Primary Science Subject Knowledge Audit

Throughout this course, you must demonstrate continuous improvement in your subject knowledge to meet the required standards. Strong expertise in subject knowledge is essential for effective teaching. You will show your knowledge partly through lesson observations, but also by completing the subject knowledge audit below at each assessment point during your training year. The audit's red-amber-green rating of course content will map your progress. This live document will serve as a professional tool that you can build on throughout the early stages of your teaching career. The audits are to help you identify those areas of the curriculum where you may have less knowledge or confidence.

	RAG Rating Key
S	Secure knowledge = I have good pedagogical content knowledge and would be able to teach it
D	Developing knowledge = I understand it, I need to study it further to be able to teach it
L	Limited Knowledge = I have little knowledge and have not seen it taught

Subject Knowledge	**Pre-Course Knowledge**	**AP1 Autumn Term**	**AP2 Spring Term**	**AP3 Summer Term**	**Final Assessment Summer Term**	**Action Plan for Development**
Dates		**18 November 24 to 2 December 24**	**3 March 25 to 24 March 25**	**28 April 25 to 12 May 25**		
Curriculum Knowledge						
Have you read the science National Curriculum programmes of study for Key Stages 1 and 2?						
Do you have a good understanding of various teaching strategies for developing children's scientific knowledge, understanding and skills?						
Working Scientifically						
Recognising and controlling variables						

Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs						
Identifying scientific evidence that has been used to support or refute ideas or arguments						
Plants						
Describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers						
Understand the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal						
Animals including Humans						
Identify and name the main body parts and parts of the human circulatory system						
Describe the functions of the heart, blood vessels and blood						
Describe the changes as humans develop to old age						
Describe the simple functions of the basic parts of the digestive system in humans						
Identify the different types of teeth in humans and their simple functions						
Construct and interpret a variety of food chains, identifying producers, predators and prey						
Everyday Materials						
Understand reversible changes, including, evaporating, filtering, sieving, melting and dissolving, recognising that melting and dissolving are different processes						
Compare and group together everyday materials on the basis of their properties,						

including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets						
Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution						
Seasonal Changes						
Describe weather associated with the seasons and how day length varies						
Living Things & Their Habitats						
Describe how living things are classified						
Understand that broad groupings such as micro-organisms can be subdivided						
Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird						
Describe the life process of reproduction in some plants and animals						
Understand the differences between things that are living, dead, and things that have never been alive						
Rocks						
Describe in simple terms how fossils are formed when things that have lived are trapped within rock						
Recognise that soils are made from rocks and organic matter						
Light						
Explain that light appears to travel in straight lines						
Explain how objects are seen because they give out or reflect light into the eye						
Explain why shadows have the same shape as the objects that cast them						
Understand that light is reflected from surfaces						

Force & Magnets						
Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object						
Identify the effects of air resistance, water resistance and friction, that act between moving surfaces						
Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect						
Describe magnets as having two poles						
States of Matter						
Compare and group materials together, according to whether they are solids, liquids or gases						
Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)						
Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature						
Sound						
Identify how sounds are made, associating some of them with something vibrating						
Recognise that vibrations from sounds travel through a medium to the ear						
Electricity						
Understand that voltage of cells is associated with brightness and volume						
Recognise some common conductors and insulators, and associate metals with being good conductors						
Use recognise symbols in circuit diagrams						
Construct a simple circuit						

Earth & Space						
Describe the movement of the Earth, and other planets, relative to the Sun in the solar system						
Describe the movement of the Moon relative to the Earth						
Describe the Sun, Earth and Moon as approximately spherical bodies						
Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky						
Evolution & Inheritance						
Living things have changed overtime						
Offspring vary and are not identical to their parents						
Animals and plant have adapted to their environment						
Adaptation may lead to evolution						