

Romans -Saxons- Vikings-Industrial Revolution-WWI-WWI Who came? When? Where did they come from? Where did they settle? Why did they settle there?

Examining the continuity between the way we live today and previous civilisations

Examining how different civilisations are at different stages of development at any given time

Lower Key Stage 2	Upper Key Stage 2
Raise their own relevant questions about the world around them	Use their science experiences to explore ideas and raise differ- ent kinds of questions
Should be given a range of scientific experiences including differ- ent types of science enquiries to answer questions	Talk about how scientific ideas have developed over time
Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions	Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions
Set up simple practical enquiries, comparative and fair tests Recognise when a simple fair test is necessary and help to decide how to set it up	Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why
Talk about criteria for grouping, sorting and classifying; and use simple keys	Use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment
Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations	Recognise which secondary sources will be most useful to re- search their ideas and begin to separate opinion from fact
Make systematic and careful observations Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used	Make their own decisions about what observations to make, what measurements to use and how long to make them for
Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them	Look for different causal relationships in their data and identify evidence that refutes or supports their ideas
Take accurate measurements using standard units learn how to use a range of (new) equipment, such as data log- gers / thermometers appropriately	Choose the most appropriate equipment to make measure- ments with increasing precision and explain how to use it ac- curately. Take repeat measurements where appropriate.
Collect and record data from their own observations and mea- surements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data	Decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
With help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions	Identify scientific evidence that has been used to support or refute ideas or arguments
Use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions	Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas, use oral and written forms such as displays and other presenta- tions to report conclusions, causal relationships and explana- tions of degree of trust in results
With support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done.	Use their results to make predictions and identify when further observations, comparative and fair tests might be needed

•	sexual and asexual reproduction Pupils are taught which parts of the plants could be used to try and re- grow new plants (N.B. To link with reproduction of animals including living things)
•	Pupils are taught to pose pertinent questions that they can explore an answer how plants reproduce Pupils are taught to set up a practical enquiry using fair test including
•	systematic observations and recording results Pupils are taught to make predictions and compare the outcomes to draw a conclusion
•	Pupils are taught to use scientific knowledge and evidence to support their findings
٠	Pupils are taught to understand the role of reproduction in the life cycle of a plant
•	Pupils are taught that every living thing has to have the means of reproducing itself in order to have a life cycle and to continue the species
•	Pupils can generate and use scientific evidence to identify similarities, difference and patterns in the life cycles of living things, offering well-reasoned explanations for differences between species.
•	Pupils will visit the Yorkshire Dales
	Pupils will compare river and canal habitats

Plan	Asking questions Asking questions that can be answered using a scientific enquiry.	Questions to be guided by observations of plants and seeds.
	Making predictions Using prior knowledge to suggest what will happen in an enquiry.	Can predictions be made as to how a plant is pollenated based upon the structure of its sex organs? Can the method of seed dispersal be predicted from its structure? Can predictions be made as to which seeds will be the most effective at being dispersed by the wind?
	Comparative / fair testing Changing one variable to see its effect on another, whilst keeping all others the same.	Comparative testing of different seeds and how far they can travel upon the wind.
Do	Research Using secondary sources of information to answer scientific questions.	What are the different methods of pollination and seed dispersal? What are the advantages of sexual vs asexual reproduction in plants?
	Observation over time Observing changes that occur over a period of time ranging from minutes to months.	Observe the development and changes in a fertilised plant – grow daffodils in class and then artificially fertilise them. Take observations/draw diagrams at intervals.
	Pattern-seeking Identifying patterns and looking for relationships in enquiries where variables are difficult to control.	
	Identifying, grouping and classifying Making observations to name, sort and organise items.	Group plants based upon their features – can common traits be used to identify how the plants are fertilised? Can seed dispersal be identified before the plant is fertilised?
	Problem-solving Applying prior scientific knowledge to find answers to problems.	Design seeds for a given method of dispersal. Design a plant for given method of fertilisation.
	Recording data Using tables, drawings and other means to note observations and measurements.	Take notes and label diagrams of plants. Measure and record the distance travelled by different types of seed.
Review	Evaluating Reflecting on the success of the enquiry approach and identifying further questions for enquiry.	Evaluate the experiments and the seed designs.
	Interpreting and communicating results Using information from the data to say what you found out.	Present findings to the year group – graphs and talk.