New Excursion Information for Teachers
Valid April 1, 2020 to March 31, 2021
Explore, Learn & Be Amazed

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Contact Us  |  02 6359 3900  |  Jenolancaves.org.au
Inspirational

Jenolan is famous for spectacular beauty. School groups can choose to tour one or more of a range of sensational show caves.

The Jenolan Caves Karst Conservation Reserve is located in the Blue Mountains World Heritage Area, and has been protected since 1866. Jenolan Caves is the ideal destination for school groups, and is best described as ‘Nature’s Classroom’.

Truly unique surrounds offer students the opportunity to experience rare wildlife, unchanged and contrasting ecosystems, and geological formations wilder than the imagination.

We offer experiential learning through such activities as Adventure Caving, abseiling, guided tours and new science tours.

Explore the World’s Oldest Caves

In 2006, scientists from CSIRO, the University of Sydney and the Australian Museum revealed that Jenolan’s limestone caves date back more than 340 million years, to the Carboniferous, making them millions of years older than any reported date for an open cave anywhere in the world.

The finding was the result of a variation of conventional potassium-argon dating, which can calculate the age of minerals by measuring levels of decay caused by radioactive potassium. The age of the caves was determined by dating the clay minerals that crystallised when volcanic ash entered the caves.
Links to Curriculum
Choose from an existing program or ask us to develop a package to fit the needs of your students and fulfil the learning outcomes of specific key learning areas outside the generic requirements. This document shows you which areas of the NSW school syllabus we can help you with.

Risk Management & Insurance
We will be more than happy to provide you with the risk management document, Venue and Safety Information for School Excursion, as required by the NSW Department of Education and Training. This document covers many issues such as first aid, bush fires, accidents and lost or missing students.
Our Certificate of Currency is also easily provided.

FREE Teacher Resources
Newly developed pre and post excursion curriculum resources are available for our activities. These tools help to make the teachers job easier and the student experience more enriching.

1. At School
Pre-excursion, we provide reading for you, the teacher, plus an outline of a full science lesson. You can use the lesson either before the excursion, to prepare your students, or after the excursion to reinforce their learning.

2. At Jenolan
Fun, fascinating, curriculum-based above and/or below ground activities.

3. Back at School
We provide you with a list of sample questions, tasks and short projects that will stimulate the minds of your students and reinforce their caves experiences.
Activities for Stages 1, 2 & 3

The Lucas Cave Tour

The 1.5 hour Lucas Cave tour has been the mainstay of our school learning activities for many years, and never loses its popularity. We can tailor the content of this tour to your specific study requirements—just let us know.

The Lucas Cave tour provides a great overview of caves—how they form (geology and chemistry), their unique environment (biology), and how they were discovered (history and Aboriginal culture).

It is a great tour for all size school groups, including very large groups. If you have already explored the Lucas Cave, and your school group is under 45 students, we can easily provide similar commentary in the Chifley or Imperial Caves.

If your group is less than 24 students, they can experience the Orient Cave, or the Temple of Baal Cave or the River Cave.

Early Stage 1 & Stage 1 - STe-4WS, ST1-10LW, ST1-11LW, ST1-9ES

For very young children, this activity fosters curiosity and wonder while developing their skills in questioning, observing and exploring their world.

Children learn to describe external features, changes and growth of living things. They learn about the ways that environment provides for the special plants and animals that live in and around Jenolan Caves.

Stage 2 - ST2-8ES, ST2-11LW

Children learn to describe changes to the caves and surrounding area over time, from natural processes and human activity.

They learn about steps that are taken to conserve the caves. They learn to describe the life cycles of things that live in and around caves, how scientific knowledge helps people understand the effect of their actions on the environment and on the survival of living things.

Stage 3 - ST3-9ES, ST3-10LW, ST3-11LW

Students learn:

• to explain rapid change at the Earth’s surface caused by natural events, using evidence provided by advances in technology and scientific understanding.

• to describe how living things have structural features and other adaptations which help them to survive in the special environment around the caves and even the extreme environment inside the caves.
Additional Activity for Stage 3

Adventure Caving

For Adventure Caving, students must be at least 10 years old—making it ideal for Stage 3. Both boys and girls enjoy this activity, which is also extremely popular for adults. Participants do not need any experience to do our Adventure Caving activity.

Adventure Caving is challenging, but also fun. For the PDHPE syllabus, Stage 3 children learn about:

- developing and maintaining a positive self-concept, as it is excellent for self-confidence
- gender images and expectations, as this activity is highly inclusive.
- developing and maintaining friendships and working relationships (teamwork).
Help Students Work Better Together - Adventure Caving

Geared up with personal head-lamps and overalls, students will negotiate squeezes, climbs and crawls, and feel like real explorers, while learning about the cave environment up close.

Environmentally responsible and overseen by expert guides, it is a fantastic way to explore the underworld. The students must help each other and rely on teamwork to make their way through the caves. NO EXPERIENCE NECESSARY.

There are Adventure Caves to suit different ages and group sizes. The Plughole Adventure includes an abseil into the entrance, weather permitting. (For students age 10 and over.)

Adventure Caving is popular with schools, as it helps children develop a positive self-concept in a unique, non-competitive, yet challenging, physical activity.

Many students that try Adventure Caving, will take it up as a sport later on, along with rappelling, rock climbing, canyoning, hiking, mountain biking and similar mountain based activities.

Adventure caving involves helping each other, learning amazing new skills, focusing, manoeuvring through unfamiliar and difficult terrain and even making friends.

Carefully crawling, climbing, balancing, squeezing, even abseiling, involves flexibility and the use of all muscle groups.

Without the need to be ‘athletic’, Adventure caving is highly inclusive, beneficial for boys, girls and teachers. Participants do not even need to be particularly fit or thin. They just need average flexibility and agility.

Exploring a deep, undeveloped cave like a real speleologist brings students as close to nature as they can possibly get.

Importantly, students can immediately feel the positive results of working together, listening, obeying instructions from experts and carefully controlling their movements.

Caving is a challenging and exhilarating lifestyle activity that is increasing popular with all ages.
Inspiring Future Scientists

Looking for a new, inspiring excursion for your Stage 4 and 5 science students – one that meets a range of requirements in the new NSW Science Syllabus? We have developed 2 exciting new activities that shine a spotlight on current scientific investigations in Jenolan’s Chifley Cave – ‘Science in the Chifley’ and ‘Science Karst Walk’.

At Jenolan, teachers and students experience Australia’s most spectacular caves up close. These 2 new activities take them a step further, revealing current experiments by the Australian Nuclear Science and Technology Organisation (ANSTO), the CSIRO and the Australian Museum – real research done in a real environment.

Globally, the Chifley Cave is an important cave science site, where ANSTO is conducting the world’s longest-running cave monitoring program. Scientists have discovered 88 types of new methanotropic bacteria in the Chifley cave plus 8 new phosphate minerals. Science in the Chifley’ takes students on a fascinating journey through the cave, shedding light on all current research.

On the ‘Science Karst Walk’, students explore the Nettle Cave. Highlights include inspection of a palaeontological dig, where approximately 2,000 bone fragments have been found, revealing much about animals, some now extinct, that lived in the Jenolan area up to 200 years ago. Students also see stromatolites, massive structures produced by colonies of cyanobacteria, which started growing around 20,000 years ago and are still growing.

Science teachers know how important it is to relate classroom learning to the real world. Nick Coucouvinis, teacher from Sydney Montessori School, said,

“The thing I was really excited about was the fact that we would be looking at currently running experiments and seeing what sort of science is being done in the cave right now. I think that was particularly important for my students to see, to give them an idea that science is continually evolving. I’m a big believer in enquiry project based learning, and I think that experiences like this are what will really help students develop that perception of science as an exciting subject. It really gets them excited about learning.”

So, now teachers have a wider choice at Jenolan - the traditional Lucas tour, ‘Science in the Chifley’, ‘Science Karst Walk’, plus the increasingly popular Plughole Adventure Caving experience, which is great for self-confidence and teamwork.
NEW Activities for Stage 4

NEW - Science Karst Walk

SC4-12ES, SC4-13ES, SC4-14LW, SC4-15LW

Students learn:

- how the theory of plate tectonics changed ideas about the structure of the Earth and continental movement over geological time,
- how the theory of plate tectonics explains earthquakes, volcanic activity and formation of new landforms,
- how global systems rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere, including the carbon cycle (ACSSU189),
- that ecosystems consist of communities of interdependent organisms and abiotic components of the environment (ACSSU176),
- how energy flows through ecosystems, including input and output through food webs (ACSSU176),
- how changes in some biotic and abiotic components of an ecosystem affect populations and/or communities,
- ways that Aboriginal and Torres Strait Islander peoples’ cultural practices and knowledge of the environment contribute to the conservation and management of sustainable ecosystems,
- to evaluate some examples in ecosystems, of strategies used to balance conserving, protecting and maintaining the quality and sustainability of the environment with human activities and needs,
- to describe scientific evidence that present-day organisms have evolved from organisms in the past,
- to relate the fossil record to the age of the Earth and the time over which life has been evolving.

NEW - Science in the Chifley

SC5-13ES, SC5-15LW, SC5-12ES, SC5-16CW, SC5-17CW, SC5-14LW

Students learn:

- the dynamic nature of models, theories and laws in developing scientific understanding of the Earth,
- how advances in scientific understanding of processes that occur in the Earth, influence the choices about resource use and management,
- how the theory of plate tectonics changed ideas about the structure of the Earth and continental movement over geological time, and explains earthquakes, volcanic activity and formation of new landforms,
- how global systems rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere, including the carbon cycle (ACSSU189),
- about interactions between components and processes within biological systems,
- how biological understanding has advanced through scientific discoveries, technological developments and the needs of society,
- examples of how multicellular organisms respond to changes in their environment,
- that ecosystems consist of communities of interdependent organisms and abiotic components of the environment (ACSSU176),
- that energy flows through ecosystems, including input and output through food webs (ACSSU176),
- how changes in some biotic and abiotic components of an ecosystem affect populations and/or communities,
- examples in ecosystems, of strategies used to balance conserving, protecting and maintaining the quality and sustainability of the environment with human activities and needs,
- how theories and laws about matter have been refined as new scientific evidence becomes available,
- to investigate a range of chemical reactions that occur in non-living systems and involve energy transfer, including combustion (ACSSU179), the reaction of acids including metals and carbonates (ACSSU179), corrosion, precipitation, neutralisation, decomposition, respiration and reactions involving acids as in digestion (ACSSU179),
- to construct word equations from observations and written descriptions of a range of chemical reactions,
- that new substances are formed during chemical reactions by rearranging atoms rather than creating or destroying them.
Activities for Stage 4

The Lucas Cave Tour

SC4-13ES, SC4-14LW, SC4-17CW

Students learn:

• to explain how advances in scientific understanding of processes within and on the Earth, influence the choices people make about resource use and management.
• about the formation of landforms and limestone, weathering, erosion, deposition, fossils, water, water cycle and even cave dating methods.
• to relate the structure and function of things that live in and around the caves to their classification, survival and reproduction, such as marsupials, monotremes, bats and even more unusual organisms.
• to explain how new biological evidence, such as fossil discoveries, changes people’s understanding of the world’s history.

Adventure Caving

PDHPE - 4.1, 4.9, 4.10, 4.13, 4.14

Students learn:

• self-confidence and how to improve their capacity to manage challenging circumstances,
• to participate in and promote enjoyable lifelong physical activity,
• how personal strengths and abilities contribute to enjoyable participation in physical activity,
• the benefits of a balanced lifestyle and participation in physical activity,
• to develop and apply the skills that enable them to adopt and promote healthy and active lifestyles,
• demonstrates cooperation and support of others in social, recreational and other group contexts
• to engage successfully in a wide range of movement situations that display an understanding of how and why people move.
New Activities for Stage 5

NEW - Science Karst Walk

SC5-12ES, SC5-13ES, SC5-14LW, SC5-15LW

Students learn:

• how the theory of plate tectonics changed ideas about the structure of the Earth and continental movement over geological time,
• how the theory of plate tectonics explains earthquakes, volcanic activity and formation of new landforms,
• how global systems rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere, including the carbon cycle (ACSSU189),
• that ecosystems consist of communities of interdependent organisms and abiotic components of the environment (ACSSU176),
• how energy flows through ecosystems, including input and output through food webs (ACSSU176),
• how changes in some biotic and abiotic components of an ecosystem affect populations and/or communities,
• ways that Aboriginal and Torres Strait Islander peoples’ cultural practices and knowledge of the environment contribute to the conservation and management of sustainable ecosystems,
• to evaluate some examples in ecosystems, of strategies used to balance conserving, protecting and maintaining the quality and sustainability of the environment with human activities and needs,
• to describe scientific evidence that present-day organisms have evolved from organisms in the past,
• to relate the fossil record to the age of the Earth and the time over which life has been evolving.

NEW - Science in the Chifley

SC5-13ES, SC5-15LW, SC5-12ES, SC5-16CW, SC5-17CW, SC5-14LW

Students learn:

• the dynamic nature of models, theories and laws in developing scientific understanding of the Earth,
• how advances in scientific understanding of processes that occur in the Earth, influence the choices about resource use and management,
• how the theory of plate tectonics changed ideas about the structure of the Earth and continental movement over geological time, and explains earthquakes, volcanic activity and formation of new landforms,
• how global systems rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere, including the carbon cycle (ACSSU189),
• about interactions between components and processes within biological systems,
• how biological understanding has advanced through scientific discoveries, technological developments and the needs of society,
• examples of how multicellular organisms respond to changes in their environment,
• that ecosystems consist of communities of interdependent organisms and abiotic components of the environment (ACSSU176),
• that energy flows through ecosystems, including input and output through food webs (ACSSU176),
• how changes in some biotic and abiotic components of an ecosystem affect populations and/or communities,
• examples in ecosystems, of strategies used to balance conserving, protecting and maintaining the quality and sustainability of the environment with human activities and needs,
• how theories and laws about matter have been refined as new scientific evidence becomes available,
• to investigate a range of chemical reactions that occur in non-living systems and involve energy transfer, including combustion (ACSSU179), the reaction of acids including metals and carbonates (ACSSU179), corrosion, precipitation, neutralisation, decomposition, respiration and reactions involving acids as in digestion (ACSSU179),
• to construct word equations from observations and written descriptions of a range of chemical reactions,
• that new substances are formed during chemical reactions by rearranging atoms rather than creating or destroying them.
**Activities for Stage 5**

**The Lucas Cave Tour**

SC5-13ES, SC5-15LW, SC5-17CW

Students learn:
- how plate tectonics created the Great Dividing Range
- the impact of natural events, such as floods,
- about the communities of interdependent organisms that live in and around the caves, the rare animals, the fossilised lifeforms that have lived at Jenolan in ages past, the effect of changes to the ecosystem,
- how Jenolan balances conservation, and sustainability with human activities and needs,
- about the chemical reaction that forms calcite crystal, and the gases that are present in caves – radon, methane and carbon dioxide. Students can hear about the K-Ar dating method that has established the age of the caves.

**Adventure Caving**

PDHPE—5.1, 5.2, 5.10, 5.13, 5.14

Students learn:
- self-confidence and how to improve their capacity to manage challenging circumstances,
- how they can support their own and others’ sense of self,
- to reflect on and respond positively to challenges,
- to participate in and promote enjoyable lifelong physical activity,
- to enhance their own and others’ enjoyment of physical activity,
- to adopt roles and responsibilities that enhance group cohesion and the achievement of personal and group objectives,
- to confidently uses movement to satisfy personal needs and interests.
School Group Accommodation

The Gatehouse

The Gatehouse is a comfortable, historic, 3-storey bush-walkers lodge, containing 14 rooms. It is a heritage-listed building, built in 1926 as staff accommodation. The Gatehouse can sleep 57 students, and has a separate flat for teachers, containing 1 queen bed, 1 double sofa bed and 2 single beds. There is a unisex bathroom on each floor. Two floors each have common rooms with fridges and cooking facilities. We provide bed linen and towels, but students need to bring their own toiletries.

The Mountain Lodge

The Mountain Lodge is our motel-style accommodation. All rooms have a king size bed (can be split to form two singles), en-suite bathroom, television and iron. Four rooms have additional beds to cater for up to 4 students in a room. 18 Rooms have additional beds to cater for up to 3 students in a room.
Chisolm’s Restaurant

Breakfast and Dinner is served in our Chisolm’s Restaurant, the grand dining room, built between 1906 and 1926.

Your school name ........................................................................................................................................................................

Your arrival date ...........................................................................................................................................................................

Breakfast
Full buffet breakfast

Packed Lunch
☐ tick if lunch is required
☐ 1 piece of fruit
☐ 1 packet of crisps
☐ 1 fruit popper
☐ 1 sandwich per primary student or
☐ 2 sandwiches per secondary student

Sandwich fillings may include ham, cheese, tomato, lettuce, tuna, turkey, chicken & cucumber

Dinner Mains (tick 1 box only)
☐ Roast Beef, with steamed vegetables, roast potato and gravy
☐ Roast Chicken, with steamed vegetables, roast potato and gravy
☐ Beef Lasagne with a basil and tomato sauce, salad and roast potato
☐ Chicken Drumstick with mash potato, steamed vegetables and gravy

Dinner Desserts (tick 1 box only)
☐ Assorted jelly cups
☐ Chocolate Mousse
☐ Fresh Seasonal Fruit Salad
☐ Assorted Ice Cream

Dinner Beverages
Juices and soft drink are available at additional cost. Water will be available on the table.

Special Dietary Needs
We can cater to all dietary needs, eg vegetarian, dairy free, gluten free. Please list any special dietary requirements below:
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Chisolm’s Restaurant

IMPORTANT
Please complete this menu form at least 14 days before your stay, otherwise the ‘default’ dinner, Roast & Assorted Ice Cream will be served.
Return this menu to:
groups@jenolancaves.org.au
### Activity Prices

<table>
<thead>
<tr>
<th>Activity</th>
<th>Stage</th>
<th>Max No.</th>
<th>Duration</th>
<th>Student</th>
<th>Adult*</th>
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</thead>
<tbody>
<tr>
<td>Adventure Caving</td>
<td>Stage 3-6</td>
<td>11+1</td>
<td>2-3 hrs</td>
<td>$86</td>
<td>$108</td>
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<tr>
<td>Science in the Chifley**</td>
<td>Stage 4-5</td>
<td>20</td>
<td>1.5 hrs</td>
<td>$15</td>
<td>$28</td>
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<tr>
<td>Science Karst Walk**</td>
<td>Stage 4-5</td>
<td>20</td>
<td>1.5 hrs</td>
<td>$15</td>
<td>$28</td>
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<td>Lucas Cave***</td>
<td>Stage 1-6</td>
<td>60</td>
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<td>$15</td>
<td>$28</td>
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<td>Chifley Cave***</td>
<td>Stage 1-6</td>
<td>40</td>
<td>1 hr</td>
<td>$15</td>
<td>$28</td>
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<tr>
<td>Imperial Cave***</td>
<td>Stage 1-6</td>
<td>35</td>
<td>1 hr</td>
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<td>$28</td>
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<tr>
<td>Diamond Cave***</td>
<td>Stage 1-6</td>
<td>30</td>
<td>1.5 hr</td>
<td>$30</td>
<td>$40</td>
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<tr>
<td>Orient Cave****</td>
<td>Stage 1-6</td>
<td>25</td>
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<td>$40</td>
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<td>Temple of Baal Cave****</td>
<td>Stage 1-6</td>
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<td>$40</td>
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<td>River Cave****</td>
<td>Stage 1-6</td>
<td>25</td>
<td>2 hrs</td>
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<td>$50</td>
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<td>Guided Bush Walks**</td>
<td>Stage 1-6</td>
<td>20</td>
<td>1 hr</td>
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### Accommodation & Meal Price

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<tr>
<th>Accommodation</th>
<th>Max. no.</th>
<th>Primary Student</th>
<th>High School Student</th>
<th>Adult*</th>
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<tbody>
<tr>
<td>Gate House (Bunks)</td>
<td>57</td>
<td>$32.50</td>
<td>$32.50</td>
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<tr>
<td>Mountain Lodge</td>
<td>78</td>
<td>$43.50</td>
<td>$43.50</td>
<td>$48.50</td>
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<tr>
<td>Cave House 'Traditional' Rooms</td>
<td>16</td>
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<td>Binoomea Cottage</td>
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<td>Breakfast</td>
<td></td>
<td>$15</td>
<td>$21</td>
<td>$21</td>
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<tr>
<td>Packed Lunch</td>
<td></td>
<td>$14</td>
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</tr>
<tr>
<td>Dinner</td>
<td></td>
<td>$16.50</td>
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</tbody>
</table>

Extra Cost:
- Soft Drink: $12 per jug
- Juice: $16 per jug

### Fees for Overalls

If you choose Adventure Caving, we provide helmets and headlights. If the weather is fine for abseiling, we provide safety harnesses. All participants must wear enclosed, non-slip shoes and clothes that can get dirty and that cover the entire body, for protection, especially the knees, elbows and shoulders. This means long pants (baggy or stretchy), long sleeve t-shirts or light jumpers. Tights are inadequate.

We provide overalls for teachers, at no charge. For groups (including teachers) of:
- 24 or less, we can book overalls for students, at $10 each.
- 25 or more, we cannot provide overalls for students.

### Tour Times

Guided activities should be between 9am and noon and/or between 2pm and 5pm.

If you need a guided activity, other than Adventure Caving, before 9am, between noon and 2pm or after 5pm, we can do it. However, we must charge an extra $1.00 for each child, to cover the cost of additional casual staff.*

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Note: If the Jenolan accommodation you choose cannot sleep all students and teachers in your group, any overflow to other accommodation will be charged at the advertised rate for each room type.

^ A 25% surcharge will apply, if requested to provide extra tours, without filling tours to capacity.

* For every 20 students, 1 teacher is admitted free. Drivers are admitted free, except on Adventure Caving.

** Tour start times are staggered for larger groups.

*** Tour start times are staggered 15 minutes apart for larger groups.

**** Tour start times are staggered 30 minutes apart for larger groups.
Explore, Learn & Be Amazed

Jenolan Caves
explore marvel stay

02 6359 3900
Jenolancaves.org.au