		How am I doing?					
		A 1	A 2	Sp 1	Sp 2	Su 1	Su 2
Beginner Scientist (1.5 CPS 6 each)	Explore simple scientific ideas						
	Observe closely using all of their senses						
	Draw pictures and take photos						
	Respond yes/no to questions						

		How am I doing?					
		A1	A2	Sp1	Sp2	Su1	Su2
Emerging Scientist (1 CPS for every 2	Explore making it obvious they are trying to find something out						
	Take a few guided planning decisions.						
	Observe . . . simple features of organisms, objects, materials and events						
	Use a simple key						
	Compare 2 things by direct observation						
	Use simple equipment provided						
	Describe simple features of organisms, objects, materials and events through talking, drawing, mark-making or writing simple words.						
	State what's happened using everyday terms						
	Order results 1st, 2nd , 3rd						
	Spot obvious similarities and differences						
	Sorts and groups objects, living things or events.						
	Suggest an answer to the original question after they have collected their results or observations.						

		How am I doing?					
		A1	A2	Sp1	Sp2	Su1	Su2
Developing Scientist (1 CPS for every 2 statements)	Discuss the steps needed to carry out their enquiries. *(e.g. suggest equipment, what to measure and how they will know the answer)*						
	Recognise simple risks when prompted *(e.g. answers hot water can burn)*						
	Discuss what is needed to be successful *(e.g. collect measurements/observations, use equipment carefully, be able to answer the question)*						
	Make enough observations to be able to sort, group and compare organisms, objects, materials, and events.						
	Use a Venn diagram to sort ideas.						
	Uses non-standard units make observations and measurements. *(E.g. 2 hands wide)*						
	Make simple records of their findings by talking, drawing, writing simple sentences, constructing tally charts or pictograms.						
	Help to make a class table.						
	Say what you have found out using simple scientific terms. *(e.g. The metal let electricity through but the plastic did not)*						
	Identify similarities and changes based on simple scientific concepts and processes. *(e.g. The ice cube melted because it was too warm)*						
	Describe the basis for their groupings using simple differences between organisms, objects, materials and physical phenomena. *(e.g. These have wings and these do not)*						
	Respond to questions about what worked in their investigation and what didn't.						

(Pupils starting on **accelerating Scientist** have achieved **18 points** from beginner, emerging and developing scientist)

		How am I doing?					
		A1	A2	Sp1	Sp2	Su1	Su2
Accelerating Scientist (1 CPS for every 3 statements)	**Plan, with support, the method to be used for their enquiries.** (e.g. equipment, measuring/observing, fair testing, how to collect results)						
	Talk about their ideas and using their everyday experience they make simple predictions. *(e.g. This hot water will melt it the quickest because on a hot day the ice in my drink melts quickly)*						
	Discuss and agree on some basic success criteria, (*e.g. fair testing)*						
	Follow a simple series of instructions safely to gather their findings.						
	Use a more complex key						
	Correctly use equipment to make measurements						
	Carry out a fair test when prompted						
	Organise their findings in simple tables …..						
	Organise findings on a bar chart.						
	Begin to identify simple patterns and trends. *(e.g. As the water gets warmer the sugar dissolves faster)*						
	Give an explanation using scientific forms of language, based upon their everyday experiences, for their findings, including any patterns. *(e.g. The materials made of metal lost the most heat. This is why sauce pans are made of metal, so heat can pass through)*						
	Say what they have found out from their work and make their own decisions by weighing up pros and cons. *(e.g. I have found out that bubble wrap is the best at trapping the heat because it lost the least temperature).*						
	Link outcomes to success criteria and identify what worked and what didn't. *(e.g. I could trust my results because I made sure I used equal amounts but it was hard to judge how much liquid I used in the cup)*						
	Say whether what happened was what they expected.						
	Begin to think about how the method could be improved. *(e.g. Next time I would use a measuring cylinder to measure the liquid)*						
	Link the learning, with support, to familiar situations. *(e.g. When I boil pasta, I can see the water evaporate into a gas).*						
	Can further sort once sorted. *(e.g. sorts into winged and not winged and then sorts further by counting legs)*						
	Use simple models *(e.g. a digestion model of tights, tubing, pestle and mortar etc)*						

Pupils starting on **Proficient Scientist** have achieved **24 points** from beginner, emerging, developing and accelerating scientist.

		How am I doing?					
		A1	A2	Sp1	Sp2	Su1	Su2
Proficient Scientist (1 CPS for every 3 statements)	Asks relevant questions.						
	Use scientific knowledge and skills to plan their enquiries. *(e.g. observe over time, comparative test, pattern spotting, research or identify and classify)*						
	Use scientific knowledge and skills to predict outcomes *(e.g. The vinegar will react because it is an acid)*						
	Recognise, with support, the variables to change and measure and those to be kept the same.						
	Decide upon some basic success criteria. *(e.g. controls, repeats, equipment).*						
	Follow the planned method . . . make qualitative observations and use standard equipment to measure within a given range using S.I. units.						
	Carry out a fair test						
	Construct tables to organise their findings						
	Construct bar charts with more complex scales						
	Identify patterns and trends						
	Consider the reliability of their results						
	Use some scientific knowledge and understanding to explain their findings						
	Begin to draw conclusions, form considered opinions and make informed decisions.						
	Decide whether their method was successful by referring to their success criteria.						
	Say how they could improve their method						
	Raise further questions to investigate						
	Classify living things, objects and events						

Pupils starting on **Expert Scientist** have achieved **30 points** from beginner, emerging, developing and accelerating scientist.

		How am I doing?					
		A1	A2	Sp1	Sp2	Su1	Su2
Expert Scientist (1 CPS for every 3 statements)	Ask a variety of scientific questions.						
	Systematically plan their enquiries, including repeats.						
	Making predictions based on scientific knowledge and understanding, including simple models						
	Identify key variables and distinguish between independent and dependent variables and those that they will keep the same.						
	Give some justification for their success criteria.						
	Select measuring instruments that allow them to make a series of accurate measurements.						
	Construct a simple key						
	Make accurate measurements with correct SI units.						
	Construct tables to organise repeats and the average, using S.I. units where appropriate.						
	Organise and display findings in bar charts and in simple line graphs when the axes and scales are given						
	Use line graphs to describe relationships between two continuous variables.						
	Offer simple explanations for differences in repeated measurements/observations						
	Organise and communicate their findings using relevant scientific language						
	Use scientific knowledge and understanding, including simple models, when explaining their findings . . .						
	How successful were you at answering your original question						
	Suggest adaptations to the original method						
	Link the learning to dissimilar but familiar situations.						
	Design a physical model to describe ideas.						