



Science Progression of Knowledge at Speen School

| | Working Scientifically | Plants | Animals Including Humans | Living Things and Their Habitats | Everyday Materials | Seasonal Changes |
|----------------------|---|--|---|--|---|--|
| Little Apples | <ul style="list-style-type: none"> Asking questions and observing helps make sense of the world around them. Information gathered through observation can be displayed in different ways including pictures and words (written, verbal and signed). Objects and living things can be looked at and compared. Know and follow safety rules related to Forest | <ul style="list-style-type: none"> Plants need water to survive. Plants need to be cared for to ensure they survive. | <ul style="list-style-type: none"> To keep healthy, humans should eat a range of healthy food stuffs such as fruit, vegetables and not too many sugary foods. Animals and people have eyes, ears, nose, head, legs. Plants have petals, a stem and roots. Animals and humans are living things. Live young have different names Live young examples to be covered: Humans - babies, Whale - calf, Pig - piglet, Horse – foal , Elephant - calf, Common pet | <ul style="list-style-type: none"> Animals can live in homes as pets and also in the wild. Minibeasts need lots of different environments. Bug hotels give minibeasts the shelter they need. | <ul style="list-style-type: none"> Materials have different textures. Some are soft and smooth. Others are hard and bumpy. Things can grow and change over time. Models can be created using lots of different materials and tools. Some of these materials have had different uses. These materials are recycled. | <ul style="list-style-type: none"> In autumn leaves fall from the trees, In winter it's colder, In summer it's warmer and flowers may grow in spring. Types of weather include sun, rain, wind and snow. |

| | | | | | | |
|--|-------------------------|--|--|--|--|--|
| | Schools investigations. | | <p>examples (dog - puppies, cat – kittens, rabbit – kit, guinea pig – pup)</p> <ul style="list-style-type: none">• There are many different types of insects in the school grounds.• Humans and plants need water to survive. Plants and humans need to be cared for to ensure they survive.• To know that exercise, eating, sleeping and good hygiene (such as washing hands) keeps us healthy.• It is important to stay safe. Some ways to stay safe include staying safe in the Sun (sun cream, sun hat and sunglasses), crossing roads (stop, look and listen), in the kitchen (not touching hot or sharp objects). | | | |
|--|-------------------------|--|--|--|--|--|

| | | | | | | |
|-------------------------|--|---|---|---|---|---|
| <p>Reception</p> | <ul style="list-style-type: none"> • Asking relevant questions and observing helps make sense of the world around them. • Information gathered through observation can be displayed in different ways including pictures and words (written, verbal and signed). • Question words include what, why, how, when, who and which. • Objects, materials and living things can be looked at and compared. • Know and follow safety rules related to Forest Schools investigations. | <ul style="list-style-type: none"> • Plants are living things that change as they grow and mature. • Plants need water to survive. • Some plants can be eaten and some are dangerous for us. | <ul style="list-style-type: none"> • The basic body parts are the head, arms, legs, nose, eyes, ears, mouth, hands and feet. Ears are used for hearing, eyes are used to see, the nose is used to smell, the tongue is used to taste and skin gives the sense of touch. • Humans can eat plants and meat. • It is important to stay safe. Some ways to stay safe include staying safe in the Sun (sun cream, sun hat and sunglasses), crossing roads (stop, look and listen), in the kitchen (not touching hot or sharp objects) and with household reagents (not touching, drinking or eating). • The importance of eating a balanced diet and how much exercise a person needs. | <ul style="list-style-type: none"> • Animals can live in homes as pets, be livestock in farms and also in the wild. • Animals homes have different names. Pigs live in a sty, horses in a stable, rabbits in a burrow, foxes in a den. • The wild animals around Speen school have many different homes. • Leaf litter should not be cleared as it is shelter for creatures like hedgehogs and butterflies. | <ul style="list-style-type: none"> • Materials change when cooking, heating and cooling. • Things can grow, decay and change over time. • Some materials float or sink. • Choose the resources they need for their chosen activities. | <ul style="list-style-type: none"> • At night it is dark, in the day it is light. In winter it is colder, in summer it is warmer. • Each season has typical weather patterns. Types of weather include sun, rain, wind, snow, fog, hail and sleet. • There are four different forms of light pollution that vary over the seasons. |
|-------------------------|--|---|---|---|---|---|

| | | | | | | |
|--|--|--|--|--|--|--|
| | | | <ul style="list-style-type: none"> • Animals need to eat different types of food to survive. • Some animals are awake at night and sleep during the day. These are nocturnal animals. • Human beings have a responsibility to care for the animals on the planet. • Light pollution effects nocturnal animals and birds when they migrate. | | | |
|--|--|--|--|--|--|--|

Key Stage 1

| | | | | | | |
|----------------|--|--|--|--|---|--|
| Cycle A | <p>Cycle A and B</p> <ul style="list-style-type: none"> • The results are information that has been found out from an investigation. • Data can be recorded and displayed in different ways, including tables, pictograms and drawings. | <ul style="list-style-type: none"> • Plants grow from seeds and bulbs. • Seeds and bulbs need nutrients from soil, water and warmth to start growing (germinate). • As the plant grows bigger, it develops leaves and flowers. • Many predators eat plants. Pesticides are | <ul style="list-style-type: none"> • Animals are living things. Animals can be sorted and grouped into six main groups: fish, amphibians, reptiles, birds, mammals and invertebrates. • Carnivores eat other animals (meat), herbivores eat plants and omnivores eat other animals and plants. | <ul style="list-style-type: none"> • Living things need to be cared for in order for them to survive. They need water, food, warmth and shelter. • When animals hibernate, they need shelter and to be safe. • Living things depend upon each other to survive. • There are many different animals | <ul style="list-style-type: none"> • Materials can be grouped according to their properties. • A material is what an object is made from. Everyday materials include wood, plastic, glass, metal, water, rock, brick, paper and fabric. • Materials have different properties, such as hard or soft; stretchy or stiff; rough or smooth; opaque or | |
|----------------|--|--|--|--|---|--|

| | | | | | | |
|----------------|--|--|--|---|---|---|
| | <ul style="list-style-type: none"> • Question words include what, why, how, when, who and which. • Simple tests can be carried out by following a set of instructions. • Objects, materials and living things can be looked at, compared and grouped according to their features. | <p>used to deter them. Some pesticides are harmful to the environment.</p> | <ul style="list-style-type: none"> • Different animal groups have some common body parts, such as eyes and a mouth, and some different body parts, such as fins or wings. • Living things need to be cared for in order for them to survive. They need water, food, warmth and shelter. | <p>and plants in our local habitat.</p> <ul style="list-style-type: none"> • Animals obtain food from plants and other animals. | <p>transparent; bendy or rigid; waterproof or not waterproof; magnetic or non-magnetic.</p> <ul style="list-style-type: none"> • Some materials are natural and some are manmade. | |
| Cycle B | <ul style="list-style-type: none"> • Know and follow safety rules related to Forest Schools investigations. | <ul style="list-style-type: none"> • Know the parts of a plant and name them: petals, stem, leaves and root of a plant. • Know the parts of a tree and name them: the roots, trunk, branches and leaves of a tree. • Some plants can be eaten and some are dangerous for us. We know where the plants are and what their names are. | <ul style="list-style-type: none"> • Living things are those that are alive. Dead things are those that were once living but are no longer. Some things have never been alive. • Animals need water, food, air and shelter to survive. Their habitat must provide all these things. • Humans have offspring that grow into adults (baby, toddler, child, teenager, adult) • A healthy lifestyle includes exercise, | <ul style="list-style-type: none"> • The local environment is a habitat for living things and can change during the seasons. • Local habitats include parks, woodland and gardens. Habitats beyond the locality include beaches, rainforests, deserts, oceans and mountains. All living things live in a habitat to which they are suited and it must provide | <ul style="list-style-type: none"> • A material's physical properties make it suitable for particular purposes, such as glass for windows and brick for building walls. Many materials are used for more than one purpose, such as metal for cutlery and cars. • Some objects float and others sink. Objects that float are typically light or hollow. • Some materials can be recycled so they are used for different purposes. | <ul style="list-style-type: none"> • Different types of weather include sun, rain, hail, wind, snow, fog, lightning, storm and cloud. The weather can change daily and some weather types are more common in certain seasons, such as snow in winter. • Simple equipment can be used for measuring weather, such as measuring temperature with a thermometer; |

| | | | | | | |
|--|--|--|--|--|--|--|
| | | <ul style="list-style-type: none"> • Know and name a variety of common wild and garden plants. • Some plants like bluebells cannot be picked as it is against the law. | <p>good hygiene and a balanced diet.</p> <ul style="list-style-type: none"> • Humans have 5 senses which send messages to our brain so we know about the world around us. • Humans need water, food, air and shelter to survive. | <p>everything they need to survive.</p> <ul style="list-style-type: none"> • A habitat is a place where a living thing lives. A microhabitat is a very small habitat. • Habitats can be destroyed and the plants and animals that live there may lose their sources of food, water and shelter. • Many animals are endangered because of destruction of habitats. • Animals need water, food, air and shelter to survive. Their habitat must provide all these things. | | <p>identifying wind direction and force with a wind sock or measuring rainfall with a gauge.</p> <ul style="list-style-type: none"> • Observe and describe how day length changes across the year. • Day length (the number of daylight hours) is longer in the summer months and shorter in the winter months |
|--|--|--|--|--|--|--|