Working scientifically progression

LKS2	**To ask scientific questions**	**To plan an enquiry**	**To observe closely**	**To take measurements**	**To gather/record results**	**To present results**	**To interpret results**	**To draw conclusions**	**To make a prediction**	**To evaluate an enquiry**
Classification	Be able to ask a range of yes/no questions to aid sorting	Be able to put appropriate headings onto intersecting Venn and Carroll diagrams	Be able to compare objects based on more sophisticated, observable features. Present observations in labelled diagrams			Sort objects and living things into groups using intersecting Venn and Carroll diagrams	Spot patterns in the data particularly two criteria with no examples e.g. there are no living things with wings and no legs	Draw simple conclusions when appropriate for patterns e.g. a flying insect with no legs might always crash land		Suggest improvement e.g. a wider range of objects – only looked at British trees. Suggest new questions arising from the investigation.
Research	Ask a range of questions linked to a topic	Choose a source from a range provided				Present what they learnt verbally or using labelled diagrams	Be able to answer their questions using simple scientific language			Suggest limitations e.g. only had one book. Suggest new questions arising from the investigation.
Comparative/fair test		Decide what to change and what to measure or observe	As for KS1	Measure using standard units where not all the numbers are marked on the scale, take repeat readings where necessary	Prepare own tables to record data	Present data in bar charts	Refer directly to their evidence when answering their question	Where appropriate provide oral or written explanations for their findings	Use results from an investigation to make a prediction about a further result	Suggest improvements e.g. to method of taking measurements. Suggest new questions arising from the investigation.
Observation over time		Decide what to measure or observe. Decide how often to take a measurement	Make a range of relevant observations	Measure using standard units where not all the numbers are marked on the scale. Use dataloggers to measure over time		Present data in time graphs				
Pattern seeking		Decide what to measure or observe	As for KS1	Measure using standard units where not all the numbers are marked on the scale.		Use ICT package to present data as a scattergram				