Academic Achievement: Rating Descriptors

Subject: Science

Year: 8

In general, based on progress shown so far, we expect that **by the end of this academic year** your child will…

1 Above the expected standard	...describe processes and phenomena related to science, using abstract ideas and appropriate terminology. They apply and use knowledge and understanding in unfamiliar contexts and describe some evidence for some accepted scientific ideas. They explain the importance of some applications and implications of science.	...identify an appropriate approach in investigatory work, selecting and using sources of information, scientific knowledge and understanding. They select and use methods to collect adequate data for the task, measuring with precision, using instruments with fine scale divisions, and identify the need to repeat measurements and observations. They recognise a range of familiar risks and take action to control them. They record data and features effectively, choosing scales for graphs and diagrams. They analyse findings to draw conclusions that are consistent with the evidence and use scientific knowledge and understanding to explain them and account for any inconsistencies in the evidence. They manipulate numerical data to make valid comparisons and draw valid conclusions. They communicate qualitative and quantitative data effectively, using scientific conventions and terminology. They evaluate evidence, making reasoned suggestions about how their working methods could be improved.
2 Meeting the expected standard	...describe processes and phenomena related to scientific ideas. They explain processes in more than one step and apply and use knowledge and understanding in familiar contexts. They recognise that both evidence and creative thinking contribute to the development of scientific ideas, they describe applications and implications of science in the everyday world.	...decide appropriate approaches to a range of tasks, including selecting sources of information and apparatus. They select and use methods to obtain data systematically. They recognise hazard symbols and make, and act on, simple suggestions to control obvious risks to themselves and others. They use line graphs to present data, interpret numerical data and draw conclusions from them. They analyse findings to draw scientific conclusions that are consistent with the evidence. They communicate these using scientific and mathematical conventions and terminology. They evaluate their working methods to make practical suggestions for improvements.
3 Working towards the expected standard	...describe some processes and phenomena, drawing on scientific knowledge and understanding and using appropriate terminology. They recognise that evidence can support or refute scientific ideas, and recognise some applications and implications of science.	...decide on an appropriate approach, including using a fair test to answer a question, and select suitable equipment and information from that provided. They select and use methods that are adequate for the task. Following instructions, they take action to control obvious risks to themselves. They make a series of observations and measurements and vary one factor while keeping others the same. They record their observations, comparisons and measurements using tables and bar charts and begin to plot points to form simple graphs. They interpret data containing positive and negative numbers. They begin to relate their conclusions to patterns in data, including graphs, and to scientific knowledge and understanding. They communicate their conclusions using appropriate scientific language. They suggest improvements in their work, giving reasons.
4 Below the expected standard	...use their knowledge and understanding to describe scientific ideas. They provide simple explanations and begin to make simple generalisations about scientific phenomena.	...respond to suggestions and put forward their own ideas about how to find the answer to a question. They recognise why it is important to collect data to answer questions. They use simple texts to find information. They make relevant observations and measure quantities, such as length or mass, using a range of simple equipment. Where appropriate, they carry out a fair test with some help, recognising and explaining why it is fair. They record their observations in a variety of ways. They provide explanations for observations and for simple patterns in recorded measurements. They communicate in a scientific way what they have found out and suggest improvements.