National Curriculum learning objective (Biology)	- identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals - identify and name a variety of common animals that are carnivores, herbivores and omnivores - describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)	
Vocabulary:	fish, amphibian, reptile, bird, mammal, goldfish, tropical fish, budgerigar, parrot, rabbit, gerbil, hamster, mouse, chinchilla, lizard, snake, dog, cat, tail, paws, legs, feet, nose, ears, eyes, feather, fur, scales, fins, fish, tail, gills, scales, eyes, mouth, bill, beak, head, eye, legs, claws, wings, feather, down quill, webbed feet, legs, smooth skin, big eyes and mouth, nose, scaly skin, claws on feet, long tongue, big teeth, mackerel, trout, hake, sea bass, whitebait, flat fish, plaice, robin, blackbird, blue tit, hawk, peacock, seagull, magpie, eagle, jump, hop, leap, climb, clamber, swing, pad, pace, prowl, pounce, spring, fl ap, fl y, flutter, fl op, splash, splosh, dive, swim, slither, slide, hedgehog, fox, bat, badger, night, nocturnal, senses, sight, smell, sonar, food, feeding, roost, sett, burrow, tunnel, nest, hospital, surgery, nurse, vet, patient, care, look after, treat, accident, injury, injured, illness, sick, medicine, bandage, stethoscope, gloves, face mask, overalls, cow, sheep, pig, horse, pony, goat, duck, chicken, cockerel, goose, harvest mouse, barn owl, rabbit, cat, dog, moo, baa, oink, neigh, bleat, quack, cluck, cock-a-doodle-do, honk, squeak, purr, miaow, woof, eat, healthy, meat, insects, fish, vegetables, plants, trees, grass, seeds, nuts, carnivore, herbivore, omnivore, goat, beard, hoof, hooves, horns, troll, ugly, big eyes, big pointed ears, big nose, big mouth with sharp teeth, small, medium, big, smallest, biggest, dinner, meal, meat, lamb, beef, ham, chicken, vegetables, plants, trees, bushes, grass, menu, hamper, appetite	
Essential prior knowledge / vocabulary to check:	For Year 2: check prior learning from Year 1 Cycle B 20-21 For Year 1: check prior learning from Reception Cycle B 20-21	
National Curriculum learning objective (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	**Suggested enquiries:** **Asking Questions** **Identify, classify and group:** Group and classify animals by what they eat or their type of animal. Describe and compare different types of fish. **Research using Secondary Sources -** name and identify body parts of different animals. Name nocturnal animals.
Vocabulary:	what, how, why, when, question, observe, pattern, test, measure, compare	

	look, notice, observe, compare, describe, similar, different, features, sort, group, notice, biggest/smallest, best/worst, Venn diagram find out, look up, investigate, research, photo, website, leaflet, information obook
Essential prior knowledge/skills to check:	For Year 2: check prior learning from Year 1 Cycle B 20-21 For Year 1: check prior learning from Reception Cycle B 20-21
Suggested sequence of learning	Suggest following Snap Science lessons 1. Prior learning check, mind map 2. Name, describe, classify, group animals (several lessons by animal type) 3. Describe and compare the structure of animals (fish and birds) 4. Identify and name animals that are carnivores, herbivores and omnivores
Useful facts to support teaching this unit	Most amphibians and reptiles have a similar basic structure – four legs (apart from snakes), large bulbous eyes and gaping mouths. However amphibians are able to breathe in water and on land. Not all amphibians and reptiles have tails, and the skin of the two types of animals is quite different. Amphibians, such as frogs, toads and newts, have a delicate soft skin, while reptiles, such as iguanas, crocodiles and alligators, have scaly skin that gives their bodies a protective external 'armour plating'. Most reptiles live on land. Most fish are 'torpedo' shaped with eyes at either side of their heads. They feed while swimming through the water, for example, trout, mackerel, clown fish and angler fish. Some fish have a flat body and swim on their sides, for example, plaice, skate, sole and halibut. They have eyes on the upper side of their body, as they are bottom feeders. This enables them to see approaching predators. Birds are unique in the animal kingdom in having feathers that not only cover the bird's body to provide warmth, but also are light and create the appropriate wing shape that enables the birds to fly. Nocturnal animals are those that sleep or hide away during daylight hours and emerge to look for food as night falls. After dark, they spend their time hunting for food (and avoiding being caught by other animals). They may have large ears and good hearing to help to detect their prey moving in the dark, and/or big eyes so that they can see despite the darkness, and/or a very good sense of smell to help them to find food in the dark. Animals that eat only plants are called herbivores. Most herbivores, including cows, squirrels, and elephants, eat a wide variety of plants and plant parts, fruits, nuts and seeds. Some herbivores, however, are very particular about the type of plant that they eat. Wild pandas have evolved to eat nothing but bamboo plants – a food that is plentiful where they live but not particularly nutritious. Because of this pandas need to eat a lot. Adult pandas spend 10–12 hours each day eating and they consume an enormous amount of bamboo during that time. Animals that eat only other animals are called carnivores. Lions, dogs, owls and dragonflies are all carnivores. Like herbivores, some carnivores eat a wide variety of animals, while a few eat only one type of animal. For example, anteaters eat little else besides ants and termites. They have a sticky tongue and powerful front legs (for tearing into insect mounds) to help them to do that. Omnivores eat both plants and animals, and often eat a wide variety of each. Humans, badgers, chickens and frogs are all omnivores. A typical grizzly bear, another example of an omnivore, catches and kills its own food, including deer, but also scavenges the carcasses of dead animals. They also eat fish, amphibians, small mammals, insects, berries, tree buds and grass.

Common misconceptions			
Threshold Concept	**Learning**	**Scientific enquiry skills to teach, use, apply and deepen**	**Milestone expectations**
Biology - To understand animals Throughout this unit children should be using the skills of **asking questions**: *While exploring the world, the children develop their ability to ask questions (such as what something is, how things are similar and different, the ways things work, which alternative is better, how things change and how they happen). Where appropriate, they answer these questions.* *The children answer questions developed with the teacher often through a scenario.* *The children are involved in planning how to use resources provided to answer the questions using different types of enquiry, helping them to recognise that there are different ways in which questions can be answered, including -*	**Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates.** To explore the variety of animals living on the Earth. By the end of the lesson they can identify and name animals by their distinguishing features, and start to recognize that animals can be grouped according to common characteristics.	**Identify, classify and group:** Group and classify animals by what they eat or their type of animal *Observe and identify, compare and describe, sort and classify.* *Children use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.* *The children recognise 'biggest and smallest', 'best and worst' etc. from their data.* *Children classify using simple prepared tables and sorting rings*	**1) Identify and name a variety of common animals that are birds, fish, amphibians, mammals and invertebrates.** *B: Name some common animals. Match the animals to the labels birds, fish, amphibian, reptile, mammal and invertebrate.* *A: Point out and explain the main differences between birds, fish, amphibians, reptiles, mammals and invertebrates* *D: Create a guide to recognising different types of animals.*
	Describe and compare the structure of a variety of common animals. (amphibians, reptiles) To examine the structures of animals' bodies, particularly reptiles and amphibians, use secondary sources to identify and name important body parts of their chosen animal, and create a model of it. By the end of this lesson children are familiar with the body structure of this animal and have compared it with models of other animals. The lesson might need to be extended or revisited to complete the models.	**Research using Secondary Sources -** name and identify body parts of different animals *Use simple secondary sources to find answers.* *Can find information to help from books and computers with help*	**2) identify and name a variety of common animals that are carnivores, herbivores and omnivores.** *B: Name some common animals. Label animals as carnivores, herbivores or omnivores.* *A: Show how carnivores, herbivores and omnivores are similar and different* *D: True or false? (prove) Carnivores are not hunted by other carnivores* **3) Describe and compare the structure of a variety of common animals. (birds, fish, amphibians, reptiles, mammals and invertebrates, including pets)** *B: Name and label the structures of common animals. Complete tables that compare the structures of common animals.* *A: Compare and contrast mammals with amphibians.* *D: What evidence would you show to prove that a reptile could not be confused with a mammal?*
	Describe and compare the structure of a variety of common animals. (fish) To observe and compare fish, looking at real examples. By the end of this lesson children are able to name parts of a fish and describe similarities and differences between fish.	**Identify, classify and group:** Describe and compare different types of fish. *Observe and identify, compare and describe, sort and classify.* *Children use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.*	

observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative tests, finding things out from secondary sources).		*The children recognise 'biggest and smallest', 'best and worst' etc. from their data.* *Children classify using simple prepared tables and sorting rings*
	Describe and compare the structure of a variety of common animals. (birds) To discover what makes birds a distinct group of animals. They observe and compare different birds and in particular examine feathers. By the end of this lesson children are able to name parts of a bird, describe their features and recognise the uniqueness of having feathers.	**Identify, classify and group:** Describe and compare different types of bird *Observe and identify, compare and describe, sort and classify.* *Children use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.* *The children recognise 'biggest and smallest', 'best and worst' etc. from their data.* *Children classify using simple prepared tables and sorting rings*
	Describe and compare the structure of a variety of common animals. (birds, fish, amphibians, reptiles, mammals and invertebrates, including pets) Children use their bodies to help them to explore and communicate how different types of familiar animals move. By the end of this lesson they are able to use appropriate simple vocabulary to describe different movements and match particular movements to types of animals.	**Identify, classify and group** *Observe and identify, compare and describe, sort and classify.* *Children use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.* *The children recognise 'biggest and smallest', 'best and worst' etc. from their data.* *Children classify using simple prepared tables and sorting rings*
	Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Children explore animals' diets. By the end of this lesson children are able to group animals: carnivore, herbivore or omnivore.	**Identify, classify and group:** Group and classify animals by what they eat *Observe and identify, compare and describe, sort and classify.* *Children use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.* *The children recognise 'biggest and smallest', 'best and worst' etc. from their data.*

		Children classify using simple prepared tables and sorting rings	
	Describe and compare the structure of a variety of common animals. (birds, fish, amphibians, reptiles, mammals and invertebrates, including pets) Children learn about some familiar nocturnal animals that might be found in and around the local environment at night time. By the end of this lesson they are able to name several nocturnal animals and describe how the lives of those animals differ from familiar animals that children might see in the daytime.	**Research using Secondary Sources -** name nocturnal animals *Use simple secondary sources to find answers.* *Can find information to help from books and computers with help*	
Assessment of learning task and/or title of double page spread outcome Assessment of the National Curriculum Objective by applying understanding of Threshold Concepts and demonstrating Milestones/Skills.	Teachers should assess children's learning of knowledge and vocabulary frequently throughout the unit. Use recap, refresh and revision to start the unit and each lesson. Use the BAD outcomes to assess depth of learning each lesson against the 4 expected outcomes for this unit. Teachers should refer to the milestone expected outcomes for scientific enquiry when assessing these skills (see St J's Science Progression Document)		