

STREET SCIENCE PRESENTS

INTO THE UNKNOWN

PATTERNS, CHAOS, AND THE LANGUAGE OF THE UNIVERSE

CURRICULUM LINKS

Each of our shows focuses intently on engaging your students with Science as a Human Endeavour. Our team of qualified Street Science presenters understand how important it is for students to seek to improve their understanding and explanations of the natural world. Students will be inspired through learning about how others before them constructed explanations based on evidence while celebrating national and international discoveries. Each of our presenters will use customized language and show content to best cater to the year-levels of your audience, while supporting alignment to the national curriculum. The following National Curriculum elements will be addressed with each group:

PREP

8.4	9.0
Nature and development of science: ACSHE013 Science involves observing, asking questions about, and describing changes in, objects and events	Use and influence of science: AC9SFH01 Explore the ways people make and use observations and questions to learn about the natural world

YEAR 1

8.4	9.0
Physical sciences: ACSSU020 Light and sound are produced by a range of sources and can be sensed	Physical sciences: AC9S1U03 Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape
Nature and development of science: ACSHE021 Science involves observing, asking questions about, and describing changes in, objects and events	Use and influence of science: AC9S1H01 Describe how people use science in their daily lives, including using patterns to make scientific predictions
Use and influence of science: ACSHE022 People use science in their daily lives, including when caring for their environment and living things	

YEAR 2

8.4	9.0
<p>Physical sciences: ACSSU033</p> <p>A push or a pull affects how an object moves or changes shape</p>	<p>Earth and space sciences: AC9S2U01</p> <p>Recognise Earth is a planet in the solar system and identify patterns in the changing position of the sun, moon, planets and stars in the sky</p>
<p>Nature and development of science: ACSHE034</p> <p>Science involves observing, asking questions about, and describing changes in, objects and events</p>	<p>Physical sciences: AC9S2U02</p> <p>Explore different actions to make sounds and how to make a variety of sounds, and recognise that sound energy causes objects to vibrate</p>
<p>Use and influence of science: ACSHE035</p> <p>People use science in their daily lives, including when caring for their environment and living things</p>	<p>Use and influence of science: AC9S2H01</p> <p>Describe how people use science in their daily lives, including using patterns to make scientific predictions</p>

YEAR 3

8.4	9.0
<p>Nature and development of science: ACSHE050</p> <p>Science involves making predictions and describing patterns and relationships</p>	<p>Nature and development of science: AC9S3H01</p> <p>Examine how people use data to develop scientific explanations</p>
<p>Use and influence of science: ACSHE051</p> <p>Science knowledge helps people to understand the effect of their actions</p>	<p>Use and influence of science: AC9S3H02</p> <p>Consider how people use scientific explanations to meet a need or solve a problem</p>

YEAR 4

8.4	9.0
<p>Physical sciences: ACSSU076</p> <p>Forces can be exerted by one object on another through direct contact or from a distance</p>	<p>Physical sciences: AC9S4U03:</p> <p>Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects</p>
<p>Nature and development of science: ACSHE061</p> <p>Science involves making predictions and describing patterns and relationships</p>	<p>Nature and development of science: AC9S4H01</p> <p>Examine how people use data to develop scientific explanations</p>
<p>Use and influence of science: ACSHE062</p> <p>Science knowledge helps people to understand the effect of their actions</p>	<p>Use and influence of science: AC9S4H02</p> <p>Consider how people use scientific explanations to meet a need or solve a problem</p>

YEAR 5

8.4	9.0
	<p>Chemical sciences: AC9S5U04</p> <p>Explain observable properties of solids, liquids and gases by modelling the motion and arrangement of particles</p>
<p>Nature and development of science: ACSHE081</p> <p>Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions</p>	<p>Nature and development of science: AC9S5H01</p> <p>Examine why advances in science are often the result of collaboration or build on the work of others</p>
<p>Use and influence of science: ACSHE083</p> <p>Scientific knowledge is used to solve problems and inform personal and community decisions</p>	<p>Use and influence of science: AC9S5H02</p> <p>Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions</p>

YEAR 6

8.4	9.0
	<p>Earth and space sciences: AC9S6U02</p> <p>Describe the movement of Earth and other planets relative to the sun and model how Earth's tilt, rotation on its axis and revolution around the sun relate to cyclic observable phenomena, including variable day and night length</p>
<p>Nature and development of science: ACSHE098</p> <p>Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions</p>	<p>Nature and development of science: AC9S6H01</p> <p>Examine why advances in science are often the result of collaboration or build on the work of others</p>
<p>Use and influence of science: ACSHE100</p> <p>Scientific knowledge is used to solve problems and inform personal and community decisions</p>	<p>Use and influence of science: AC9S6H02</p> <p>Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions</p>

YEAR 7

8.4	9.0
<p>Physical sciences: ACSSU117</p> <p>Change to an object's motion is caused by unbalanced forces, including Earth's gravitational attraction, acting on the object</p>	<p>Physical sciences: AC9S7U04</p> <p>Investigate and represent balanced and unbalanced forces, including gravitational force, acting on objects, and relate changes in an object's motion to its mass and the magnitude and direction of forces acting on it</p>
	<p>Chemical sciences: AC9S7U05</p> <p>Use particle theory to describe the arrangement of particles in a substance, including the motion of and attraction between particles, and relate this to the properties of the substance</p>
<p>Nature and development of science: ACSHE119</p> <p>Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available</p> <p>ACSHE223</p> <p>Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures</p>	<p>Nature and development of science: AC9S7H01</p> <p>Explain how new evidence or different perspectives can lead to changes in scientific knowledge</p> <p>AC9S7H02</p> <p>Investigate how cultural perspectives and world views influence the development of scientific knowledge</p>
<p>Use and influence of science: ACSHE120</p> <p>Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations</p> <p>ACSHE121</p> <p>People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity</p>	<p>Use and influence of science: AC9S7H03</p> <p>Examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations</p> <p>AC9S7H04</p> <p>Explore the role of science communication in informing individual viewpoints and community policies and regulations</p>

YEAR 8

8.4	9.0
<p>Nature and development of science: ACSHE134</p> <p>Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available</p> <p>ACSHE226</p> <p>Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures</p>	<p>Nature and development of science: AC9S8H01</p> <p>Explain how new evidence or different perspectives can lead to changes in scientific knowledge</p> <p>AC9S8H02</p> <p>Investigate how cultural perspectives and world views influence the development of scientific knowledge</p>
<p>Use and influence of science: ACSHE135</p> <p>Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations</p> <p>ACSHE136</p> <p>People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity</p>	<p>Use and influence of science: AC9S8H03</p> <p>Examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations</p> <p>AC9S8H04</p> <p>Explore the role of science communication in informing individual viewpoints and community policies and regulations</p>

YEAR 9

8.4	9.0
<p>Chemical sciences: ACSSU177</p> <p>All matter is made of atoms that are composed of protons, neutrons and electrons; natural radioactivity arises from the decay of nuclei in atoms</p>	<p>Chemical sciences: AC9S9U06</p> <p>Explain how the model of the atom changed following the discovery of electrons, protons and neutrons and describe how natural radioactive decay results in stable atoms</p>
<p>Nature and development of science: ACSHE157</p> <p>Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community</p> <p>ACSHE158</p> <p>Advances in scientific understanding often rely on technological advances and are often linked to scientific discoveries</p>	<p>Nature and development of science: AC9S9H01</p> <p>Explain how scientific knowledge is validated and refined, including the role of publication and peer review</p> <p>AC9S9H02</p> <p>Investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering</p>
<p>Use and influence of science: ACSHE160</p> <p>People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities</p> <p>ACSHE228</p> <p>Values and needs of contemporary society can influence the focus of scientific research</p>	<p>Use and influence of science: AC9S9H03</p> <p>Analyse the key factors that contribute to science knowledge and practices being adopted more broadly by society</p> <p>AC9S9H04</p> <p>Examine how the values and needs of society influence the focus of scientific research</p>

8.4	9.0
<p>Biological sciences: ACSSU184</p> <p>Transmission of heritable characteristics from one generation to the next involves DNA and genes</p>	<p>Biological sciences: AC9S10U01</p> <p>Explain the role of meiosis and mitosis and the function of chromosomes, DNA and genes in heredity and predict patterns of Mendelian inheritance</p>
<p>Chemical sciences: ACSSU186</p> <p>The atomic structure and properties of elements are used to organise them in the Periodic Table</p>	<p>Chemical sciences: AC9S10U06</p> <p>Explain how the structure and properties of atoms relate to the organisation of the elements in the periodic table</p>
<p>Physical sciences: ACSSU229</p> <p>The motion of objects can be described and predicted using the laws of physics</p>	<p>Physical sciences: AC9S10U05</p> <p>Investigate Newton's laws of motion and quantitatively analyse the relationship between force, mass and acceleration of objects</p>
<p>Nature and development of science: ACSHE191</p> <p>Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community</p> <p>ACSHE192</p> <p>Advances in scientific understanding often rely on technological advances and are often linked to scientific discoveries</p>	<p>Nature and development of science: AC9S10H01</p> <p>Explain how scientific knowledge is validated and refined, including the role of publication and peer review</p> <p>AC9S10H02</p> <p>Investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering</p>
<p>Use and influence of science: ACSHE194</p> <p>People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities</p> <p>ACSHE230</p> <p>Values and needs of contemporary society can influence the focus of scientific research</p>	<p>Use and influence of science: AC9S10H03</p> <p>Analyse the key factors that contribute to science knowledge and practices being adopted more broadly by society</p> <p>AC9S10H04</p> <p>Examine how the values and needs of society influence the focus of scientific research</p>