The Churchside Federation
Gooderstone & Mundford CofE Primary Academies

Scientific Area of Learning	Science Skills - Progression through Year Groups						
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Discussing and Questioning.	Beginning to understand 'why' and 'how' questions. Questions why things happen and gives explanations. Asks e.g. *who, what, when, how.* Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. • Can talk about some of the things they have observed such as plants, animals, natural and found objects. Talks about why things happen and how things work. • Developing an understanding of growth, decay and changes over time	Respond to teachers questioning Ask questions other than those beginning with why.	Ask questions other than those beginning with why. Use scientific terminology some of the time. Take turns in discussion.	Ask questions of other pupils. Make relevant contributions to group or class discussions. Use Scientific Vocabulary in the correct context.	Use questions to instigate investigation Begin to suggest different ways to find answers.	Recognise why it is important to collect data to answer questions. Use their experience to construct questions that can be investigated. Identify what may be changed in an investigation. Use scientific vocabulary during discussions. Show awareness that there may be a variety of ways to find the answer to a question. Identify questions that cannot be investigated.	Ask questions that have a clear scientific purpose. Identify questions that cannot be investigated. Use scientific vocabulary regularly during discussions. Use a systematic approach to asking and answering scientific questions.
Fair Testing		Start to show an awareness that things can be treated the same.	With help talk about what could affect a test. Show understanding of comparative language.	Understand the need for fair testing, but require help to put into practice.	Understand the need for fair testing, but require help to put it into practice	Begin to realise that not all investigations involve fair testing. Identify which factors to keep the same.	Set up a fair test, knowing what to change and what to keep the same. Know and explain why fair testing is important.

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Predicting		Make a simple statement about the activity, referring to some previous experience.	Sometimes predict the outcome of the investigation. Make a guess about what might happen.	Sometimes predict the outcome of the investigation.	Sometimes predict the outcome of the investigation.	Predict outcomes, giving reasons based upon everyday experiences.	Predict outcomes based upon scientific knowledge and understanding. Start to carry out preliminary work to refine productions.
Planning	Constructs with a purpose in mind, using a variety of resources.		Using someone else's ideas, make a suggestion about what to do when asked.	Make a simple plan identifying what observations they will make. Make suggestions about what can be measured.	Start to recognise some possible problems that may arise during the investigation. Plan the main steps systematically, identifying equipment and any possible risks.	Decide upon an appropriate approach.	Show how to vary one factor while keeping the rest the same. Use scientific vocabulary to identify the variables in the investigation.
Observing and Measuring	Questions why things happen and gives explanations. Asks e.g. *who, what, when, how.* Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. • Can talk about some of the things they have observed such as plants, animals, natural and found objects.	Sort into groups using given criteria.	With help use simple equipment provided.	Use own criteria to group/classify. With support begin to use standard measures to the nearest whole number. Measure using non-standard measures.	Suggest what type of observation/ measurements to make. Use a range of quantitative measures e.g. mass, time, length.	Take accurate measurements.	Decide what type and the number of measurements that are required. Select appropriate equipment from the range available. Use appropriate range or sample of data. Begin to use decimal places in measurements. Use averages to present their findings.
Recording tables/charts and graphs.	Records, using marks that they can interpret and explain.	With support, record results by drawing in simple tables provided.	With support, record results by drawing in simple tables provided. With support, draw or stick objects onto a prepared chart	Ensure sufficient results are recorded to give a pattern. Decide upon appropriate headings for charts and graphs.	Be aware of a number of different ways results can be represented. Record results using stick and line graphs, with whole-number scales.	Record results using sick and line graphs, with whole-number scales. Use a sensible range of results.	Record results accurately, using appropriate headings. Decide upon an appropriate method of recording.

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							Use ICT to record results. Begin to record decimal places/averages.
Evaluating results	Looks closely at similarities, differences, patterns and change.		Respond to questions about a task e.g. which leaf fell faster? Recognise results which are unexpected.	Compare what happened with what they thought might happen.	In the light of results, offer further predictions.	Make further predictions and test them.	Look at the results of repeat readings and suggest why we may get different results from the same test. Identify unusual/unexpected results. Decide whether unusual readings were accurate or sufficient in number to provide a pattern.
Interpreting results	Looks closely at similarities, differences, patterns and change.	Describe what happened showing awareness of similarities and differences	Describe what happened showing awareness of similarities and differences	Compare results Make some statements about what the results show.	Rank results in order, and in different directions, mostly correctly. Identify the extremes of ranked results e.g. the fastest/slowest	With help, start to identify simple patterns in results and graphs. With help, start to identify simple patterns in results and graphs. Explain patterns using everyday language and knowledge.	Start to explain patterns/draw conclusions using scientific knowledge and understanding.
Choosing an approach	Explains own knowledge and understanding, and asks appropriate questions of others.	Carry out a given task. Experiment with given apparatus	Experiment with given apparatus	Begin to make suggestions	Respond to suggestions about how to find out the answer to a question.	Decide upon an appropriate approach to answer a scientific question	Decide upon an appropriate approach to answer a scientific question
Scientists	Shows care and concern for living things and the environment.	Looking at the part science has played in the development of many useful things					

Health and Safety	Shows understanding of the need for safety when tackling new challenges, and considers and manages some risks. • Shows understanding of how to transport and store equipment safely. • Practices some appropriate safety measures without direct supervision.	Recognise that there are hazards in living things, materials and physical processes and assess risks and take action to reduce risks to themselves and others