Dereham Church Infant and Nursery School- Science

	Year group: 2, Spring 2	Area/topic: Animals
	(objectives from NC/ELG/Development matters) **Working scientifically:** *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 suggest answers to questions. *Gathering and recording data to help in answering questions. **Animals, including humans:** *Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals (C1) *Identify and name a variety of common animals that are carnivores, herbivores and omnivores (C2) *Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) (C3) *Notice that animals, including humans, have offspring which grow into adults (C5) *Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)(C6)	

Prior learning	Future learning
Animals, including humans: *Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals (Year 1, C1) *Identify and name a variety of common animals that are carnivores, herbivores and omnivores (Year 1, C2) *Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) (Year 1, C3)	**Animals, including humans:** *Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. (Y3 - Animals, including humans) *Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. (Y5 - Living things and their habitats) *Describe the life process of reproduction in some plants and animals. (Y5 - Living things and their habitats)

	*Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. (Y6 – Animals, including humans)

Working scientifically & encouraging scientific enquiry

Observations

*Children will be given the opportunity for hands-on experiences of animals and will make recordings of their observations through drawing or photographs.
*Children to observe animal teeth to support identifying the differences between predators and prey.

Observing over time

*Children to observe the life cycle of an animal over the half term.

Identifying and classifying

*Identify, name and sort animals into their classifications of mammals, birds, fish, reptiles, amphibians whilst making comparisons between groups.
*Children will group animals based on if they are warm or cold-blooded.

Research using secondary resources

*Children to use books and online resources to learn about different animal groups and their features.
*Children to see photos of animals that they otherwise might not experience in real life.
*Children will use books and online resources to learn about animal life-cycles and to view images of how different animal groups begin life.
*Children to use photos to compare animal teeth.

What pupils need to know or do to be secure

Key knowledge and skills	Possible evidence
*I understand what an animal needs to survive including food, water and air. (C6) *I can name the body parts of an animal and explain how these body parts help the animal to survive including the use of their senses. (C3 & C6) *I can identify and understand the features of animals and how these features are used for survival as well as what the animals need to survive. (C3 & C6) *I can explain how the adaptations of an animal helps it to survive. (C3 & C6) *I understand the term 'nocturnal' *I can use the correct vocabulary to sort and group animals (mammals, amphibians, reptiles, fish and birds) whilst explaining more than one observable feature of that animal group as well as explaining if they are warm or cold blooded. (C3) *I understand the meaning of warm blooded and cold blooded; I can explain how an animal's	**There will be evidence of children meeting the 'I can' statements through:** *Quotes taken from discussions. *Children can correctly use the key vocabulary during lessons. *Children recording through drawing. *Photographs of children's learning. *Written explanations of understanding or adult scribing a child's understanding depending on individual needs.

body temperature alters. (C3)
*I can compare what a cold-blooded animal needs to survive with what a warm-blooded animal needs. (C1 & C6)
*I can explain what happens to the body temperature of an animal group when in different climates depending on if they are warm or cold-blooded. (C3)
*I can provide examples of animals that are mammals, reptiles, amphibians, birds and fish whilst describing the type of skin the animal has, if they have lungs to breathe or gills, the type of offspring belonging to the group, their usual habitat and if they are warm or cold-blooded. (C1 & C3)
*I can explain which animal groups have similarities as well as identifying their differences. (C3)
*I can begin to understand the difference between vertebrate and invertebrate. (C3)

*I can explain and compare how each animal group begins life and compare this to a human whilst recognising which animal group a human belongs to. E.g. birds lay eggs but mammals give birth to live young. (C3 & C5)
*I can present the life cycle of an animal and explain the main stages in the life cycle. I can discuss how the way the animal looks changes through the life cycle. (C5)
*I can use appropriate scientific vocabulary to name the stages of an animal's life cycle. (C5)
*I understand that an animal begins the life cycle again once it is an adult. (C5)

*I can explain if an animal is a carnivore, omnivore or herbivore using their teeth to help my explanation of how I know. I can use this to recognise which animals would eat other animals and ***begin*** to use the terms 'predator' and 'prey'. (C2 & F4)

*Children answering and asking questions.

Key vocabulary

Survive, survival, offspring, names of animals and their offspring (e.g. frog and tadpole), amphibian, reptile, bird, fish, mammal, warm blooded, cold blooded, endangered, extinct, nocturnal, life cycle, life span, predator, prey, carnivore, herbivore, omnivore, vertebrate, invertebrate, producer, consumer, adaptations vertebrate, invertebrate.

Common misconceptions	Books linking to this area
*All sea animals are fish.	*Tadpole's promise by Jeanne Willis
*All mammals are big animals.	*The rainbow bear by Michael Morpurgo
*Humans are not an animal.	*The big book of beasts by Yuval Zommer

*Children may not recognise that insects are animals. *Children may think that all bugs are part of the insect group such as spiders. *Children may confuse reptiles and amphibians and think these animals are the same. *Warm/cold-blooded means the blood is physically warm or cold. *All creatures have the same life span. *If an animal is prey, they are only prey. Children may not recognise an animal can be both prey and a predator. *Adaptations are immediate changes e.g. a brown bear could turn white to camouflage in the snow.	*Tad by Benji Davies *The big book of bugs by Yuval Zommer *Do you love bugs? By Matt Robertson
Memorable first hand experiences	**Opportunities for communication**
*Animals visiting the school. *Witnessing the start of a life cycle in school through chicks hatching or class caterpillars. *Visit to a local farm to meet baby animals.	*Children to be given opportunities for communication with partners, groups and whole class to discuss as completing practical activities and also to share findings. *Children to share their thoughts and ideas during first-hand experiences. *Children to create their own creature with perfect adaptations and verbally share their ideas with others. *Through the use of Explorify.

Communication and Interaction	Cognition and Learning
*Visual aids, pictures of equipment with words labelled, word mats with pictures for key words in that lesson. *Freedom to explore scientific equipment and investigate in own way. *Hands on experiences to encourage communication and interaction with others. *Pre teaching any new vocabulary.	*Opportunity for lots of hands on exploration and verbally sharing thoughts and ideas. *Freedom to explore scientific equipment and processes. *Pre teaching new vocabulary or concepts. *Activities adapted if needed for safety and ease. *Visual aids, pictures of equipment, mats with key words and pictures *Learning recorded through photos and adult quotes, children not expected to write for recording their understanding. *Using working walls to aid learning and remind of previous learning.
Social, Emotional and Mental health	**Sensory and Physical**
*Awareness of individual needs, any potential triggers within the curriculum and the child's background. *Pre prepare children for any activity they could find triggering or difficult in some way. *Practical activities or experiments to be completed within a smaller group or 1:1 if needed. *If the class are sharing their learning within a large group, take the child in a smaller focus group if they struggle with social situations. *Adjustments made where needed to suit individual.	*Adult support with any practical activities. *Awareness of the individual's likes or dislikes and their own reactions to sensory activities. *If a child enjoys sensory activities, then plan for this wherever possible within the lesson.