

CLASS DESCRIPTIONS JANUARY 2019

A: class title	Class description
<p>Ancient Greek Archaeology: Digging into the mysteries of the past</p> <p>Years 5-6</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • What is Archaeology? • Garbage talks: looking at material found on "digs" and how to use this to answer questions • Visit to the Ancient History Museum • Piecing it together: finding broken artefacts and how to put them back together • What lasts in the ground? • How to do a dig: excavation
<p>Astronomy: The Modern Earth</p> <p>Years K-1</p> <p>**Learning activities will go until 4.00pm only. Care is available until 5.30pm and children will play inside and outside from 4.00pm - 5.30pm. You can collect your child anytime from 4.00pm - 5.30pm.**</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • The Solar System forms • The crust of the Earth • A story of tectonic plates • The wonder of rocks and becoming a palaeontologist • The most important formula on Earth: photosynthesis

<p>Astronomy: The Solar System</p> <p>Years K-1</p> <p>**Learning activities will go until 4.00pm only. Care is available until 5.30pm and children will play inside and outside from 4.00pm - 5.30pm. You can collect your child anytime from 4.00pm - 5.30pm.**</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • A star dies and a new star forms • Planets grow • The Early Earth • Layers of the Earth • Our atmosphere
<p>Attractive Science</p> <p>Years 3-4</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Electrostatics – All charged up! • Electrostatics – May the force be with you! • Levitating rings • Hair raising science – the Van der Graff generator • Magnetic forces – What things are magnetic? • Making a compass • Magnetic forces – Gone fishing!
<p>B: class title</p>	<p>Class description</p>
<p>Bird Time Lucky</p> <p>Years 2-3</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Bird watching – what can you see? • Bird Bingo • Bird talk from a special guest • Attract a partner: design a dance to "attract" others! • Bird beaks and adaptations • Build a nest

<p>Bright Sparks</p> <p>Years 3-4</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Human circuits • Testing conductors and insulators • Fruit batteries • Circus relay • Building circuits – lights and buzzers • Steady hand game
<p>Bubbleology</p> <p>Years 1-2</p> <p>**Learning activities will go until 4.00pm only. Care is available until 5.30pm and children will play inside and outside from 4.00pm - 5.30pm. You can collect your child anytime from 4.00pm - 5.30pm.**</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • The science of bubbles • What ingredients make the best bubbles? • Unbreakable bubbles! • Spooky dry ice bubbles • Sunshine, rainbows and... GIANT BUBBLES
<p>C: class title</p>	<p>Class description</p>
<p>Call the Dr</p> <p>Years 6-7</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Principles and practice of electrophoresis Whose DNA was left behind? (Fake) Blood-based cancer diagnostics • Detecting sickle-cell anaemia • Which orange juice has the most vitamin C? • Community immunity • Genetic engineering and disease

<p>Coding with Processing</p> <p>Years 4-6</p>	<p>Learning experiences include:</p> <p>Learn to code using Processing (Java language) Processing is a visual programming language designed for creative people incorporating digital multi-media.</p> <ul style="list-style-type: none"> • Processing is based on Java so you learn Java coding • Learn to draw shapes in different colours and move them around the screen • Create your own avatar • Interact with your creations • Check out processing.org for more information
<p>CSI</p> <p>Years 5-6</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Collect evidence <ul style="list-style-type: none"> ▪ fingerprinting ▪ dental forensics ▪ footprint analysis ▪ chromatography ▪ handwriting analysis • Solve a crime in your group!
<p>D: class title</p>	<p>Class description</p>
<p>Day of the Dinosaur</p> <p>Years K-1</p> <p>**Learning activities will go until 4.00pm only. Care is available until 5.30pm and children will play inside and outside from 4.00pm - 5.30pm. You can collect your child anytime from 4.00pm - 5.30pm.**</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Fizzing dinosaur eggs • Make fossil imprints • T-rex tag • Bird feather bonanza • Touch and feel bird experience • Pasta skeleton • How big is a dinosaur's foot?

<p>DNA and Evolution</p> <p>Years 4-6</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Alike but different • Tree of genetic traits • DNA model • Dog DNA: interpreting the code • Extracting strawberry DNA • Preying on beans: evolution and natural selection • Bird beak adaptations
<p>E: class title</p>	<p>Class description</p>
<p>Earth and Solar System</p> <p>Years 2-3</p> <p>(with solar telescope!)</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Making Earth's defence - our magnetic field • The charged particle game • How do moon craters form? • Oreo moon cycle • Make a model of the Earth, Sun and Moon • Check out a solar telescope
<p>Earth and Solar System</p> <p>Years 3-4</p> <p>(with planetarium!)</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Model the scale of the solar system • Make a meteorite • Visit to the digital epsilon planetarium • Model a black hole

F: class title	Class description
<p>Falling with Style (Flight)</p> <p>Years 2-3</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • What is flight? Flight and forces • Perfecting the paper plane: dart planes, hang gliders, circular planes • Paper plane competition: whose plane can fly the furthest and for the longest? • Paper helicopters • Hot air balloons
<p>Float My Boat</p> <p>Years 5-6</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Learn about buoyancy, gravity and other water forces • Discover who Archimedes was and why he loved taking baths! • Will it sink or float? experimenting with buoyancy • Design your own cargo boat challenge. • Sticky water! Learning about water cohesion and adhesion • Experiment with gravity and the use of sails and keels.
<p>Funky Physics</p> <p>Years K-1</p> <p>**Learning activities will go until 4.00pm only. Care is available until 5.30pm and children will play inside and outside from 4.00pm - 5.30pm. You can collect your child anytime from 4.00pm - 5.30pm.**</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • We'll explode ... safely! • We'll apply force, propel and hit targets • We'll push, pull, drop and explore gravity • At the end of today we will understand Earth a little better!
<p>Future Pilots (previously known as Flight)</p>	<p>Learning experiences include:</p> <p>Day 1</p>

<p>Years 5-6</p>	<ul style="list-style-type: none"> • All things that fly • Plane manoeuvres during flight • Creating fast-moving air • The hot air challenge • Designing a fair test – Nakamura design • Paper plane testing – Nakamura and Alpine • Pocket rockets <p>Day 2</p> <ul style="list-style-type: none"> • The propeller problem • Paper plane testing – Kamikaza and Hipster • Plane launchers • Air resistance engineering • Presentation prep • Electric planes • Flying machines of the future • Presentation with parents
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G: class title	Class description
<p>Geology Rocks!</p> <p>Years 3-4</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • The rock cycle • What rock is that? • Rock abrasion • Minerals under the microscope and looking at mineral density • Build an earthquake resistant building • Meet a real, live geologist! What do they do anyway?
<p>Good Vibrations</p> <p>Years 1-2</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Sensing Sound: using your ears

- What's that Sound?
- Good Vibrations: learning that sounds are vibrations
- Making different sounds
- Sound Travels: making a string telephone
- Water and Sound
- The Science of Music
- Sound Art

H: class title	Class description
<p>The Human Circulatory System</p> <p>Years 2-3</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Make a heart, a lung, and blood • Model the circulation of blood around the body • Sheep heart and lung dissection • What can you see in the chest x-ray of a child? • Experiment: what gets our heart pumping the most?
I: class title	Class description
<p>Incredible Forces</p> <p>Years 2-3</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Balloon rockets • Egg-citing science • Push and pull dance • Magnetic forces • Make a bridge that can withstand strong push forces
L: class title	Class description

<p>Let's Get Physics</p> <p>Years 3-4</p>	<p>Learning experiences include:</p> <p>Will Egg-bert survive the day? Use your newfound knowledge and skills to make sure Egg-bert makes it (or not, that's fun too!).</p> <ul style="list-style-type: none"> • Do activities and games on energy • Test your reaction time • Know your hand preference • Learn about how you balance
<p>Let It Grow</p> <p>Years 1-2</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Do you know what it needs to grow? • Rainbow flowers • Bush tucker garden walk with a special guest • Why do leaves change colour? • Garden scavenger hunt! • Create your own grass heads

M: class title	Class description
<p>Matter Mayhem</p> <p>Years K-1</p> <p>**Learning activities will go until 4.00pm only. Care is available until 5.30pm and children will play inside and outside from 4.00pm - 5.30pm. You can collect your child anytime from 4.00pm - 5.30pm.**</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • It's all about adding and subtracting and making something new • Do elephants use toothpaste? • Is slime really slippery? • Do cupcakes really need all those ingredients?

<p>Magic Tricks</p> <p>Year 1</p> <p>**Learning activities will go until 4.00pm only. Care is available until 5.30pm and children will play inside and outside from 4.00pm - 5.30pm. You can collect your child anytime from 4.00pm - 5.30pm.**</p>	<p>Learning experiences include:</p> <p>Make some magic (it's really just science)!</p> <ul style="list-style-type: none"> • First, make your wand • Walking on water • Lemon volcano • Magic potion • Heat changing slime • Electric eels • Put on a show!
<p>Microscope Magic</p> <p>Years 4-6</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Become a master at using a microscope • Collect and examine your own DNA • Discover the secret life of little critters living in our pond water • Compare the cells collected from humans, plants and bacteria • Explore the life cycle of a Sea Monkey
<p>P: class title</p>	<p>Class description</p>
<p>Programming Electronics with Micro:Bit</p> <p>Years 3-4 Years 5-6</p> <p>** Two separate classes will be run dividing the students into years grouped by Stage. Teachers will deliver content targeted for the appropriate age groups. **</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Learn to think like a Computer Scientist! • Discover the hardware and software concepts behind everyday objects like TV's, microwaves and traffic lights • Learn the difference between hardware and software • Create 'new technologies' and solve problems using hardware and software • Learn to program electronics with the Micro:bit!

R: class title	Class description
<p>Rube Goldberg Machines</p> <p>Years 3-4</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Learn about and make: Levers, inclined planes, wheel and axels, pulleys, wedges, screws and gears • Create a simple Rube Goldberg machine and exhibit it to the class • Check out Rube Goldberg machines on You Tube for the kinds of things that you could make!

S: class title	Class description
<p>Science is Real</p> <p>Years 1-2</p> <p>**Learning activities will go until 4.00pm only. Care is available until 5.30pm and children will play inside and outside from 4.00pm - 5.30pm. You can collect your child anytime from 4.00pm - 5.30pm.**</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Purple celery experiment • How much does a guinea pig eat? • Marble physics • Where is my tree? • Film canister rockets • It's all natural
<p>Smart Materials</p> <p>Years 5-6</p>	<p>Learning experience include:</p> <ul style="list-style-type: none"> • Exploring the key concepts of chemistry • What are atoms, molecules and elements? • What are polymers and plastics? • What are smart materials? • Experimenting and playing with polymers • Thermochromic polymers – colour change slime!

<p>Special Effects Science</p> <p>Years 4-5</p>	<p>Learning experience include:</p> <ul style="list-style-type: none"> • Making Spooky potions that change colour • Making and using a variety of invisible inks • A brain dissection • Spreading the Zombie virus • Making fake blood • Creating fake wounds
<p>Super Science</p> <p>Years 1-2</p> <p>**Learning activities will go until 4.00pm only. Care is available until 5.30pm and children will play inside and outside from 4.00pm - 5.30pm. You can collect your child anytime from 4.00pm - 5.30pm.**</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Proprioception – your place in space • Animal athletes – can you jump as high as a flea? • Sock walk – what do our feet find in the bush? • Whose scat is that? Make animal scat (playdough) • Looking at our ears and how we hear – make an amplifier

T: class title	Class description
<p>Take to the Skies (previously known as Flight)</p> <p>Years 4-5</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Discover things that fly • Making the best paper plane • How are birds able to fly? • Seeds that fly • Creating a seed that can fly • Flying paper planes – Phantom, Nakamura and Cardinal

- Make your own flying toy!
- How heavy is air?

V: class title	Class description
<p>The Vikings: Longships, Compasses and Magnetism</p> <p>Years 5-6</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Learn who the Vikings were and why were their ships the best of their time? • Make your own Viking longship • Investigating the compass • Discover magnetism with magnetic sand and magnetic slime • Create your own compass • Use your new skills to take part in a Treasure Hunt!
<p>Volcanology</p> <p>Years 5-6</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Volcanoes intro – everything you need to know! • Types of volcanoes • Let's erupt! • Volcanic rocks – trip to the Macquarie Rock Lab • The dangers of volcanoes and their aftermath • Q&A with a special guest Volcanologist
W: class title	Class description
<p>Weaponry of Ancient Rome: Catapults</p> <p>Years 4-5</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Science of catapults: Forces, Motion and Energy • Build a Roman Shield • Ancient Roman Weaponry Show at the Ancient History Museum • Flying Balloons • Build a mini catapult

	Romans vs Barbarians: The battle has begun! Your only weapons are marshmallows to attack and a cardboard shield to protect you and your team. Use your knowledge of forces, motion, and energy to seize the day!
<p>We Build this City</p> <p>Years 1-2</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Become an engineer: draw, design & build your own objects! • Modelling: teacher models what you need to do/think of when designing and building – until you’re ready to do it by yourself! • Explore techniques & experiment with materials – see what works and what doesn’t • Work as a team to design & build objects • Take home your creations!
<p>The Wonder Gears</p> <p>Years 4-5</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Simple machines- why use gears? • How to make working gears DIY • Building gear train models using different gear types • Gaining control- how gears impact torque, direction and speed • Being an engineer- designing and building complex machines to solve everyday problems with gears
<p>What’s the Matter?</p> <p>Years 3-4</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none"> • Making a thermometer • Chemistry magic show • Molecule tag • Dancing ooblek • See an invisible gas • Classic candle experiment • Test items: are they acids or bases?

Z: class title	Class description
<p>Zippy Balloon Science</p> <p>Years 3-4</p>	<p>Learning experiences include:</p> <ul style="list-style-type: none">• The exploding bag• Flushed away• Making ice-cream• Making sherbet• Heat conduction activity• Make a hovercraft• Marshmallow puff tube experiment