|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Science Skills Progression 2024** | | | | | | | | |
| **SCIENCE** | | **RECEPTION** | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **Upper KS2 (Y5 and Y6)** | |
| **QUESTION** | | **Ask simple questions** about immediate environment. | **Ask questions** and know some can be answered using scientific enquiry. | | **Identify scientific questions.** ie can be investigated through scientific enquiry. | | **Raise scientific questions** and **hypothesise** | |
| **SCIENTIFIC ENQUIRY** | **OBSERVE** | **Qualitative**  Talk about  similarities and differences. | **Qualitative and Simple Quantitative** | | **Qualitative and Quantitative** | | **Qualitative and Quantitative** | |
| Observe change  over time.  Use Senses/ equipment. | Measure change over time e.g. plant growth. Select equipment | Systematic/ careful observations. Use bar charts, pictograms, tables. | Accurate measurements. Use time graphs and other graphs. | Accurate/ precise measurements, Diagrams, tables, bar and line graphs. | Take repeat readings when appropriate.  Scatter graphs. |
| **CLASSIFY and FIND PATTERNS** | **Talk and Sort** | **Identify and Classify** | | **Classify and Find Patterns** | | **Classify and Find Patterns** | |
| Use simple scientific criteria. | e.g. familiar plants, animals,  materials    Compare and contrast | e.g. living/ dead/ never alive;  materials    Compare  differences | Classify animals/ materials. Link two variables e.g. *the closer the magnet the bigger the force.* | Use simple classification keys.  Link two variables  e.g. *the more cells in a circuit, the brighter the bulb.* | Use complex  classification keys.    Identify causal relationships. | Develop  classification keys. Identify evidence that supports/ refutes causal relationship. |
| **CONTROL INVESTIGATIONS: comparative and fair testing** | **Explore** objects/ materials/ living things/ resources designed to model scientific processes. | **Simple comparative tests** | | **Comparative and fair tests** | | **Design own comparative and fair tests** | |
| e.g. *What is the best material for an umbrella?* | e.g. *What if plants do not get light and water?* | **Predict.** Fair tests e.g. *How does distance affect magnet strength?* | **Predict.** Language of independent and control variable. | Identify when and how to use tests.  Recognise and control variables.  Make predictions based on previous test results. | |
| **RESEARCH** | **Listen and respond to stories** about scientific processes/ events/ objects. | **Find information** using given sources. e.g. *animals.* | **Select information** from a range of given sources**.** | **Research** using given sources. e.g. *research different food groups and how they keep us healthy* | **Select information** to support findings.  e.g. *research animals* | **Explore relevant information by using a wide range of secondary sources.** | |
| Explore how  scientific ideas have developed over time. | Identify evidence that has been used to support or refute ideas. |
| **MODEL** | **Concrete** context.    Create drawings and models of their  environment | **Concrete**  context    Draw diagrams e.g. *parts of plants/ the body.* | **Explore** and **create**    drawings and physical models e.g. *habitats.* | **Abstract** contexts  e.g. processes and phenomena such as forces/ light. **Use** labelled diagrams and drawings and physical models. | **Abstract** contexts  e.g. processes and phenomena such as sound/ electricity. **Create** labelled diagrams and drawings and physical models. | **Abstract** contexts.    **Evaluate** diagrams/modelse.g. states of matter; solar system. | **Abstract** contexts.    **Create** own versions of models. e.g. circulatory system; light. |
| **CONCLUDE** | | **Explain**  simple phenomena:  How? Why? | **Describe** what has happened or been observed. | **Explain** why a simple observation occurred. **Evaluate** the effectiveness of observations. | **Explain an observation or an event in scientific terms.** Distinguish between what has been observed and why it happened. Begin to link evidence from secondary sources as well as primary.  Suggest improvements. | | **Evaluate original hypothesis against observed evidence and reach appropriate conclusions.** Identify causal relationships between concepts and data. Begin to identify how reliable the data is. | |