** WE ARE SCIENTISTS **

**Class:** Pears (Y1/2) **Teacher:** Miss Ellis **Term and Year:** Year A – Autumn Term

**PRIMARY PROVOCATION**

*Encouraging children to think deeply, ask questions, debate, have opinions and develop spiritually.*

**HUMANS ARE THE GREATEST CREATURES.**

In this topic, children will have the freedom to explore the similarities and differences between humans and animals, including learning about adaptation, inheritance and the concept of ‘survival of the fittest’. We will learn about the senses, including investigating whether the senses are more prominent in humans or animals, and look at habitats too. We will explore the idea of ‘what keeps us healthy?’ including making links to the 30:30 initiative. With this, children will be able to form their own questions and areas of enquiry, provoking independent learning attitudes.

This will allow pupils to explore the provocation ‘Humans are the greatest creatures’ and draw their own conclusions based on what they have learned.

**THE ROOTS OF TEACHING FOR LEARNING**

**These are the prerequisites of Teaching for Learning**

*constant feedback from all adults*

*sustained shared thinking between adults and children, between children*

*continuous questioning and hypothesising*

*high expectations for all*

*valuing every person and every contribution*

*learning from mistakes*

 *recognising and celebrating achievements*

*willingness to be brave*

Teaching for Learning is rooted in our values. In **WE ARE SCIENTISTS** we are focusing on the following values.

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| **Respect** Ensuring that children understand how to respect other people’s differences, with links to PSHE (human characteristics and differences).Also looking at Sporting Values through the 30:30 initiative when looking at what keeps humans healthy.  | **Compassion**Showing compassion to one another when learning about similarities and differences between humans (inc. race, diversity, gender) and animals. Showing compassion to other creatures and living things including learning about how to care for animals.  |

**THE TRUNK OF TEACHING FOR LEARNING**

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| **Teaching for Learning Objectives** | **Activities to Support Teaching for Learning** |
| **What are the adults doing?** | **What are the children doing?** |
| OurselvesLO – What is special about me?*Essential Vocabulary: Unique, personality, appearance, character, values*LO – How can I identify parts of the human body?*Essential Vocabulary: Compare, describe, similar, different, baby, adult, changes, growing*LO – What keeps humans healthy?*Essential Vocabulary: Health, exercise, sleep, hygiene, food, wellbeing, food wheel*LO- To make a fruit salad*Essential Vocabulary: Fruit, seeds, chop, cut, wash, rinse, sugar, energy, healthy* LO – Do people with bigger feet need larger gloves?*Essential Vocabulary: Patterns, compare, measure, record, data, gather, predict, centimetre* LO – To understand our senses*Essential Vocabulary: Test, ears, senses, hearing, patterns, taste, touch, feel, see*LO – How can we sort items using our senses?*Essential Vocabulary: Classify, identify, tongue, taste* LO – How can we explore all of our senses?*Essential Vocabulary: Touch, sight, smell, taste, hear, sense*LO – To make a sensory board*Essential Vocabulary: Touch, sight, smell, taste, hear, sense*AnimalsLO – Who lives in the sea?*Essential Vocabulary: Sea, creature sea floor, ocean, fish, habitat*LO – To know names for animals and their young *Essential Vocabulary: Offspring, male, female*LO – How do caterpillars change when they grow up?*Essential Vocabulary: Hatch, nest, nettle, chrysalis, pod*LO – How are animals classified? *Essential Vocabulary: Mammals, reptiles, birds, amphibians, fish*LO – To describe a food chain*Essential Vocabulary: Carnivore, herbivore, omnivore, food source*LO – Are all animal habitats the same?*Essential Vocabulary: Food, water, shelter, air, safety*LO – Can you make a shoebox habitat home?*Essential Vocabulary: build, structure, stick, solid, strong, small* **National Curriculum Objectives****Animals including humans Year 1:**identify and name a variety of common animals including, fish, amphibians, reptiles, birds and mammalsidentify and name a variety of common animals that are carnivores, herbivores and omnivoresdescribe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.**Animals including humans Year 2:**notice that animals, including humans, have offspring which grow into adultsfind out about and describe the basic needs of animals, including humans, for survival (water, food and air)describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.**Working Scientifically Year 1 and Year 2:**asking simple questions and recognising that they can be answered in different waysobserving closely, using simple equipmentperforming simple testsidentifying and classifyingusing their observations and ideas to suggest answers to questionsgathering and recording data to help in answering questions. | * Begin each lesson with a short review of previous learning
* Ensuring daily review of new vocabulary including using this on We are Scientists display
* Making learning meaningful – having appropriate real-to-life activities including using ‘real’ resources like photographs
* Ensuring stations are well set up and support scientific enquiry skills
* Providing models to support children
* Using small steps to introduce new concepts
* Ensuring questioning is tailored to address misconceptions and to move learning on
* Revisiting learning
 | * Following routines
* Actively listening
* Being prepared and organised
* Ready for learning
* Engaged in the process
* Showing commitment to the learning
* Independently applying themselves to the learning
* Using prior knowledge
* Supporting one another
* Asking questions
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**GROWING**

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| The child is beginning to demonstrate understanding and is engaging with the learning. They recall some knowledge and use some vocabulary correctly and in context but maybe not sufficiently confident to do this without prompting. They are carefully led, by the adult, through small steps of guided learning to recognise, practise and repeat key skills. |
| **Teaching for Learning Objectives** | **Activities to Support Teaching for Learning** |
| **What are the adults doing?** | **What are the children doing?** |
| OurselvesLO – What is special about me?*Essential Skills: Identifying unique features to them*LO – How can I identify parts of the human body?*Essential Skills: To label and match parts of the human body*LO – What keeps humans healthy?*Essential Skills: To verbalise key that exercise and some foods keep us healthy*LO- To make a fruit salad*Essential Skills: To name, wash and chop identified fruits* LO – Do people with bigger feet need larger gloves?*Essential Skills: To measure by approximation (which is bigger, which is larger?)*LO – To understand our senses*Essential Skills: To name the 5 senses and match to skill*LO – How can we sort items using our senses?*Essential Skills: To group* LO – How can we explore all of our senses?*Essential Skills: To match senses to actions*LO – To make a sensory board/bottle*Essential Skills: To cut and stick* AnimalsLO – Who lives in the sea?*Essential Skills: To identify the difference between underwater animals and plants* LO – To know names for animals and their young *Essential Skills: To match (older animals and younger animals based on appearance and size)* LO – How do caterpillars change when they grow up?*Essential Skills: To understand chronology* LO – How are animals classified? *Essential Skills: To group* LO – To describe a food chain*Essential Skills: To use appropriate vocabulary* LO – Are all animal habitats the same?*Essential Skills: To recognise similarities and differences* LO – Can you make a shoebox habitat home?*Essential Skills: To choose appropriate resources*  | Model using post-its on one pupil for the rest of the class to see and use as an example.Supporting practical learning – matching pictures to words in a model and checking understanding through learning reviews.Links to real life – what do you do in the playground? How do you get to school? What do you eat at lunch? Do these things keep us healthy?Pre-teaching to ensure pupils understand the safety aspects. Modelling of cutting, washing etc. Go through initial ideas and questions as a group. Model measuring with language reviews and demonstrations. Repeat this again later in lesson for additional clarification. Allow all children to talk together about key concepts and ideas. Bring children together to share and check initial understanding. Allow different foods to be on display on different tables. Come up (as a class) with a list of ways we can group and organise these food types. Write key q’s on board as investigation prompts. Allow different ways that pupils group effectively to be celebrated. Modelling what grouping looks like (with use of feely bag). Giving pupils the chance to question teacher choices and challenge findings. Revise learning with group – recapping previous vocabulary from other lessons. How can this be applied today?Pre-teaching of difference between animals and humans (specific focus of under the sea). Support pupils with new language. Address prior knowledge (what do you already know – farmyard animals?) Check prior knowledge and recap. Make links to provocation. Pre-teach idea of life cycle. Pre-teaching of new language with all pupils. Modelling food chain of a human with the class. How could this be different to an animal? Are all animal food chains the same?Discuss key vocabulary and show PPT giving imagery to back up new language. Model through use of PPT what a shoebox habitat should look like. What should be placed inside and why? (Make deliberate mistakes for pupils to correct).  | With support, using post-it notes to label and identify key attributes. Complete as a group. Pupils to match pictures of body parts to key words. Extend to identifying changes in photos verbally (baby to adult).Working as a group to group items into ‘healthy’ or ‘unhealthy’ columns. Work through with an adult to consolidate and address misconceptions. Supported work initially and then mixed with flourishing pupils so that modelling can impact on learning. Investigation task – allowing pupils to explore key concepts and apply initial ideas. Focus on using key language identified and share ideas with talk partner. Using key statements to investigate in partners. Focus on ‘whistle blowing’ task and being able to verbalise what they learned. Mixed ability groups on tables to promote challenge, dialogic talk and investigation. Complete regular recaps with growing pupils to ensure that they are on-task and retaining key learning. Independent practice to encourage fluency. Teacher to check-in on understanding and challenge via questioning where necessary. Independent practice – focus on fine motor skills when making and constructing. Ensure regular group talks help to discuss choices, vocabulary and how it can be improved. Guided work matching pictures to definitions. Help pupils with the reading of new vocabulary and add to We are Scientists display. Independent practise tasks to match the names of animals to their young based on appearance. Allow pupils to share visual recognition with rest of the class. Pupils to cut out and place pictures in order of the life cycle. Ensure pupils know how to check that they are correct. Children to independently cut out and stick animals into the correct classification boxes. Challenge 🡪 adding own animals. Mixed ability groups to encourage collaboration and challenge. Sorting pictures into relevant categories based on the information given. Supported work to place the animal pictures into the correct habitat – discuss reasons why together. Act on previous learning by creating independent habitat home. Make sure teacher questions for clarification throughout. Use books from the areas to ensure pupils use the correct colours for each creature.  |

**BLOSSOMING**

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| The child is engaged and enjoying the learning and able to apply the necessary skills and knowledge in order to demonstrate their understanding of the learning. They confidently meet the objectives and demonstrate a full ability to use the vocabulary correctly and in context. They are confident when making links and explaining their method to others. They are encouraged to explore and experiment whilst the adult sets challenges, hypothesises and explores misconceptions with them. |
| **Teaching for Learning Objectives** | **Activities to Support Teaching for Learning** |
| **What are the adults doing?** | **What are the children doing?** |
| LO – What is special about me?*Essential Skills: Identifying unique features to them**Essential Knowledge: To understand that everyone is different* LO – How can I identify parts of the human body?*Essential Skills: To label and match parts of the human body**Essential Knowledge: To understand the differences between body parts*LO – What keeps humans healthy?*Essential Skills: To verbalise key that exercise and some foods keep us healthyEssential Knowledge: To understand why it is important to be healthy* LO- To make a fruit salad*Essential Skills: To name, wash and chop identified fruits* *Essential Knowledge: Why certain items have been chosen* LO – Do people with bigger feet need larger gloves?*Essential Skills: To measure by approximation (which is bigger, which is larger?)**Essential Knowledge: To know why/how we test fairly* LO – To understand our senses*Essential Skills: To name the 5 senses and match to skill**Essential Knowledge: To know the difference between each of the senses*LO – How can we sort items using our senses?*Essential Skills: To group* *Essential Knowledge: To understand how/why our senses are different*LO – How can we explore all of our senses?*Essential Skills: To match senses to actions**Essential Knowledge: To know which senses we are using when investigating* LO – To make a sensory board/bottle*Essential Skills: To cut and stick* *Essential Knowledge: To know which resources are most suitable to use for each sense and why* AnimalsLO – Who lives in the sea?*Essential Skills: To identify the difference between underwater animals and plants* *Essential Knowledge: To know different types of animals and plants under the sea*LO – To know names for animals and their young *Essential Skills: To match (older animals and younger animals based on appearance and size)* *Essential Knowledge: To know the names of offspring* LO – How do caterpillars change when they grow up?*Essential Skills: To understand chronology* *Essential Knowledge: To be able to organise life events in order and understand that this works as a cycle*LO – How are animals classified? *Essential Skills: To group* *Essential Knowledge: To know the names of different classification groups and the differences between them* LO – To describe a food chain*Essential Skills: To use appropriate vocabulary* *Essential Knowledge: To understand which animals this applies to and that different animals have different needs*LO – Are all animal habitats the same?*Essential Skills: To recognise similarities and differences* *Essential Knowledge: To know why animals live in different habitats*LO – Can you make a shoebox habitat home?*Essential Skills: To choose appropriate resources**Essential Knowledge: To understand which resources are most appropriate to use and why*  | Model using post-its on one pupil for the rest of the class to see and use as an example.Supporting practical learning – matching pictures to words in a model and checking understanding through learning reviews.Links to real life – what do you do in the playground? How do you get to school? What do you eat at lunch? Do these things keep us healthy?Pre-teaching to ensure pupils understand the safety aspects. Modelling of cutting, washing etc. Go through initial ideas and questions as a class group. Model measuring with language reviews and demonstrations. Opportunity to explore misconceptions through initial discussion session. Set challenges to investigate. Allow different foods to be on display on different tables. Come up (as a class) with a list of ways we can group and organise these food types. Write key q’s on board as investigation prompts. Allow different ways that pupils group effectively to be celebrated and hypothesising to be explored. Write key questions on bubbles for pupils to read through and explore. Allow room for their own questions to be generated and connections to be made from previous lessons. Strengthen connections within learning and explore misconceptions within initial teacher led discussion. Write these down as prompts on the board. Pre-teaching of difference between animals and humans (specific focus of under the sea). Support pupils with new language. Address prior knowledge (what do you already know – farmyard animals, jungle animals, sea creatures?) Check prior knowledge and recap. Make links to provocation. Pre-teach idea of life cycle and how it works. Do you predict that this will be the same for every creature?Pre-teaching of new language with all pupils. Modelling food chain of a human with the class. How could this be different to an animal? Are all animal food chains the same?Discuss key vocabulary and show PPT giving imagery to back up new language. Model through use of PPT what a shoebox habitat should look like. What should be placed inside and why? (Make deliberate mistakes for pupils to correct).  | Pupils to work with a partner to identify what is unique about one another. Pupils to independently write key words next to each picture. Extend to identifying changes in photos verbally and in written form (baby to adult).Working in partners to place items into ‘healthy’ or ‘unhealthy’ columns. Pupils to work with other blossoming pupils to consolidate and share learning outcomes. Emphasis on teamwork and communication skills. Investigation task – allowing pupils to explore key concepts and apply initial ideas. Focus on using key language identified and share ideas with talk partner. Record findings in a table. Using key statements to investigate in partners. Focus on ‘whistle blowing’ task and being able to verbalise what they learned. Make sure reasoning is supported. Mixed ability groups on tables to promote challenge, dialogic talk and investigation. Complete regular recaps with blossoming pupils to ensure that they are being challenged and making links within their learning. Teacher focus group to work on higher order thinking opportunities. Allow pupils to reflect on outcomes and to decide whether their hypothesis was initially correct. Allow pupils to experiment with a partner to create the most effective sensory board/bottle. Independent practice matching pictures to definitions. Help pupils with the reading of new vocabulary and add to We are Scientists display. Independent practise tasks to match the names of animals to their young based on appearance. Allow children to begin to write names of young too. Pupils to cut out and place pictures in order of the life cycle. Ensure pupils know how to check that they are correct and share with other members of the class as ‘strength partners’. Children to independently cut out and stick animals into the correct classification boxes. Challenge 🡪 adding own animals. Mixed ability groups to encourage collaboration and challenge. Sorting pictures into relevant categories based on the information given. Independent practice to place the animal pictures into the correct habitat – discuss reasons why together. Act on previous learning by creating independent habitat home. Make sure teacher questions for clarification throughout. Use books from the areas to ensure pupils use the correct colours for each creature.  |

**FLOURISHING**

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| The child is exhibiting a depth of learning and enthusiasm relating to the objectives. They can select knowledge and understanding for different contexts and justify their choice when using their repertoire of skills. They are able to revise, review and reflect on what they know and create their own solutions to situations, justifying the rationale for what they are demonstrating. They are able to, and indeed want to, ‘show off’ with what they know and what they can do; they want to share that they are flourishing and how they know they are flourishing. Adults are present for affirmation and organisation. |
| **Teaching for Learning Objectives** | **Activities to Support Teaching for Learning** |
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| LO – What is special about me?*Essential Skills: Identifying unique features to them**Essential Knowledge: To understand that everyone is different* LO – How can I identify parts of the human body?*Essential Skills: To label and match parts of the human body**Essential Knowledge: To understand the differences between body parts*LO – What keeps humans healthy?*Essential Skills: To verbalise key that exercise and some foods keep us healthyEssential Knowledge: To understand why it is important to be healthy* LO- To make a fruit salad*Essential Skills: To name, wash and chop identified fruits* *Essential Knowledge: Why certain items have been chosen* LO – Do people with bigger feet need larger gloves?*Essential Skills: To measure by approximation (which is bigger, which is larger?)**Essential Knowledge: To know why/how we test fairly* LO – To understand our senses*Essential Skills: To name the 5 senses and match to skill**Essential Knowledge: To know the difference between each of the senses*LO – How can we sort items using our senses?*Essential Skills: To group* *Essential Knowledge: To understand how/why our senses are different*LO – How can we explore all of our senses?*Essential Skills: To match senses to actions**Essential Knowledge: To know which senses we are using when investigating* LO – To make a sensory board/bottle*Essential Skills: To cut and stick* *Essential Knowledge: To know which resources are most suitable to use for each sense and why* AnimalsLO – Who lives in the sea?*Essential Skills: To identify the difference between underwater animals and plants* *Essential Knowledge: To know different types of animals and plants under the sea*LO – To know names for animals and their young *Essential Skills: To match (older animals and younger animals based on appearance and size)* *Essential Knowledge: To know the names of offspring* LO – How do caterpillars change when they grow up?*Essential Skills: To understand chronology* *Essential Knowledge: To be able to organise life events in order and understand that this works as a cycle*LO – How are animals classified? *Essential Skills: To group* *Essential Knowledge: To know the names of different classification groups and the differences between them* LO – To describe a food chain*Essential Skills: To use appropriate vocabulary* *Essential Knowledge: To understand which animals this applies to and that different animals have different needs*LO – Are all animal habitats the same?*Essential Skills: To recognise similarities and differences* *Essential Knowledge: To know why animals live in different habitats*LO – Can you make a shoebox habitat home?*Essential Skills: To choose appropriate resources**Essential Knowledge: To understand which resources are most appropriate to use and why* | Set challenge straight away and allow pupils to work in collaboration with one another as a group to investigate. Check-in on understanding to further assess. Modelling initial idea – showing vocabulary links and key ideas. Observe pupils on how they work together and address misconceptions. Links to real life – what do you do in the playground? How do you get to school? What do you eat at lunch? Do these things keep us healthy? What could you do to be more healthy?Pre-teaching to ensure pupils understand the safety aspects. Modelling of cutting, washing etc. Go through initial ideas and questions as a class group. Model measuring with language reviews and demonstrations. Ask flourishing children to act as ‘supporters’. Opportunity to explore misconceptions through initial discussion session. Set challenges to investigate. Allow different foods to be on display on different tables. Come up (as a class) with a list of ways we can group and organise these food types. Write key q’s on board as investigation prompts. Allow different ways that pupils group effectively to be celebrated and hypothesising to be explored. Set ‘challenge table’ up to further extend learning. Write key questions on bubbles for pupils to read through and explore. Allow room for their own questions to be generated and connections to be made from previous lessons. Strengthen connections within learning and explore misconceptions within initial teacher led discussion. Write these down as prompts on the board.Pre-teaching of difference between animals and humans (specific focus of under the sea). Support pupils with new language. Address prior knowledge (what do you already know – farmyard animals, jungle animals, sea creatures, desert animals, arctic animals?) Check prior knowledge and recap. Make links to provocation. Pre-teach idea of life cycle and how it works. Do you predict that this will be the same for every creature? Can you give an example where you already know that a life-cycle is different to this one?Pre-teaching of new language with all pupils. Modelling food chain of a human with the class. How could this be different to an animal? Are all animal food chains the same? Do you already know some that are different?Discuss key vocabulary and show PPT giving imagery to back up new language. Affirmation of prior knowledge. Model through use of PPT what a shoebox habitat should look like. What should be placed inside and why? (Make deliberate mistakes for pupils to correct).  | Pupils to work with a partner to identify what is unique about one another. Use conjunctions within explanations. Pupils to label and write sentences about the similarities and differences that can be seen between adults and babies. Promote deeper explanations. Working independently to place items into ‘healthy’ or ‘unhealthy’ columns and to justify their choices. Pupils to work with growing children (mixed ability pairs) to consolidate and share learning outcomes. Emphasis on teamwork and communication skills. Investigation task – allowing pupils to explore key concepts and apply initial ideas. Focus on using key language identified and share ideas with talk partner. Record findings in a table and share findings with the rest of the class. Using key statements to investigate in partners. Focus on ‘whistle blowing’ task and being able to verbalise what they learned. Make sure reasoning is supported. Mixed ability groups on tables to promote challenge, dialogic talk and investigation. Complete regular recaps with flourishing pupils to ensure that they are being challenged and making links within their learning. Teacher focus group to work on higher order thinking opportunities. Allow pupils to reflect on outcomes and to decide whether their hypothesis was initially correct. Allow pupils to experiment with a partner to create the most effective sensory board/bottle. Ensure that reasoning is explored by creating labels to accompany their final product. Independent practice matching pictures to definitions. Help pupils with the reading of new vocabulary and add to We are Scientists display. Independent practise tasks to match the names of animals to their young based on appearance. Allow children to begin to write names of young too and explain how they are different. Pupils to cut out and place pictures in order of the life cycle. Ensure pupils know how to check that they are correct and share with other members of the class as ‘strength partners’. Children to independently cut out and stick animals into the correct classification boxes. Challenge 🡪 adding own animals and explaining how they know. Mixed ability groups to encourage collaboration and challenge. Sorting pictures into relevant categories based on the information given. Independent practice to place the animal pictures into the correct habitat – discuss reasons why together and share. Act on previous learning by creating independent habitat home. Make sure teacher questions for clarification throughout. Use books from the areas to ensure pupils use the correct colours for each creature.  |

** WE ARE SCIENTISTS **

**Class:** Pears (Y1/2) **Teacher**: Miss Ellis **Term and Year:** Year A – Autumn Term

**FINAL FLOURISH**

*Enabling children to reflect on and celebrate their learning, whilst connecting their knowledge over space and time.*

As a Final Flourish, pupils will have the opportunity to visit Flamingo Land Zoo. Here they will observe animals that have originated from different countries, in different habitats, and with different physical adaptations to be able to draw a conclusion from the initial provocation. They will also have a ranger workshop, allowing them to learn from the experts about a range of animals great and small, their life cycles and the food chain. At the end of this workshop, there will be a question and answer slot which will relate to the similarities and differences between animals and humans. Children will have had chance to devise these key questions before the trip.

They will then come back to school and draw on all they have learned about both animals and humans to create a presentation of findings, including labelled drawings, data and research, to identify whether they believe humans are the greatest creatures or not. They will then showcase their argument to Apples Class.