

Knowledge and Understanding

To become an **Exceptional Explorer** who can show curiosity about the world around them, understand how to read and draw a simple map, understand some differences between times and places.

Living things and their habitats:

- I can describe what I can see, hear & feel whilst outside exploring and investigating the play garden.
- I can make observational drawings of the natural world.
- I know why living things have different habitats e.g. polar bears prefer to live in colder climates.
- I understand that plants and animals react to seasons in the way they grow and their natural life cycles.
- I know that animals change as they grow and have life cycles.
- I can talk about how animals adapt to their environment e.g. camouflage.
- I understand that the natural environment and world around me supports me to live and grow.
- I know how to care for the natural environment.
- I know how to care for living things.
- I care for my immediate environment and the wider world and am developing an eco-conscious approach.
- I can use the correct terms and vocabulary e.g. chrysalis, pupa when observing the life cycle of butterflies & ladybirds.
- I express opinions on natural & built environments & have opportunities to hear different points of view on the quality of the environment. Use words such as busy, quiet, pollution.
- I can observe changes across the 4 seasons.
- I can describe weather associated with the seasons and how day length varies.
- I know there are 4 seasons across the year.
- I know the seasons affect the temperature.
- I am aware that the length of the day and night changes depending on the season.
- I can use the vocabulary of the four seasons.

Plants:

- I know that all plants need water, light and warmth as well as nutrients in the soil to grow and survive.
- I can recall a seed produces roots to allow water to get into the plant and shoots to produce leaves to collect the sunlight.
- I can describe what I see, hear & feel whilst exploring and investigating outside in the play garden.
- I can name & describe some plants.
- I can draw pictures of plants.
- I can identify and describe the basic structure of a bean flower and order the life cycle.

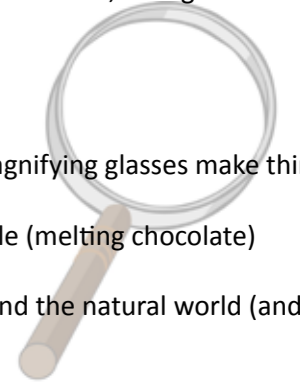
Animals including Humans:

- I understand good practices with regard to exercise, eating, drinking water, sleeping & hygiene can contribute to good health.
- I understand that science has helped us to live healthier lives for example understanding our bodies (linked to oral hygiene).
- I can name different parts of my body including- skeleton, skull, heart, lungs, brain, muscles etc.
- I know the effects exercise has on my body.
- I have an understanding of growth and change.
- I can talk about and make drawings of animals and body parts.
- I can identify, name, draw and label the basic parts of the human body.
- I can say which part of the body is associated with each sense.



Materials:

- I observe & interact with natural processes, such as ice melting, a sound causing a vibration, light travelling through transparent material, an object casting a shadow, a magnet attracting an object & a boat floating on water.
- I can sort materials by a criteria.
- I can talk about forces such as water, friction and wind.
- I notice & discuss patterns around them.
- I can explore how things work and talk about it for example magnifying glasses make things bigger to be seen in more detail.
- I know that temperature can change materials in both reversible (melting chocolate) and irreversible ways (baking).
- I know that some specialist equipment can help us to understand the natural world (and enhance our experience) for example a microscope.



Links from Development Matters (September 2021)

Captain Creative

- Sort objects and materials.
- Solve real problems.
- Make links between their ideas.

Professor Play

- Make choices, exploring different materials and resources.
- Plan and think ahead.
- Respond to new experiences.

Agent Active

- Use a range of strategies to reach a goal.
- Enjoy meeting challenges for their own sake.
- Keep on trying and bouncing back after difficulties.

Physical:

- Know and talk about the different factors that support their overall health and wellbeing: - regular physical activity, healthy eating, tooth brushing, sensible amounts of 'screen time', having a good sleep routine, being a safe pedestrian.

C&L:

- Learn new vocabulary.
- Ask questions to find out more and to check what has been said to them.
- Articulate their ideas and thoughts in well-formed sentences.
- Describe events in some detail.
- Use talk to work out problems and organise thinking and activities.
- Explain how things work and why they might happen.
- Use new vocabulary in different contexts.

UW:

- Explore the natural world around them.
- Describe what they see, hear and feel while they are outside.
- Recognise some environments that are different to the one in which they live.
- Understand the effect of changing seasons on the natural world around them.

Biology, Chemistry and Physics ELG:

- Explore the natural world around them, making observations and drawing pictures of animals and plants.
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.
- Understand some important processes and changes in the natural world around them, including the seasons.

Basic and Appropriate Vocabulary

Know a range of scientific words such as: Months: September, October, November, oak, horse chestnut, sycamore, sweet chestnuts, husk, shell, nuts, hibernate, hedgehog, badger, rabbit, squirrel, mole, sett, den, burrow, baby, toddler, teenager, adult, face, eyes, ears, nose, mouth, chin, cheeks, forehead, hair, nostrils, lips, skin, eyebrows, eyelashes skin, head, arms, legs, feet, toes, hands, fingers, thumbs, knees, shoulders, elbows, hips, stomach, neck, back, bottom, chest, lungs, heart, brain, bones, blood, muscles, skin, skeleton, skull, pelvis, spine, fingers, toes, wings, beak, fin, gills, lungs, heart, blood, brain, stomach, deciduous, evergreen, blossom, fruit, bulb, nutrients, carbon dioxide, buds, bean, shoot, seedling, seed, roots, stem, lifecycle, soil, season, spring, summer, autumn, winter, month, year, day, night, sun, moon, shadow, reflection, torch, fire, electricity, Space, planets, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, dwarf planet, Pluto, meteorite, comet, constellation, satellite, temperature, weather, materials, wood, plastic, metal, wood, rock, chalk, glass, rigid, floppy, bendy, stiff, shiny, dull, stretchy, transparent, opaque, absorbent, spiky, heavy, light, sparkly, shimmery, glittery, glossy, bumpy, slippery, melting, freezing, evaporating, food, bio degradable, magnetic, rigid, magnetic repulsion, energy, gravity, motion, friction, waterproof

Vocabulary to name specific features of the natural world, both natural & man-made:

cold, hot, freezing, boiling, Arctic, Antarctic, South Pole, North Pole, ice, igloo, iceberg, glacier, snowflake, polar bear, emperor penguin, seal, walrus, arctic fox, cubs, chick, egg, waddle, rookery, huddle, colony, slide, swim, dive, crill, squid, blubber, wings, feathers, flippers, fur, waxy, translucent, camouflage, equator, desert, Wild animals, safari animals, jungle animals, zoo animals (a wide variety of animals will be covered during this topic following the interests of the children), Mini-beasts, caterpillar, butterfly, chrysalis, egg, emerge, spin, life cycle, ladybird, beetle, woodlouse, bee, wasp, spider, centipede, millipede, worm, aphid, fly, blue bottle, ant, habitat, damp, dark, dry, web, nest, hive, compost, wings, legs, antenna, sea creatures, fish, jellyfish, crabs, octopus, squid, sea snake, sea horse, puffer fish, sting ray, shark, sea star, sea turtles, whale, gills, tentacles, scales, dorsal fin, pectoral fin, sea birds, Overfishing, pollution, litter, waste, oil spillage, sewerage.

Know a range of words that relate to scientific enquiry such as observe, explore, results, investigate, explain, predict, describe, test, measurements, record, sort, group, pictogram, tally chart

Be able to talk about the work/activity experience they are having, organise their thinking, explaining how things work and how they might happen

Be able to name a range of equipment that they use such as a pooter (bug collector), magnifying glass, incubator

More specialised vocabulary will be introduced as the theme/investigation develops. Some words will be new to the children and just introduced while others will be more familiar and repeated and consolidated.

