Skills

Explanations that apply scientific ideas

Explanations that use scientific reasoning

Explanations using scientific vocab

Descriptions

Simple explanations

Simple descriptions

Experiences

Y6

own questions about scientific **ideas** /
select **appropriately** (e.g. enquiries) /
make **decisions** (e.g. on data to collect) /
carry out fair test & **explain** it / **keys** to classify /
record scientifically / use evidence and **data** in many forms
analyse patterns / make **connections** / **explain** improvements /
relevant scientific language

Y5

Plan own *fair tests / use* ***scientific vocab*** */*
select *suitable equipment /* ***Begin*** *to plot* ***line graphs*** */*
find ***patterns*** *in recorded data / describe improvements*

Y4

relevant questions /begin to **decide** (e.g. on enquiry type)/
plan fair test **with help** / carry out **simple** fair tests /
accurate measurements / **explain** / begin to **record scientifically** /
interpret (explain) data **with help** / **develop ideas** about patterns/
use **simple relevant** scientific language

Y3

Begin *to ask relevant questions / carry out fair tests* ***with help*** */*
complete ***bar charts & tables*** */* ***standard*** *measures / sort & group /*
interpret data with some scientific language ***with help***

Y2

simple questions /**use** what is provided (follow instructions)
begin to carry out 'fair tests' or **simple** tests / **non-standard** & simple **standard** measures /
sort & group **with help** / **differences** (**simple** comparisons) /
record **simple** data / notice patterns **with help** /
simple scientific, **comparative** language

Y1

begin *to plan / use simple equipment* ***with help*** */* ***begin*** *to compare /* ***complete*** *pictograms*
/ ***state*** *what happened*

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WORKING SCIENTIFICALLY SKILLS – CURRICULUM 2014 (WITH ADDITIONAL CRITERIA, BASED ON PROGRESSION)

	Q	V		O			R		C		E
N.C. level	Ask Questions (Enquiry) (Problem Solve)	Variables (Reasoning) (Enquiry)	Research (Info processing)	Observe & Measure (Reasoning) (Enquiry) (Problem Solve)			Present Information (Communicate)		Analysis (Creative thinking) (Reasoning)		Evaluate (Problem Solving) (Evaluating)
				Planning	Resources	Observation	Recording	Graphs	Patterns	Conclusion	
Y3 (3)	• Ask **relevant** questions and use different types of scientific enquiries to answer them • *I ask questions in different ways* • *I ask questions related to the activity we are carrying out*	• Set up simple practical enquiries, comparative and fair tests • *I **compare** tests saying if it is fair or not, with help* • *With help I identify at least 1 variable to control*	• Gather, record, classify and present data in a variety of ways to help answer questions • *I can use ICT to find information relevant to my investigation as well as other sources provided*	• Set up simple practical enquiries, comparative and fair tests • *I can carry out a fair test with some help*	• Make systematic and careful, observations where appropriate, taking accurate measurements using standard units using a range of equipment including thermometers and dataloggers • *To the **nearest whole no.** I measure from a range of equipment*		• Gather, record, classify and present data in a variety of ways to help answer questions • Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables • *I can finish charts & tables started for me* • *I **begin** to record what I found out in a **scientific way**, trying to put headings in tables drawn for me* • *With help I can draw a **bar chart or diagram** to show what happened*		• Report on findings including oral and written explanations, displays or presentations of results and conclusions	• Use results to draw simple conclusions, make predictions for new values and suggest improvements, and raise further questions • Use straight forward evidence to answer quest's or to support their findings • *I can write what I found out and try to **explain it simply***	• *I can recognise unexpected results*
Y2 (2/3)	• Ask **simple** questions… • I can use practical activities to ask **my own** questions • I can ask **simple questions** about **how** things change or **how** they happen or what will happen if…?	•	• Gather and record data to help in answering questions • …and recognise that they can be answered in different ways • I can **use simple** secondary sources to help find answers • I ask people questions to find out answers	• Perform **simple** tests • I have **experienced** different ways of answering questions • I have **started to work on** different types of enquiry • I am beginning to recognise ways to answer questions • I can carry out simple tests	• Observe closely with **simple** equipment • I can make **simple measurements** • I can use **simple equipment** e.g. handlenses and egg timers to gather data	• Identifying and Classifying • I can explore the world around me • I can make **comparisons** of objects, materials and living things • I decide on how to **group and sort** things **with help** • I observe changes over time	• Gather and record data to help in answering questions • I can record simple data • I can record what I found out in a variety of ways • *I fill in a tally chart if the teacher makes it for me or with help* • *I can use simple chart templates provided to communicate with help*		• Use observations and ideas to suggest answers to questions • I am beginning to notice patterns with help • I can talk about what has happened and how I found it out • I am beginning to use some **simple** scientific language to share what I found out • *I **describe** obs. **simply** with a range of vocab*		•
Y1 (1/2)	• Ask simple questions • *With help, I can use: Why, What, How and When*	•	• Gather and record data to help in answering questions • *With help, I can use **simple books & other sources** to find out about scientific ideas*	• Perform simple tests • *I **state** what I am doing now* • *I am beginning to **say** what to do next*	• Observe closely with simple equipment • *With help, I can use simple equipment to collect data* • *I recognise some simple equipment we use*	• Identifying and Classifying • *I use my senses to **observe** & start to describe simple features of objects, events / living things* • *I respond & **begin to sort** appropriately with regard to simple features* • *I can observe a change* • I begin to make **simple comparisons**	• Gather and record data to help in answering questions • *I communicate and draw simple pictures of my findings with help* • *I can add blocks to towers, showing early measurement* • *I can stick pictures onto a chart drawn for me*		• Use observations and ideas to suggest answers to questions • *I begin to tell others some differences and similarities* • *I use annotate drawings and simple sentences to communicate* • *I can **state** what happened or what we did*		•

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