and illnesses.<br>-Practise good hygiene skills.<br><br>-Describe the impact the exercise makes on the human body.<br>-Name foods in each section of the Eat well guide. |

## Learning Sequence

| | Substantive knowledge | Disciplinary knowledge | Activity |
|---|---|---|---|
| 1 | | -Know that good hygiene helps to prevent infections and illnesses.<br>-Practise good hygiene skills.. | Recap the reasons for good hygiene.<br>Remind the chn of the handwashing song.<br>Complete handwashing investigation |
| 2 | -To stay alive all animals, including. humans have three basic needs for survival: air, water and food. | -To explore the world around them and raise their own questions using scientific language.<br><br>-To use their observations and ideas to suggest answers to questions. Talk about what they have found out and how they have found it out with support.<br>-To use scientific vocabulary competently and appropriately with support. | WWW – what do we know?<br>Identify what the body needs to survive.<br>Discuss the importance of each need for survival.<br>Does this include animals?<br>Sort cards/ statements into true or false. |
| 3 | -Know the importance | -Name foods in each | Discuss and sort foods which are healthy |

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|---|---|---|---|---|---|---|
| | | | | for humans of exercise, eating the right amounts of different types of food and hygiene. | section of the Eat well guide. | and unhealthy foods. (photograph)<br>Introduce the term balanced diet.<br>Look at Eat well plate and discuss foods on each section. Sort foods on a class 'Eat Well Plate' |
| | | | 4 | | | Look at the knowledge organiser (Eat well plate) Use info to understand how to stay healthy.<br>Recap Eat Well Plate and understand quantity.<br>Name the foods in each group.<br>Draw and label the foods for each part of the Eat Well plate. |
| | | | 5 | -The importance of exercise for human. | -To measure using standard units.<br>-To present results in a simple table with headings initially provided by the teacher.<br>-Describe the impact the exercise makes on the human body. | Recap fitness from P.E what happens to the body after exercise. Introduce investigative steps and processes. Complete the investigation-which exercise increase my heart rate the most. Record in a table |

| **Prior Knowledge**<br>**I remember ….** | **Wonderful Words**<br>**Key Vocabulary** | | **Planned Investigation, Experiences and Enrichment** |
|---|---|---|---|
| | **Known Vocabulary** | **New Vocabulary** | |
| -I know that I am a human.<br>-Name basic parts of the human body.<br>-Identify and sort a variety of common animals.<br>-Describing and comparing the structure of different animals.<br><br>-Living things grow and change. | | Adult, life cycle, off spring, germs<br>Living, dead, never living | -Vetinary nurse / animal expert.<br>-Pet show and tell (photos!)<br>-Reach out reporter for environmental issues regarding recycling news etc.<br><br>What is the best way to get rid of germs? (comparative testing) |

| Key Substantive "sticky" Knowledge<br>I know… | Key Disciplinary Knowledge & Skills<br>I can… |
|---|---|
| **Plants**<br>- Plants need different amounts of water, space and light to grow well and stay healthy.<br>-Plants also need different amounts of water and space to grow well and stay healthy<br><br>**Materials**<br>- The shapes of solid objects made from some materials can be change by bending, stretching, squashing and twisting. | -Look after plants as they grow – weeding, thinning, watering etc.<br>-Make close observations and measurements of their plants growing from seeds and bulbs.<br>-Make comparisons between plants as they grow.<br><br>-Recognise that a material may come in different forms which have different properties.<br>-Name materials that can be squashed, bent, twisted or stretched and how this could be done.<br>-Carry out simple tests / classifying activities to compare the properties of materials. |

**Learning Sequence**

| | Substantive knowledge | Disciplinary knowledge | Activity |
|---|---|---|---|
| 1 | -Plants also need different amounts of water and space to grow well and stay healthy | -Look after plants as they grow – weeding, thinning, watering etc.<br>-Make close observations and measurements of their plants growing from seeds and bulbs. | Set up plant investigation to be observed over time to explore whether or not plants need light and water to grow well. Over time make observations and record findings. |
| 2 | To know that plants need different amounts of water, space and light to grow well and stay healthy. | -To recognise the different ways in which they might answer scientific questions.<br>-To predict the outcome of an investigation, sometimes being right.<br>-Make comparisons between plants as they grow. | Record observations of each plant under different their different conditions-week 2. |
| 3 | To know that plants need different amounts of water, space and light to grow well and stay healthy. | | Record observations of each plant under different their different conditions-week 3. |
| 4 | -The shapes of solid objects made from some materials can be change by bending, stretching, squashing and twisting. | -To group and classify in different ways with support.<br>-Recognise that a material may come in different forms which have different properties.<br>-Name materials that can be squashed, bent, twisted or stretched and how this could be done. | Identify different objects made from the same materials and sort into groups of the same material. |
| 5 | | -Carry out simple tests / classifying activities to compare the properties of materials. | Record which materials can be altered by bending, stretching, squashing and twisting. |

| Prior Knowledge<br>I remember …. | Wonderful Words<br>Key Vocabulary | | Experiences and Enrichment |
|---|---|---|---|
| | Known Vocabulary | New Vocabulary | |
| -Plants grow from seeds or bulbs.<br>-I have spotted similarities and differences between bulbs and seeds.<br>-I can describe how plants that have grown from seeds and bulbs have developed over time.<br><br>-The names and properties of every day materials and their uses.<br>-Testing / classifying different materials.<br>-Explaining why a material is suitable / unsuitable for a particular purpose. | | Healthy, nutrition, water, temperature, light, grow, shade.<br>Bend, stretch, twist, squash. | -Planting in our outdoor / garden area<br>-Tim Smit -idea to build the Eden project<br>-Nicholas Grimshaw – created the biome (Eden project)<br>*Charles Mcintosh first invented waterproof fabric |