

Year 9 Ways of Doing- Science

Knowledgeable

Investigative

Analytical

Exceeding

<ul style="list-style-type: none"> I can recall different theories with ease I can explain increasingly detailed scientific explanations using correct scientific theory and terminology I can compare and contrast different ideas with ease and occasionally include generalisations from my own reading I can link different ideas from prior topics easily and occasionally bring in new ideas/challenging views using my own ideas 	<ul style="list-style-type: none"> I can design my own investigations and use the scientific method to verify their hypotheses I increasingly assess my work for risks and always work safely I can record data independently in line with scientific conventions My evaluations regularly contain references to accuracy, reliability and suggest improvements to the method I can independently design investigations I can identify risks when carrying out investigations and use relevant safety information to minimise risks I can apply my existing practical skills to collect adequate data, factors for reliability and sufficiency of data I can independently identify the correct data to be collected, consider factors for reliability and reproducibility I can clearly explain how evaluations and improvements are linked to the data and the methodology 	<ul style="list-style-type: none"> I can identify complex patterns and trends making generalisations as to why they are happening I can represent data with more detailed graphs/charts (including those on computer) I can interpret complex graphs/charts and identify anomalies I can recognise more detailed patterns and trends and can make some generalisations as to why they are occurring
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Expected

<ul style="list-style-type: none"> I can remember simple theories with ease With support, I can apply/analyse scientific explanations using correct scientific theory and vocabulary I can explain basic scientific ideas using the correct theory with little or no support Sometimes I can identify links between different scientific ideas 	<ul style="list-style-type: none"> I can follow experimental methods without making mistakes and make suggestions for changes to the method I am able to design a risk assessment given a template to allow for a safe working environment I am able to identify more often how data should be collected and recorded in an appropriate manner I am able to discuss strengths and weaknesses of an investigation to provide realistic and relevant suggestions for its improvement 	<ul style="list-style-type: none"> I can recognise basic patterns and trends and apply my scientific knowledge as to why they might be happening I can interpret graphs/charts with minimal support I can identify anomalies and deal with them in the appropriate way
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Developing

<ul style="list-style-type: none"> I can remember simple scientific theory with some help from the teacher I can describe an increasing amount of correct scientific theories I require only simple prompts to link different scientific ideas 	<ul style="list-style-type: none"> My evaluations are independently created but simple in manner I can follow simple methods easily with few mistakes I am increasingly aware that my working environment should be safe for myself and others I can identify variables most of the time but sometimes need some help I can present my experimental data in the correct scientific way without support I understand what an evaluation of my work means 	<ul style="list-style-type: none"> I am improving how I am able to analyse the data I collect and identify it for patterns and trends I can display data in appropriate graphs/charts with the help of my teacher With some support, I can interpret what the data on a graph is telling me With some support, I understand what anomalies are and how to identify them
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Supported

<ul style="list-style-type: none"> I can remember simple scientific information when prompted by the teacher With support from the teacher, I can explain simple scientific ideas With scaffolded worksheets and prompts I can link different ideas together 	<ul style="list-style-type: none"> I can follow a simple method with the teachers help With help and support, I can maintain a safe working space I can present the data I have collected with the help of scaffolded worksheets My evaluations are increasingly independent. With support, I can select appropriate variables 	<ul style="list-style-type: none"> With support from the teacher, I can understand what to do With support from the teacher or a scaffolded work sheet, I can present my data in an appropriate graph/chart With support, the student can read and understand the information on a graph or chart
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