

APP and Wikid



Level 7

AF1 Thinking scientifically	AF2 Understanding the applications and implications of science	AF3 Communicating and collaborating in science	AF4 Using investigative approaches	AF5 Working critically with evidence
<p>Make explicit connections between abstract ideas and/or models in explaining processes or phenomena.</p> <p>Big Idea: (all) Wikid unit: (all) All content ideas</p>	<p>Suggest ways in which scientific and technological developments may be influenced.</p> <p>Big Idea: Technology Wikid unit: Species at war (Y8)</p>	<p>Explain how information or evidence from various sources may have been manipulated in order to influence interpretation.</p> <p>Core Task: Interrogate Wikid unit: Studio magic (Y8)</p>	<p>Formulate questions or ideas that can be investigated by synthesising information from a range of sources.</p> <p>Core Task: Hypothesise Wikid unit: Pyrotechnics (Y8)</p>	<p>Explain how data can be interpreted in different ways and how unexpected outcomes could be significant.</p> <p>Core Task: Reason Wikid unit: Studio Magic (Y8)</p>
<p>Employ a systematic approach in deciding the relative importance of a number of scientific factors when explaining processes or phenomena.</p> <p>Big Idea: (all) Wikid unit: (all) All content ideas</p>	<p>Explain how scientific discoveries can change world views.</p> <p>Big Idea: Technology Wikid unit: Hollywood (Y9)</p>	<p>Effectively represent abstract ideas using appropriate symbols, flow diagrams and different kinds of graphs in presenting explanations and arguments.</p> <p>Core Task: Communicate Wikid unit: Studio magic (Y8)</p>	<p>Identify key variables in complex contexts, explaining why some cannot readily be controlled and planning appropriate approaches to investigations to take account of this.</p> <p>Core Task: Plan Wikid unit: Live & kicking (Y8)</p>	<p>Identify quantitative relationships between variables, using them to inform conclusions and make further predictions.</p> <p>Core Task: Analyse Wikid unit: Alien (Y7)</p>
<p>Explain how different pieces of evidence support accepted scientific ideas or contribute to questions that science cannot fully answer.</p> <p>Big Idea: Theories Wikid unit: NViz (Y8) All content ideas</p>	<p>Suggest economic, ethical/moral, social or cultural arguments for and against scientific or technological developments.</p> <p>Big Idea: Decision making Wikid unit: NViz (Y8)</p>	<p>Explain how scientists with different specialisms and skills have contributed to particular scientific or technological developments.</p> <p>Big Idea: Collaboration Wikid unit: Catastrophe (Y8)</p>	<p>Explain how to take account of sources of error in order to collect reliable data.</p> <p>Core Task: Plan Wikid unit: Live & kicking (Y8)</p>	<p>Assess the strength of evidence, deciding whether it is sufficient to support a conclusion.</p> <p>Core Task: Reason Wikid unit: Studio Magic</p>
<p>Explain the processes by which ideas and evidence are accepted or rejected by the scientific community</p> <p>Big Idea: Theories Wikid unit: Hollywood (Y9) All content ideas</p>	<p>Explain how creative thinking in science and technology generates ideas for future research and development.</p> <p>Big Idea: Technology Wikid unit: Hollywood – in Y9</p>		<p>Recognise the need for risk assessments and consult, and act on, appropriate sources of information.</p> <p>Core Task: Safe experimenter Wikid unit: Pyrotechnics (Y8)</p>	<p>Explain ways of modifying working methods to improve reliability.</p> <p>Core Task: Check evidence Wikid unit: Forensics; Live & Kicking (Y8)</p>

Level 6

AF1 Thinking scientifically	AF2 Understanding the applications and implications of science	AF3 Communicating and collaborating in science	AF4 Using investigative approaches	AF5 Working critically with evidence
<p>Use abstract ideas or models or multiple factors when explaining processes or phenomena.</p> <p>Big Idea: (all) Wikid unit: (all) All content ideas</p>	<p>Describe how different decisions on the uses of scientific and technological developments may be made in different economic, social or cultural contexts.</p>	<p>Identify lack of balance in the presentation of information or evidence.</p> <p>Core Task: Interrogate Wikid unit: Studio magic (Y8)</p>	<p>Apply scientific knowledge and understanding in the planning of investigations, identifying significant variables and recognising which are independent and which are dependent.</p>	<p>Suggest reasons based on scientific knowledge and understanding for any limitations or inconsistencies in evidence collected.</p>
<p>Identify the strengths and weaknesses of particular models.</p>	<p>Big Idea: Decision making Wikid unit: NViz (Y8)</p>	<p>Choose forms to communicate qualitative or quantitative data appropriate to the data and the purpose of the communication.</p>	<p>Core Task: Plan Wikid unit: Live & kicking (Y8)</p>	<p>Core Task: Reason Wikid unit: Studio Magic (Y8)</p>
<p>Big Idea: Models Wikid unit: Cook (Y7); Species at War (Y8)</p>	<p>Explain how societies are affected by particular scientific applications or ideas.</p>	<p>Core Task: Communicate Wikid unit: Studio magic (Y8)</p>	<p>Justify their choices of data collection method and proposed number of observations and measurements.</p>	<p>Select and manipulate data and information and use them to contribute to conclusions.</p>
<p>Describe some scientific evidence that supports or refutes particular ideas or arguments, including those in development.</p>	<p>Big Idea: Technology Wikid unit: Species at war (Y8)</p>	<p>Distinguish between data and information from primary sources, secondary sources and simulations, and present them in the most appropriate form.</p>	<p>Core Task: Plan Wikid unit: Live & kicking (Y8)</p>	<p>Core Task: Analyse Wikid unit: Alien (Y7)</p>
<p>Big Idea: Theories Wikid unit: A&E (Y7); NViz (Y8)</p>	<p>Describe how particular scientific or technological developments have provided evidence to help scientists pose and answer further questions.</p>	<p>Big Idea: Communicate Wikid unit: Metahuman (Y9)</p>	<p>Collect data choosing appropriate ranges, numbers and values for measurements and observations.</p>	<p>Draw conclusions that are consistent with the evidence they have collected and explain them using scientific knowledge and understanding.</p>
<p>Explain how new scientific evidence is discussed and interpreted by the scientific community and how this may lead to changes in scientific ideas.</p>	<p>Big Idea: Technology Wikid unit: Hollywood (Y9)</p>		<p>Core Task: Plan Wikid unit: Live & kicking (Y8)</p>	<p>Core Task: Reason Wikid unit: Studio Magic (Y8)</p>
<p>Big Idea: Theories Wikid unit: Hollywood (Y9)</p>	<p>Describe how aspects of science are applied in particular jobs or roles</p> <p>Big Idea: (all) Wikid unit: (all)</p>		<p>Independently recognise a range of familiar risks and take action to control them.</p>	<p>Core Task: Check evidence Wikid unit: Live & Kicking (Y8)</p>
			<p>Core Task: Safe experimenter Wikid unit: Pyrotechnics (Y8)</p>	<p>Make valid comments on the quality of their data.</p> <p>Core Task: Check evidence Wikid unit: Forensics (Y7); Live & Kicking (Y8)</p>

Level 5

AF1 Thinking scientifically	AF2 Understanding the applications and implications of science	AF3 Communicating and collaborating in science	AF4 Using investigative approaches	AF5 Working critically with evidence
<p>Use abstract ideas or models or more than one step when describing processes or phenomena.</p> <p>Big Idea: (all) Wikid unit: (all) All content ideas</p>	<p>Describe different viewpoints a range of people may have about scientific or technological developments.</p> <p>Big Idea: Decision making Wikid unit: NViz (Y8)</p>	<p>Distinguish between opinion and scientific evidence in contexts related to science, and use evidence rather than opinion to support or challenge scientific arguments.</p> <p>Core Task: Interrogate Wikid unit: Studio magic (Y8)</p>	<p>Recognise significant variables in investigations, selecting the most suitable to investigate.</p> <p>Core Task: Plan Wikid unit: Live & kicking (Y8)</p>	<p>Interpret data in a variety of formats, recognising obvious inconsistencies.</p> <p>Core Task: Analyse Wikid unit: Contact Alien</p>
<p>Explain processes or phenomena, suggest solutions to problems or answer questions by drawing on abstract ideas or models.</p> <p>Big Idea: (all) Wikid unit: (all) All content ideas</p>	<p>Indicate how scientific or technological developments may affect different groups of people in different ways.</p> <p>Big Idea: Decision making Wikid unit: NViz (Y8)</p>	<p>Decide on the most appropriate formats to present sets of scientific data, such as using line graphs for continuous variables.</p> <p>Core Task: Analyse Wikid unit: Alien (Y7)</p>	<p>Explain why particular pieces of equipment or information sources are appropriate for the questions or ideas under investigation.</p> <p>Core Task: Hypothesise Wikid unit: Electromancer (Y7); Pyrotechnics (Y8)</p>	<p>Provide straightforward explanations for differences in repeated observations or measurements.</p> <p>Core Task: Reason Wikid unit: Alien (Y7); Studio Magic (Y8)</p>
<p>Recognise scientific questions that do not yet have definitive answers.</p> <p>Big Idea: Theories Wikid unit: A&E (Y7); NViz (Y8)</p>	<p>Identify ethical or moral issues linked to scientific or technological developments.</p> <p>Big Idea: Decision making Wikid unit: Metahuman (Y9)</p>	<p>Use appropriate scientific and mathematical conventions and terminology to communicate abstract ideas.</p> <p>Core Task: Communicate Wikid unit: Extinction (Y7); Studio magic (Y8)</p>	<p>Repeat sets of observations or measurements where appropriate, selecting suitable ranges and intervals.</p> <p>Core Task: Plan Wikid unit: Live & kicking (Y8)</p>	<p>Draw valid conclusions that utilise more than one piece of supporting evidence, including numerical data and line graphs.</p> <p>Core Task: Reason Wikid unit: Alien (Y7); Studio Magic (Y8)</p>
<p>Identify the use of evidence and creative thinking by scientists in the development of scientific ideas.</p> <p>Big Idea: Theories Wikid unit: A&E (Y7); NViz (Y8)</p>	<p>Link applications of science or technology to their underpinning scientific ideas.</p> <p>Big Idea: Technology Wikid unit: A&E (Y7); Species at war (Y8)</p>	<p>Suggest how collaborative approaches to specific experiments or investigations may improve the evidence collected.</p> <p>Big Idea: Collaboration Wikid unit: Catastrophe (Y8)</p>	<p>Make, and act on, suggestions to control obvious risks to themselves and others.</p> <p>Core Task: Safe experimenter Wikid unit: Forensics (Y7); Pyrotechnics (Y8)</p>	<p>Evaluate the effectiveness of their working methods, making practical suggestions for improving them.</p> <p>Core Task: Check evidence Wikid unit: Forensics (Y7); Live & Kicking (Y8)</p>

Level 4

AF1 Thinking scientifically	AF2 Understanding the applications and implications of science	AF3 Communicating and collaborating in science	AF4 Using investigative approaches	AF5 Working critically with evidence
<p>Use scientific ideas when describing simple processes or phenomena.</p> <p>Big Idea: (all) Wikid unit: (all) All content ideas</p>	<p>Describe some simple positive and negative consequences of scientific and technological developments.</p> <p>Big Idea: Technology A&E (Y7); Species at war (Y8)</p>	<p>Select appropriate ways of presenting scientific data.</p> <p>Core Task: Communicate Wikid unit: Extinction (Y7); Studio magic (Y8)</p>	<p>Decide when it is appropriate to carry out fair tests in investigations.</p> <p>Core Task: Plan Wikid unit: Live & kicking (Y8)</p>	<p>Identify patterns in data presented in various formats, including line graphs.</p> <p>Core Task: Analyse Wikid unit: Alien (Y7)</p>
<p>Use simple models to describe scientific ideas</p> <p>Big Idea: Models Wikid unit: Cook (Y7) ; Species at War (Y8)</p>	<p>Recognise applications of specific scientific ideas.</p> <p>Big Idea: Technology A&E (Y7) ; Species at war (Y8)</p>	<p>Use appropriate scientific forms of language to communicate scientific ideas, processes or phenomena.</p>	<p>Select appropriate equipment or information sources to address specific questions or ideas under investigation.</p> <p>Core Task: Hypothesise Wikid unit: Electromancer (Y7); Pyrotechnics (Y8)</p>	<p>Draw straightforward conclusions from data presented in various formats.</p> <p>Core Task: Reason Wikid unit: Alien (Y7); Studio Magic (Y8)</p>
<p>Identify scientific evidence that is being used to support or refute ideas or arguments.</p> <p>Big Idea: (all) Wikid unit: (all) All content ideas</p>	<p>Identify aspects of science used within particular jobs or roles.</p> <p>Big Idea: (all) Wikid unit: (all)</p>	<p>Core Task: Communicate Wikid unit: Extinction (Y7); Studio magic (Y8)</p> <p>Use scientific and mathematical conventions when communicating information or ideas.</p> <p>Core Task: Communicate Wikid unit: Extinction (Y7); Studio magic (Y8)</p>	<p>Make sets of observations or measurements, identifying the ranges and intervals used.</p> <p>Core Task: Plan Wikid unit: Live & kicking (Y8)</p>	<p>Identify scientific evidence they have used in drawing conclusions.</p> <p>Core Task: Reason Wikid unit: Alien (Y7); Studio Magic (Y8)</p> <p>Core Task: Check evidence Wikid unit: Forensics (Y7); Live & Kicking (Y8)</p>
			<p>Identify possible risks to themselves and others.</p> <p>Core Task: Safe experimenter Wikid unit: Forensics (Y7); Pyrotechnics (Y8)</p>	<p>Suggest improvements to their working methods, giving reasons.</p> <p>Core Task: Check evidence Wikid unit: Forensics (Y7); Live & Kicking (Y8)</p>

Level 3

AF1 Thinking scientifically	AF2 Understanding the applications and implications of science	AF3 Communicating and collaborating in science	AF4 Using investigative approaches	AF5 Working critically with evidence
<p>Identify differences, similarities or changes related to simple scientific ideas, processes or phenomena.</p> <p>Big Idea: (all) Wikid unit: (all) All content ideas</p>	<p>Explain the purposes of a variety of scientific or technological developments.</p> <p>Big Idea: Technology A&E (Y7); Species at war (Y8)</p>	<p>Present simple scientific data in more than one way, including tables and bar charts.</p>	<p>Identify one or more control variables in investigations from those provided.</p>	<p>Identify straightforward patterns in observations or in data presented in various formats, including tables, pie and bar charts.</p>
<p>Respond to ideas given to them to answer questions or suggest solutions to problems.</p> <p>Big Idea: (all) Wikid unit: (all) All content ideas</p>	<p>Link applications to specific characteristics or properties.</p> <p>Big Idea: Technology A&E (Y7); Species at war (Y8)</p>	<p>Core Task: Communicate Wikid unit: Extinction (Y7); Studio magic (Y8)</p>	<p>Core Task: Plan Wikid unit: Live & kicking (Y8)</p>	<p>Core Task: Analyse Wikid unit: Alien (Y7)</p>
<p>Represent things in the real world using simple physical models.</p>	<p>Identify aspects of our lives, or of the work that people do, which are based on scientific ideas.</p>	<p>Use scientific forms of language when communicating simple scientific ideas, processes or phenomena.</p>	<p>Select equipment or information sources from those provided to address a question or idea under investigation.</p>	<p>Describe what they have found out in experiments or investigations, linking cause and effect.</p>
<p>Big Idea: Models Wikid unit: Cook; Species at War</p>	<p>Big Idea: (all) Wikid unit: (all)</p>	<p>Core Task: Communicate Wikid unit: Extinction (Y7); Studio magic (Y8)</p>	<p>Core Task: Hypothesise Wikid unit: Electromancer (Y7); Pyrotechnics (Y8)</p>	<p>Core Task: Reason Wikid unit: Alien (Y7); Studio Magic</p>
<p>Use straightforward scientific evidence to answer questions, or to support their findings.</p>		<p>Identify simple advantages of working together on experiments or investigation.</p>	<p>Make some accurate observations or whole number measurements relevant to questions or ideas under investigation.</p>	<p>Suggest improvements to their working methods.</p>
		<p>Big Idea: Collaboration Wikid unit: Catastrophe (Y8)</p>	<p>Core Task: Plan Wikid unit: Live & kicking (Y8)</p>	<p>Core Task: Check evidence Wikid unit: Forensics (Y7); Live & Kicking (Y8)</p>
			<p>Recognise obvious risks when prompted.</p> <p>Core Task: Safe experimenter Wikid unit: Forensics (Y7); Pyrotechnics (Y8)</p>	