

2018 VCE Outdoor and Environmental Studies examination report

General comments

The 2018 Outdoor and Environmental Studies examination was well received, with most students attempting all questions.

The following observations may assist students in future examination preparation:

- Students should be able to apply concepts taught in the classroom to a variety of contexts. Generic responses, particularly around relationships, were common and could not attract full marks. Students need to ensure that they read the question fully and that the response they provide answers the question that is asked, with specific examples included where appropriate.
- It was evident in a number of responses that there were sections where students were only able to respond strongly on one part/factor rather than all listed. It is essential that all prescribed content in the study design is covered. In particular, Unit 3, Area of Study 2, dot points 1–3; Unit 4, Area of Study 1, dotpoints 2 and 5; and Area of Study 2, dot points 5 and 6.
- When selecting an outdoor environment to use in their response, students must consider the question first. They should aim to select a specific environment and ensure that they reference it. High-scoring responses generally included references to a very specific location as this allowed the students to discuss one example in detail. When areas such as ‘Surf Coast and inland to Ballarat’ are referenced, students’ responses tended to include less specific detail as they could not draw on knowledge about one particular place.
- Locations for outdoor experiences should be chosen with careful consideration. A range of dot points on each practical experience should be covered and visits to locations that showcase aspects of the study design should be included, whether it be green building design, management strategies in place, examples of urban planning or integrated farming, primary industry, and so on. Various places can be visited when travelling to or from a particular location, such as visiting a wind farm, the indigenous interpretation walk at Point Addis or showing examples of tourism and commercialisation while travelling to the Surf Coast.
- Students need to ensure that they understand key terminology such as biodiversity, urban planning and climatic variation, and know how to describe these using examples.
- Students must respond appropriately to command terms. Where two terms are used in one question, students must ensure that they address both. For example, where a question requires students to describe and analyse, students are first expected to describe a particular feature/concept and then analyse it. It is essential that students realise that the terms ‘evaluate’ and ‘analyse’ are not used interchangeably. When asked to evaluate, students are generally expected to provide differing points of view or positives and negatives and then provided an overall judgment that is supported by their response. An analysis requires the student to look at cause and effect, meaning that they are looking at a situation or feature and then identify the result of the situation.

- Students should consider planning extended responses or those that have multiple command terms to ensure that they address all aspects of the question. This can be done in the extra space at the end of the examination.
- Students should ensure that they write only on the lines provided. If they need additional space for their answer they should use the extra space at the back of the book and label the response clearly.

Specific information

Note: Student responses reproduced in this report have not been corrected for grammar, spelling or factual information.

This report provides sample answers, or an indication of what answers may have included. Unless otherwise stated, these are not intended to be exemplary or complete responses.

The statistics in this report may be subject to rounding resulting in a total more or less than 100 per cent.

Question 1

Marks	0	1	2	3	Average
%	2	10	40	47	2.3

Students were required to explain the relationship that Indigenous people had with an outdoor environment prior to European settlement. Students were asked to provide specific examples from an environment that they had visited or studied.

The concept of relationship can be broken down through identifying perception, interactions and impacts; however, students must know how to write about relationships holistically. A large number of students provided a list of interactions, but simply listing an interaction does not explain the nature of the relationship. If students used the common example of firestick farming, they then also needed to discuss why and how this practice was used and what it meant to the Indigenous community. They needed to ensure that they covered the perception aspect of the relationship concept. Students were also required to specifically link their response to an outdoor environment. Students must know about specific Indigenous communities and that the interactions they are referencing are specific to that particular community and the environment they are studying. Not all Indigenous communities participated in the same interactions and some interactions were only conducted in very specific areas.

The following is an example of a high-scoring response.

Outdoor environment: *Crayfish Bay*

The Cadubanud people of Crayfish Bay had a strong relationship with their environment, perceiving themselves as custodians or caretakers of the land, leading to interactions like hunting crayfish and gathering limpet shells for food to have very little negative impacts on the environment as the shell and bone remains from food were thrown back into sand dunes where the nutrients were released into the soil, improving the biodiversity of Crayfish Bay.

Question 2

Marks	0	1	2	3	4	5	6	7	8	9	Average
%	5	4	6	9	11	12	15	15	13	10	5.3

Students needed to explain how the characteristics of biological isolation, geological stability and climatic variations have influenced the development of Australian flora and fauna and the broader outdoor environment.

Often students could provide only a generic definition of the characteristics. Many students were only able to explain one or two characteristics in detail and found it difficult to provide specific examples.

The following is an example of a high-scoring response.

Biological isolation: when Australia separated from Gondwana flora and fauna had to adapt to new conditions, resulting in them being endemic, eg. The platypus originally evolved from the Gondwana water rat so it could reach food sources unique to Australia. The broader environment made this adaption too by evolving independently of the rest of the world.

Geological stability: Due to being located on a single tectonic plate away from its boundaries, Australia has low tectonic and volcanic activity levels, resulting in a flat, dry environment where soils aren't refreshed and droughts and floods are common. This meant that flora and fauna had to adapt to the poor soil and lack of water. Eg. The banksia tree developed cluster roots to increase its efficiency in absorbing nutrients from the poor nutrient deficient soil.

Climatic variations: After separating from Gondwana, Australia drifted north into a hotter, drier climate, meaning the environment had to adapt to survive in the new conditions including the flora and fauna. Eg. the kangaroo can concentrate its urine and reduce fertility to reduce moisture loss.

Question 3a.

Marks	0	1	2	3	4	5	6	7	8	9	10	11	12	Average
%	1	1	2	4	7	9	10	12	13	12	11	8	10	7.6

Students were required to select an outdoor environment that they had visited or studied and provide specific examples of how the environment was used for recreation, primary industry, conservation and tourism.

In answering this question, students could have reflected more on their practical experiences and showcased their knowledge of specific environments that they had visited. Students who tried to use a broader area (such as the Surf Coast and inland to Ballarat) generally provided answers that lacked sufficient detail. Students should know a handful of specific locations and be able to reflect on these locations in detail. Most students could describe the recreation activities in their selected area but a number were unable to correctly identify a primary industry operating in the area, with some listing commercialisation and tourism industry examples (such as shops, houseboats, outdoor adventure companies/tours) rather than farming, mining, logging and so on. Conservation responses in general seemed to lack specific reference or examples from the area visited and tourism, even when covered well (incorrectly) in primary industry, also lacked specific examples.

Students are encouraged to interrogate their practical experiences to ensure that they fully understand how the experience relates to the concepts covered.

The following is an example of a high scoring response:

Outdoor environment: *Mitchell River Area*

- Recreation: *people visit the national park for bushwalking as a place for enjoyment
 - *they walk on hardened tracks and camp in designated camping areas to reduce impacts on the environment
 - *the creation of paths however creates erosion and habitat fragmentation
- Primary Industry: *people in the area are often dairy farmers
 - *dairy farmers enter voluntary agreements with the East Gippsland Catchment Management Authority (EGCMA) and fence cattle off away from the river to develop sustainable practices while using the environment as a resource
 - *this reduces turbidity and water contamination of the Mitchell River
- Conservation: *EGCMA installs timber structures into the river to provide habitats and breeding facilities for fish in the Mitchell River
 - *this is due to the perception that the river is a place to protect and preserve for future generations
 - *it allows fish to maintain high populations and avoid predators
- Tourism: *The Coonawarra Farm Resort sees the environment as a resource to gain money
 - *they provide horse riding tours to camping groups and the general public
 - *this creates soil compaction and erosion due to the hard hooves of the horses.

Question 3b.

Marks	0	1	2	Average
%	6	25	69	1.7

Students were required to identify a recreational activity associated with the environment selected for part a. They then had to describe the relationship that participants may have with the environment while participating in the activity.

Students generally responded well to this question, with most being able to identify an appropriate activity and the subsequent relationship. Most students wrote about perceptions formed, which was appropriate for this response.

The following is an example of a high-scoring response.

Activity: *Bushwalking*

Description: *they perceive the environment as a place for exercise and a challenge

*they bushwalk on tracks in the mitchell river, camping at designated camping zones

*this causes erosion and habitat fragmentation however impacts are concentrated to one areas to allow the rest of the national park to flourish

Question 4

Marks	0	1	2	3	Average
%	22	12	30	36	1.8

Students were required to identify a piece of art, music or writing that they had studied this year and explain how it depicts a relationship with the environment.

Many students did not attempt this question. Many found it difficult to identify a specific piece but students who were able to, generally responded well to the question. Some students used current news items such as shark attacks and, while not incorrect, they tended to discuss society's response to the events rather than how the piece depicted the environment.

The following is an example of a high scoring response.

Piece of music, art or writing: *Michael Jackson, Earth Song*

Michael Jackson's Earth Song and music video express the many negative impacts that humans have inflicted on the earth over time, showing detailed images of forests being destroyed and rivers drying up. It conveys the environment as fragile and that it should be protected and worshiped instead of destroyed and exploited.

Question 5a.

Marks	0	1	2	3	4	5	Average
%	6	5	10	18	30	32	3.6

Students were required to select an environmental conflict from the list provided and explain the conflict, including referencing the different parties involved and the situation that led to the conflict.

Many students were unable to correctly identify the parties involved and provide an explanation of the conflict. Grazing in the Alpine National Park was the most common response selected and extraction of coal seam gas the least common.

The following is an example of a high scoring response.

desalination plant at Wonthaggi

After concerns about Victoria's water supply's being insufficient for the growing population, especially in the event of a drought, the Victorian State Government released a plan to construct a desalination plant at Wonthaggi to secure an adequate source of clean water for Victorians. However, a group opposed to this decision known as Watershed Victoria (previously "your water your say"), argued the desal plant would have to big of an environmental impact and other water saving techniques should be tried first.

Question 5b.

Marks	0	1	2	3	4	Average
%	10	5	12	19	54	3

Students were required to correctly identify the two main opposing groups in the selected conflict and describe a method each group used to influence the decision-makers.

Students who had a good understanding of the conflict were able to respond to this question well. The answer needed to be factual, with the method described being one that the appropriate group had used or is using. An example of a hypothetical method the group could have used was not acceptable. This is specified content that students should know in depth.

The following is an example of a high-scoring response.

Group 1: Victorian State Government (VSG) The VSG set up an information centre in the town of Wonthaggi to provide local's and visitors with up-to-date information on the proposed plans

Group 2: your water, your say (ywys) took direct action by protesting in the main street of Wonthaggi to show their disapproval of the plant's construction near their town

Question 5c.

Marks	0	1	2	3	4	Average
%	38	8	12	18	23	1.8

Students had to evaluate the effectiveness of a process that has been used or could be used by land managers and/or the government to resolve the selected conflict.

Students seemed to have a good grasp on the difference between legislation and litigation; however, the role of the Victorian Environmental Assessment Council (VEAC) caused some confusion and was used by some students in response to this question. When referencing VEAC in relation to a conflict, students must first ensure that VEAC were in fact involved and then make sure they correctly reference how the information provided by VEAC was used by the decision-makers. Some students did this well and this information strengthened their evaluation; however, many students incorrectly stated that VEAC resolved the conflict being discussed.

In the question there was the option of discussing a process that either has been or could be used. This was to accommodate for the Great Forest National Park and Coal Seam Gas Extraction conflicts that are currently still ongoing. Where the conflict has been resolved, students are strongly suggested to use the decision-making process that was actually used in the conflict as they should be able to discuss it in great detail and provide better links to the conflict.

The following is an example of a high-scoring response.

In the end, litigation was used to resolve the conflict. When ywys challenged the VSG in federal court arguing the environmental effect statement was not detailed enough on how the plant would impact its pilot site, ywys claim was quickly dismissed by the court who forced the group to cover legal costs for both parties forcing them into bankruptcy. Overall, litigation was very effective in solving the conflict as it provided a clear win/lose outcome with VSG being allowed to construct the desalination plant and ywys being forced to disband.

Question 6a.

Marks	0	1	2	3	Average
%	52	31	13	4	0.7

Students were required to outline three objectives from the *Flora and Fauna Guarantee Act 1988*.

Many students found this difficult, with a number of responses being very general and containing overarching statements around protecting the environment and flora and fauna. As this is specified knowledge, students should be able to list specific details about the Act, and only responses that linked to specific objectives were awarded marks.

The following is an example of a high-scoring response.

The objectives of the flora and fauna Guarantee act 1988 are to; identify threatened and endangered species, to identify the threatening processes to those species and to create action statements and management plans to protect threatened and endangered species.

Question 6b.

Marks	0	1	2	3	Average
%	15	23	36	26	1.8

Students were asked to describe a management strategy observed in a selected outdoor environment that has been adopted by public or private land managers.

Students generally responded well to this question and provided good examples. Personal minimal impact strategies were not accepted as these are not put in place by land managers and are a personal choice. Trust for Nature was used by a number of students and while not incorrect, students needed to provide details about what Trust for Nature was actually doing or how Trust for Nature is being used as a management strategy in their selected location.

The following is an example of a high-scoring response.

Outdoor environment: *Wilson's Promontory (WP)*

A management strategy adopted at WP is zoning. This involves the separation of specific areas to only be used for specific interactions. For examples some zones are only for wilderness, recreation or conservation. Zoning also allows for sustainable practices such as replanting native species to take place to restore the health of WP.

Question 6c.

Marks	0	1	2	3	Average
%	19	24	34	23	1.6

Students had to outline three ways the management strategy they described in part b. helps to achieve and maintain a healthy outdoor environment.

Students generally responded well to this question. However, if a student referenced Trust for Nature in part b., they often only wrote 'a covenant' in response to part c. Students need to be able to articulate what the covenant does to help the environment.

The following is an example of a high-scoring response.

-Allows for native flora and fauna to be left undisturbed in wilderness zones

-Minimises the negative impacts of humans through zoning for recreation e.g. minimise soil erosion

-Allows for conservation efforts to continue to find ways to better improve the health of WP e.g. replanting indigenous fauna

Question 7

Marks	0	1	2	3	4	5	Average
%	8	8	19	28	22	15	2.9

Students were required to select an action from the list provided (green building design, integrated farming, Landcare, urban planning), describe the action and analyse its effectiveness in sustaining outdoor environments.

Descriptions given by students, particularly of green building design and integrated farming, were generally good. Landcare and urban planning in general were not described well or in sufficient detail. However, most students were unable to provide a strong enough analysis to gain full marks. The analysis in this particular question should have included unpacking how and why the selected action is effective in sustaining outdoor environments.

The following is an example of a high-scoring response.

Green building design is a concept that involves creating houses and buildings with more sustainable features that protect and sustain the environment. These buildings, such as the Kiewa discovery centre, have solar panels, grey water, double glazed windows, hydroponic tops, a water tank and a north facing orientation, all in a bid to save electricity and run off renewable resources. Green building design is an effective method of sustaining the environment as it reduces reliance on coal energy and reduces carbon emissions, thus reducing its ecological footprint. It has the capacity to slow the effects of climate change and help sustain the earth.

Question 8

Marks	0	1	2	3	4	5	Average
%	11	10	19	27	21	12	2.8

Students were required to select one issue (climate change, water management, renewable energy), analyse the debate and determine the impact that the issue has had on people's relationships with the outdoor environment.

Most students demonstrated a sound understanding of the selected issue and subsequent debate. However, some students only addressed one part of the question and either only analysed the debate without referencing relationships or focused on the relationship without sufficient analysis of the debate. In general, students' understanding of water management did not seem as good as their knowledge of climate change and renewable energy. When discussing water management, a number of students discussed the desalination plant in Wonthaggi and while not incorrect, they were limited to only one aspect of water management. Irrigation, water rights and environmental flows in rivers are topics that can be discussed when covering water management.

The following is an example of a high-scoring response.

The renewable energy debate is about whether or not Australia should invest more in renewable sources of energy or continue with coal. People like Malcom Turnbull believe that we need to be using more renewables in order to slow climate change. If people adopt this view point then they would believe that the environment is in danger and want to work to protect it, thus strengthening their relationship. On the other hand, if people like Andrew Bolt believe we should continue to use coal, then they are sending the message that the earth is in good health, and would continue to burn fossil fuels as they believe it's cheaper and reliable. This presents a weak connection to the environment as they see it as a resource.

Question 9

Marks	0	1	2	3	4	Average
%	18	24	31	20	7	1.8

Students were required to analyse the role of sustainable development in maintaining outdoor environments for the future.

Many students simply provided a definition of what sustainable development is or discussed the concept of sustainable development without analysing the role it played in maintaining environments. It is important that students can take concepts such as sustainable development and apply the idea of it to a range of situations. Being able to define a concept is important, but a student's understanding should be broader than a simple learnt definition. Students should be able to discuss the impacts of sustainable development and its critiques but also what it means for the health of the outdoor environment.

The following is an example of a high-scoring response.

Sustainable development is the concept of development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This notion is important as we must continue to grow and expand for future generations, but must do so in a way that maintains the health of the environment. This is done through urban planning and creating wildlife corridors, integrated farming and maintaining soil quality and moving towards more reliance on renewable sources to ensure social, economic and environmental sustainability for all and for the future.

Question 10a.

Marks	0	1	2	3	Average
%	11	19	37	33	1.9

Students had to select an outdoor environment that they had visited or studied and describe the current level of biodiversity.

Some student responses indicated that they do not fully understand the term ‘biodiversity’ and how to describe or observe it in an outdoor environment. Many students simply provided a range of statements about the general health of the environment: that there was running water, moist soil and animals. When discussing biodiversity, students should be looking at the variety of living things within the environment they are observing, including the range of species, ecosystems and genetic diversity in an area. Students need to be aware that just because an area has a high number of kangaroos, it does not necessarily mean that it has good biodiversity as the kangaroos may in fact be overpopulating and dominating the area at the expense of other native species. In this response, students could have listed specific species observed and the variety and number of these species, ensuring they covered both flora and fauna.

The following is an example of a high-scoring response.

The Alpine National Park has high levels of biodiversity as it contains over 40 mammal species, 200 bird species and 30 fish species, along with an abundance of native trees, plants and ferns. There is numerous ecosystems within the park that also contribute to its high level of biodiverse health, making it one of the most diverse and unique environments in Australia.

Question 10b.

Marks	0	1	2	3	4	Average
%	18	9	20	27	26	2.4

Students were asked to reference a specific theme (other than biodiversity) from the State of the Environment report and evaluate the current state of the environment.

Correctly naming the theme seemed to be the main area where students missed out on marks as most were able to evaluate the current state of the environment to a good level. If a student listed soil, water quality or similar in place of a correctly identified theme, then no marks were awarded for this part of the question. Some students were able to link observable characteristics into their response and this generally strengthened their evaluation, whereas others discussed the State of the Environment report in more detail with reference to their selected area. Both approaches worked well and allowed students to complete a good evaluation. Students are encouraged to draw on all their knowledge when responding.

The following is an example of a high-scoring response.

Theme: *Land*

Land refers to the soils and vegetation resources in the national park. Due to high levels of humus (level of organic matter) in the montane region of the Alps, the soil is rich in nutrients and can therefore support high amounts of vegetation. Despite the fragile soils in the upper peaks of the mountains the overall health of the land is high and supports life for many species and populations, mainly due to the high quality of the soil.

Question 11a.

Marks	0	1	2	3	4	Average
%	6	6	21	36	32	2.8

Students were asked to explain the impact of an introduced species, with reference to a specific outdoor environment.

Students approached this question in two ways. Some students listed one species and then explained in detail, while others listed a few then provided a more general overview. Students who focused their response to one species tended to perform better as their response were more targeted and provided specific detail.

The following is an example of a high-scoring response.

Outdoor environment: *Alpine National Park*

There are many introduced species to the Alpine National Park such as deer, brumbies and hawkweed. Hawkweed has had a significant impact on native species as it is an invasive weed that injects poisonous toxins into the soil and spread rapidly, taking resources and space of native plants. Deer are also an increasing issue as they trample native plants like the sphagnum moss and ringbark trees with their antlers. These impacts can be irreversible if they are not managed as they already pose significant threats to the park.

Question 11b.

Marks	0	1	2	Average
%	11	31	58	1.5

Students were asked to predict the future health of the specified outdoor environment based on current trends and threats.

While students generally performed well on this question, it seemed that the command term ‘predict’ confused some students. Students should be familiar with a range of command terms.

The following is an example of a high-scoring response.

There are many management programs in place to deal with the threats presented. Such as many hawkweed eradication programs, however due to its nature may cause excessive damage to the Alps, diminishing its overall health. Despite the research and trends suggest that the future health is high due to the adequacy of water, soil quality and high levels of biodiversity.

Question 11c.

Marks	0	1	2	Average
%	17	32	50	1.4

Students were required to describe the importance of their chosen outdoor environment for future society.

Students responded well to this question, indicating that they have a good grasp on some of the fundamental concepts of the study.

The following is an example of a high-scoring response.

The Alpine National Park's health and maintenance is important for society as it provides a release from concrete jungles and stress, through its aesthetics and tranquil surrounds. It also provides many resources needed for survival such as clean water, shelter and electricity (through the hydro scheme).

Question 12

Marks	0	1	2	3	4	5	6	7	8	9	10	Average
%	11	4	7	10	13	14	13	12	9	4	2	4.7

Students had to select an environmental movement from the list and then evaluate how increasing environmental awareness has had an impact on changing relationships with outdoor environments and the policies of major political parties. Students needed to include the nature of the campaign or conflict, the role of the environmental movement, the impact of the environmental movement on changing human relationships and increasing environmental awareness, and the capacity of the environmental movement to influence the policy-making process of political parties.

Students who spent time planning their response tended to perform well on this question. It is important in an extended response that students allow time for planning to ensure they cover all aspects of the question.

The Franklin River (Tasmania) was the most common selected environmental movement and as this is specified content, accuracy was needed when it comes to dates, names or key individuals and the sequence of events. Most students handled the first three parts of the question well but found discussing the capacity of the environmental movement to influence policy-making more difficult.

The following is an example of a high-scoring response.

After failing to save Lake Pedder, the “South west action comitee” joined with the “united Tasmanian group” to form the Tasmanian Wilderness Society (later “The Wilderness Society” (TWS)) to oppose the Tasmanian government’s decision to dam the Franklin river as they perceived it as a temple to be worshipped and protected for its beauty, whereas the Tasmanian Government, working with the Hydro electricity commission (HEC), perceived the Franklin river as a resource to supply Tasmania with a source of hydroelectricity. TWS aimed to convince people why this wilderness needed protection from been flooded by the dam. They did so by using minimal impact strategies such as white water rafting along the river to allow people to perceive up close why the Franklin needed to be preserved as a temple and not exploited as a resource. The coverage received by the group was further successful in changing people perception of the franklin river, were politicians could be seen crying from the overwhelming emotions they felt when realising what would be lost with the construction of this dam. In the end TWS were successful in their campaign with the Federal Government creating “the world conservation act” which prevented the Tasmanian government from damming the river. The sudden increase in environmental awareness from this campaign lead to many Australian’s pushing for environmental policy’s to be included in politics, leading to many independent parties like “the Nuclear disarmament party” earning seats in parliament house. This put

pressure on major political parties to have environmental policies as part of their campaign, to gain the support of the independents, such as labours “industrial chemical notification and assessment act” 1989 which aimed to reduce the amount of chemical’s entering the atmosphere and thining the ozone layer. Overall, the Franklin river campaign was very successful in creating environmental awareness in Australia and in politics by helping people view the environment as something other than a resource to exploit.