Yearly Skills & Knowledge Progression

Subject: Science

Year group: 1

	Half Term 1	Half Term 2
Autumn	**Animals including humans (knowledge)** **Types of animals** • Identify a variety of common animals • Describe and compare the structure of a variety of different animals (mammals, fish, birds, reptiles, amphibians, vertebrates and invertebrates) **Working Scientifically skills:** • **Identify and classify** • **Use his / her observations and ideas to suggest answers to questions** Investigation • Use observations in the local environment to compare animals or through videos and photographs • Describe how to identify and group animals	**Animals including humans (knowledge)** **What do animals eat?** • Group animals according to what they eat (carnivore, omnivore, herbivore) • Identify name and label the different parts of the human body and say which part is associated with each sense. **Working Scientifically skills:** • **Ask simple questions and recognise that they can be answered in different ways** Investigation • Group animals according to what they eat • Research how to take care of animals taken from the local **environment** and how to return them safely Seasonal Changes Autumn (Knowledge) • As the season changed has the environment around us changed? • What different weathers have come with this season? • There are many different weathers that come with each season. • Are the days longer or shorter? How has the sunlight changed
	What can make this personal to Dovers Green? • Forest school sessions • Senses investigation—using forest school, mindfulness games, local visits to busier (urban) and quiet (rural) places.	What can make this personal to Dovers Green? • Forest school sessions • Junk modelling • Outdoor investigations (different seasons) - seasonal walks in local area / school

Spring	**Plants (knowledge)** • To know the differences between deciduous and evergreen plants • What are the parts of common trees and plants? **Working Scientifically skills:** • **Identify and classify** • **Use his / her observations and ideas to suggest answers to questions** • **Gather and record data to help answer questions** Investigation • Go on a **tree** hunt around the local area - what types of **trees** can you see? Collect fallen **leaves** and identify which **tree** they came from using pictures to help you. Sort the **leaves** between **deciduous** and **evergreen trees**. • Label the parts of a plant showing where the **leaves**, **flowers** (blossom), **petals**, **fruit**, **roots**, **bulb**, **seed**, **trunk**, **branches**, and **stems** are. Seasonal Changes Winter (Knowledge) • As the season changed has the environment around us changed? • What different weathers have come with this season? • There are many different weathers that come with each season. • Are the days longer or shorter? How has the sunlight changed?	**Everyday Materials (knowledge)** • Which materials are some objects made from? • Identify and name a variety of common materials • What words can I use to describe the physical properties of materials including natural and man-made. • Group materials together on the basis of simple properties. **Working Scientifically skills:** • **Ask simple questions and recognise that they can be answered in different ways** • **Use simple equipment** • **Perform simple tests** Investigation • How are objects similar / different based on the materials they are made from? • Can you sort **natural** materials from **man-made** materials?
	What can make this personal to Dovers Green? • Lifecycle of a frog – **pond dipping,** looking after frogspawn, monitoring growth cycle • Local trip to fields/ forest school • Visit to or from an animal sanctuary? • Mini-beast hunts • Building bug hotels	What can make this personal to Dovers Green? • Forest School to observe food chains • Retrieval of dinosaurs topic from EYFS • STEM week • Science Fair

Summer	**Plants (knowledge)** • To be able to name some common garden plants • To be able to name some common wild plants **Working Scientifically skills:** • **Use simple equipment** • **Perform simple tests** • **Identify and classify** • **Use his / her observations and ideas to suggest answers to questions** • **Gather and record data to help answer questions** Investigation • **Plant** a bean or a **seed** and watch it grow. Record your observations in a diary. • Go on a **wild plant** hunt in the local area! Create a **tally chart** to show how many of each **plant** you have found and then use the information to answer questions. Seasonal Changes Spring (Knowledge) • As the season changed has the environment around us changed? • What different weathers have come with this season? • There are many different weathers that come with each season. • Are the days longer or shorter? How has the sunlight changed?	Seasonal Changes Summer (Knowledge) • As the season changed has the environment around us changed? • What different weathers have come with this season? • There are many different weathers that come with each season. • Are the days longer or shorter? How has the sunlight changed? **Retrieval of all four science topics based on gap analysis.** **Retrieval of Working Scientifically skills based on gap analysis**
	What can make this personal to Dovers Green? • Gardening with Mrs Green • Planting own vegetables / plants • Local trips to areas of rich vegetation e.g. wild flowers • Healthy eating investigation—trying different foods, what parts of the plant are they, gardening • Outdoor investigations (different seasons) - seasonal walks in local area / school • Plants investigation—plant and watch sunflowers grow • Cooking with home grown ingredients	What can make this personal to Dovers Green? • Outdoor investigations (different seasons) - seasonal walks in local area / school • Use of forest school to make seasonal comparisons • Weather gages

The development of SMSC and the promotion of British Values within Science – Year 1	
SMSC	**Spiritual**: Science supports spiritual development by providing many opportunities for children to think and reflect on the awe and wonder moments that occur in the natural world that show us what is special about life. Children begin to develop an awareness of the scale of living things from the smallest to the largest. **Moral**: Science can demonstrate and show children that different opinions need to be respected and valued. Children are encouraged to consider the immediate environment around them and how to look after it. The pupils' curiosity continues to be encouraged through exploration and investigations. **Social**: Science supports social development by exposing children to the power of collaborative working in the science community. Children work collaboratively when taking part in experiments and are encouraged to use the correct scientific vocabulary. We encourage children to take responsibility for their own and others safety. Understanding that science has a big impact on the quality of our lives. **Cultural**: Science supports cultural development by looking at how scientists from a range of cultures and genders, including our own, have had a significant impact around the world.
British Values	**Democracy;** During teamwork we encourage the children to take the views of others into account by taking turns to share ideas. Children are also reminded to listen to instructions from others. **Rule of Law;** Remind children of rules we have for science investigations, understand the importance of safety rules and that there are consequences if rules aren't followed. **Respect and Tolerance;** Teaching children that scientific discoveries often come from a range of cultures. Children are also taught about evolution and that religious beliefs can compete with scientific understanding. Mutual respect is encouraged by listening to others, working as a team, discussing what we find out as well as learning from others and offering support. **Individual Liberty;** Children are supported to make choices when planning an investigation. During discussions children begin to understand others may have a different point of view.