

2020 VCE Outdoor and Environmental Studies examination report

General comments

In 2020 the Victorian Curriculum and Assessment Authority produced an examination based on the *VCE Outdoor and Environmental Studies Adjusted Study Design for 2020 only*. The examination provided students with the opportunity to demonstrate and apply a range of knowledge and skills.

The following observations are offered as advice to teachers and students.

- Students should note the command term(s) used in the question (analyse, evaluate etc.) to guide their response. Teachers can assist with this by covering a range of terms from the key skills in School-assessed Coursework.
- Students should consider planning out responses that are extended or have multiple command terms to ensure that they address all aspects of the question.
- Where possible, students should be able to link the key knowledge and skills to a specific environment and provide examples. While ideally students would visit these environments, they can also be studied from the classroom as there is only a limited amount of time that teachers and students can be out of school. Teachers are encouraged to use environments local to the school for students to develop good local knowledge. The very limited opportunity for schools to undertake excursions and camps in 2020 was taken into consideration with the use of examples in student responses; however, it is expected that students can still link content studied in the classroom (whether online or in person) with specific outdoor environments where required throughout the exam.
- When discussing relationships, students should be guided by the context of the question and the command terms used. In general, a combination of perceptions, interactions and impacts is recommended to help guide a holistic response. To help students move away from simply listing a perception, interaction and impact, they could be encouraged to consider how the current perception influences the current impact and interaction and then consider what this means for future impacts and interactions.

For example, when looking at historical relationships, students could discuss how during the gold rush era people had a perception of the environment as a resource, which led to subsequent clearing of large sections of land and widespread destruction of the environment. Due to this destruction, people possibly were unable to form a connection with the environment, so the negative impact continued.

- When discussing contemporary societal relationships, students again can discuss perception, impact and interaction, but it is of particular importance here that they relate their response back to the human relationship. Students can discuss how a recreation activity, such as mountain bike riding, can lead to a perception of the environment as a challenge to conquer, which leads to impacts such as track degradation. A high-scoring response would then go on to discuss how that impact affects the ongoing interaction and perception.

For example, track degradation would lead mountain bike riders to realise that unless they cared for the environment they were using and worked to conserve it, they may permanently damage the area, resulting in them having to find new areas to ride in or not being able to use the area as well as they had previously. Or, conversely, track degradation would lead mountain bike riders to lose any respect they had for the area and stop any effort they were making to protect it, leading to further damage.

- Students should engage in critical thinking around the concepts of relationships as there are a number of possible responses. This allows for a range of contexts and environments to be considered.
- Students should only write on the lines provided. If additional space is needed for a response, students should complete this in the extra space provided at the end of the examination booklet, with the question number clearly labelled. When using the extra space section, students should ensure they are not writing in the final question's extended response space.

Specific information

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
%	5	10	30	55	2.3

Most students were able to respond to this question and access some marks. While the question did not ask for specific examples, many students used them to demonstrate their understanding of the characteristic and its influence on the Australian outdoor environment, which helped them develop a higher scoring response. Some students discussed the impact of the characteristic on humans; however, these responses did not address the question correctly.

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

Due to Australia's central positioning over the Indo-Australian tectonic plate, it experienced a low amount of seismic and volcanic activity. This has resulted in low soil turnover causing nutrient poor top soil. Due to this flora such as the Eucalyptus tree have adapted by having roots that penetrate beneath the top soil to access nutrients and survive in the environment.

Question 2a.

Marks	0	1	2	Average
%	5	39	56	1.5

The vast majority of students were able to correctly identify an Indigenous community and interaction. While the question did not call for a link to a specific environment, students who did this generally demonstrated greater accuracy and clarity and were able to avoid generic responses.

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

Indigenous community: Djab Wurrung

Interaction: Hunting and Gathering

the Djab Wurrung community would have men hunt kangaroo's, goana's and other fauna for meat while women gathered berries, nuts and other edible flora such as yam daisies in what is now known as the Grampians.

Question 2b.

Marks	0	1	2	3	Average
%	6	17	40	37	2.1

High-scoring responses generally included specific examples. They described a community's perception and how the interaction demonstrated this with links to a specific environment. Some students simply described the interaction in more depth (continuing on from Question 2a.); however, this approach did not adequately respond to the question as it did not include reference to the community's perception.

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

This reflects how they perceived the environment as a mother that offers them the resources to survive and in return they care for the environment back. This leads to interactions like hunting and gathering while living semi nomadically, having a positive impact as native flora and fauna can rejuvenate in the area they leave, maintaining biodiversity.

Question 3a.

Marks	0	1	2	3	4	Average
%	8	12	28	31	20	2.4

Students were required to demonstrate knowledge of their chosen environment and the environmental movement that campaigned in that area during the relevant environmental conflict. They needed to analyse how the actions of the movement impacted subsequent human relationships. When analysing, students should look for cause and effect; in this case, the effect being the changed relationship and the cause being the environmental movement's actions.

Some student responses lacked sufficient analysis or did not include accurate information about the environmental movement.

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

The Wilderness Society (TWS) was formed in 1976 by Bob Brown in order to combat the Tasmanian Hydro Electric Commission's scheme to dam the Franklin River. The TWS protested the damming gaining media attention which helped to shift peoples perception from viewing the environment as a commodity in viewing it as an important place to protect for future generations. This promoted more conservation interaction having a positive impact by reducing land degradation and protecting biodiversity.

Question 3b.

Marks	0	1	2	3	Average
%	24	26	26	24	1.5

For this question, students did not necessarily need to know specific policies from prior to 1990; rather, they needed to explain how the increased environmental awareness they had analysed in Part a. influenced the rise of green politics and the introduction of policies focused on environmental protection into politics and

political campaigns. Some students used a specific policy to demonstrate in-depth knowledge of this topic; however, in some cases, students then became side-tracked from the question and instead focused on an explanation of the policy rather than responding to the question.

Some student responses referenced current policies, despite the question requiring explanation of the impact on policy prior to 1990.

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

The increased environmental awareness lead to a stronger focus on conservative action. This impacted policies as Bob Hawk realised while campaigning to become Prime Minister that people now wanted more done to conserve the environment. He was elected Prime Minister in 1983 after he promised to protect the Franklin by creating World Heritage legislation to prevent the damming as well as creating the Landcare Program in 1989 to further promote the conservation of public land.

Question 4

Questions 4–7 all related to a coastal heathland scenario. While a specific environment was used in the scenario, the questions were accessible to all students, whether they had visited this type of environment or not. Students should be able to apply knowledge they have gained from the environments and theory that they have studied to new situations. Students who were familiar with coastal environments were at no advantage as they still had to be able to apply key knowledge from the study design correctly.

Question 4a.

Marks	0	1	2	3	4	Average
%	3	3	24	24	46	3.1

Students were generally able to respond well to this question; however, some did not specifically refer to the environment listed and just provided a general response about relationships with the environment.

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

Conservation group: may perceive the environment as a 'museum' and something to protect for future generations. This may lead to conservative actions like weed removal and eradication of pests in the heathland, having a positive effect by increasing native biodiversity.

Recreation groups: may perceive the heathland as a 'playground' to use for enjoyment. This may lead to more participation in recreational activities such as four wheel driving. These activities may cause erosion and compact the soil causing land degradation, having a negative impact on the environments health.

Question 4b.

Marks	0	1	2	3	4	Average
%	14	6	23	19	38	2.6

Students responded well to this question and generally used methods that were appropriate to the groups and to the area. Common and appropriate methods include, but are not limited to, direct action, blockades, community consultation meetings, litigation, use of a prominent person, petition and lobbying.

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

Conservation group's method: they could begin a petition in they try and gather signatures of people who would like to conserve the heathlands.

Recreation group's method: direct action, such as a protest outside parliament house in order to attract attention to the issue and influence decision makers.

Question 4c.

Marks	0	1	2	3	4	Average
%	20	7	23	33	16	2.2

In answering this question, some students continued with a description of the method from the previous question, rather than the evaluation required by the question, and some students focused on community groups rather than looking at the impact on decision-makers. It appeared that some students had not read the question closely and were not responding to the question asked.

Students needed to have an evaluation (positives and/or negatives of the method and then a judgment on its effectiveness in influencing decision-makers) and reference decision-makers.

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

Method: Direct Action, protesting

Evaluation: Positively this attracts attention, possibly receiving free media attention thus spreading the issue to a wider audience. Negatively this is time consuming and difficult to organise. Positively this would demonstrate to decision makers the scale of support for the issue was high. Negatively this would only last for a short period of time, thus only influencing for a short period. Overall, protesting is an effective method in influencing decision makers however its effectiveness is only short lived.

Question 5a.

Marks	0	1	2	Average
%	29	23	48	1.2

Students generally responded well to this question. The terminology used in the question ('was or could be used') catered for conflicts that are ongoing. Students who used a conflict that had been resolved scored highly when they were able to explain in detail the process that was used to reach the resolution. Students who used an unresolved conflict needed to explain an appropriate decision-making process that could result in future resolution.

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

The extraction of coal seam gas has been partially resolved through the creation of legislation. Laws were created which banned the extraction of coal seam gas, and therefore this process ceased. Laws are created following investigation and studies into the different sides of a conflict.

Question 5b.

Marks	0	1	2	3	4	Average
%	31	8	15	24	22	2.0

This question provided an opportunity for students to apply existing knowledge to new situations. Some students who were able to describe an appropriate process in Question 5a. were unable to evaluate this process as required by this question.

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

The creation of legislation would be relatively effective at resolving the coastal heathland conflict. The creation of legislation would provide a decision about whether recreational users are banned or allowed in the environment and as it is a law, those who go against it can be punished. Despite this, as the legislation would likely completely side with either the conservation or recreation group, one group would be unhappy and would likely challenge the decision. Also, legislation can be changed and unless it is enforced it may not have an impact. Thus, ultimately the creation of legislation would relatively effective at resolving this conflict.

Question 6

Marks	0	1	2	3	Average
%	11	10	28	51	2.2

Students generally responded well to this question and were able to outline management strategies appropriate to the area. Some lower scoring responses included management strategies that were very similar or effectively the same strategy. 'Trust for Nature' was accepted if the response identified private land and the strategy was relevant. Some students inappropriately referred to individual minimal impact strategies, which were inconsistent with the land manager context of the question.

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

- 1. Installation of signage to make recreational users aware of possible breeding sites of the endangered mouse and to keep 4WD within designated tracks to avoid potential habitat intrusion*
- 2. Installation of fencing around significant areas of the heathland that contain abundant population of the endangered orchid to ensure no human interference*
- 3. creation of designated walking trails or 4WD tracks in which keep recreational impacts like soil compaction from tires to one concentrated area*

Question 7a.

Marks	0	1	Average
%	52	48	0.5

Either the *Flora and Fauna Guarantee Amendment Act 2019* or the Ramsar Convention 1971 were acceptable responses to this question, remembering that the heathland environment in this scenario is hypothetical and similar 'real life' environments can contain wetlands (such as French Island in Western Port).

Students had to accurately list an act or convention. The abbreviation 'FFG' was not accepted unless it included reference to the Amendment Act 2019 either by using 'FFGAA 2019' or writing it out in full at first mention. Students are encouraged to limit their use of abbreviations (unless used in the study design) to ensure no ambiguity. Other acts, such as the *Environment Protection Act 2017* were also acceptable, but the majority of students referenced those stipulated in the study design.

Question 7b.

Marks	0	1	2	3	4	Average
%	24	12	21	24	19	2.0

Responses varied with this question, as some students simply evaluated the effectiveness of the act or convention with no reference to the specified environment, while others described how the act or convention could be used in the environment but provided no evaluation. As the question called for an evaluation, students needed to provide a judgment on the effectiveness of the act or convention chosen in relation to the coastal heathland. In their evaluation, students had to demonstrate an accurate understanding of how their specific act or convention worked towards environmental protection.

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

The FFGA Act would be effective in maintaining the coastal heathland via the administering of an action statement for endangered species such as the orchids or mouse. The action statement would help to maintain these species by detailing significant population of the species, current threats and management strategies such as the creation of buffer zones or eradication of pest species to ensure their protection. However, this act can also be ineffective as action statements are difficult and time consuming to create, leading to a potential backlog of species awaiting management processes to maintain their prevalence. Overall the FFGA Act, 2019 would be effective in maintaining the heathland via action statements to ensure the long term and legal protection of the endangered orchids and mouse.

Question 8

Marks	0	1	2	Average
%	26	30	44	1.2

This question was generally handled well with many students clearly understanding how the Victorian Environmental Assessment Council (VEAC) operates and what its function is. However, some students, while providing accurate information about the structure of VEAC in terms of the members and their expertise, did not answer the question to describe what role VEAC plays.

Some of the key terminology included in high-scoring responses referenced the Victorian Government, investigations on public land and providing reports. Other key terminology includes reference to conflicts within Victoria, public/crown land and government request.

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

The Victorian Environmental Assessment Council (VEAC) completes investigation into the use of crown land as requested by the government. VEAC then makes recommendation to the government based on their findings.

Question 9

Marks	0	1	2	3	4	5	6	Average
%	1	0.4	3	6	27	25	37	4.8

Students made good use of the stimulus material, with most referring to the appropriate image to help them provide a specific response. Some students provided a more general explanation of relationships and while this attracted some marks, specific links to the stimulus provided was needed to achieve a high score.

This question lends itself to focusing more on the perception element of relationships, and students who did this generally provided a higher scoring response than those who tried to focus on interaction and impacts. When discussing impacts and societal relationships, students need to discuss the effect environmental impacts have on the relationship, not just the environment.

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

Image 1: a safety sign detailing potential dangers of the beach may influence society by causing a level of fear. This will lead to society perceiving the environment as a dangerous and risky place where they may hurt themselves resulting in individuals choosing not to participate in activities along the coast such as swimming. This would overall lead to a negative, disconnected relationship with coastal environments being formed as users have no desire to potentially protect the coast by sticking to boardwalks as they are afraid of it.

Image 2: This image influences relationships by portraying the beach as a beautiful place, accessible for all to enjoy. As a result, users will develop a greater appreciation for the coast, leading to an increase desire to make trips to the beach for recreational purposes overall resulting in a relationship based around conserving the coast through developing behaviours such as pack in, pack out so it can be maintained for use in the future.

Question 10

Marks	0	1	2	3	4	5	6	7	8	9	10	11	12	Average
%	3	1	3	2	6	6	10	10	13	11	15	9	11	7.8

A number of students were unable to respond to the command term 'compare' and simply provided a description of the relationship to match each piece of stimulus material. Students needed to use comparative language throughout their response. Comparative language includes wording such as 'however,' 'on the other hand' and 'in contrast'.

Most students were able to identify that the different forms of primary industry (in this case mining and farming) and recreation (bushwalking and downhill mountain bike riding) produce different responses and relationships.

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

Primary Industry: Primary Industries such as farming practices cause society to perceive the environment as a place of intrinsic worth and value for what it can provide for us. As a result society may choose to buy produce from farmers who act sustainably with environments such as those who are integrated or cooperate with Landcare, resulting in society fostering a relationship based on protecting environments and their resources for future use and for the value of the environments health. In stark contrast, Primary Industries such as large scale mining cause society to perceive the environment as a resource to exploit, meaning they will make no effort to interact with it sustainably such as but not supporting extractive processes such as coal mining to produce energy, forming a negative resource based relationship in which they believe they should be free to utilise natural resources without restriction.

Recreation: Recreation pursuits such as hiking cause society to perceive the environment as a beautiful and majestic place worthy of protection. Because of this, users will have gained a great appreciation of environments that allow them to escape from their everyday lives, leading to move users wishing to hike frequently but with the adoption of minimal impact behaviours such as sticking to trails and following appropriate signage due to a relationship based around protecting a place they view as beautiful and important being formed. In contrast to this, recreation pursuits such as downhill mountain bike riding will cause society to perceive the environment as a place to conquer, thus leading to users creating new trails and tracks throughout environments in order to up their skill level and to feel accomplished. As a result this

leads to a relationship not based around the protection & enhancement of the outdoors but rather a relationship based on defeating it.

Question 11a.

Marks	0	1	2	3	Average
%	6	8	28	58	2.4

Students generally performed well on this question; however, some did not link the threat back to their chosen environment.

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

Land degradation through the form of soil compaction at plantation camp ground impacted the health of the Grampians as the frequent compacting of the soil by tents and camper vans made the soil to dry and firm for seeds to penetrate and germinate as well as limiting the spread of roots meaning the vegetation had low stability.

Question 11b.

Marks	0	1	2	Average
%	17	34	50	1.3

In this question, students generally outlined an observable characteristic well; however, some were not specific when naming that characteristic. For example, some students named 'soil' as a characteristic, but this required a more specific label such as 'soil quality'. Other appropriate characteristics include, but are not limited to, water quality, level of biodiversity and air quality.

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

The water quality and adequacy of the Grampians region was observed to be at a high level at Lake Bellfield in which had a low level of turbidity suggesting health as the water source is free from dangerous sediment and can act as a drinkable water source for surrounding towns such as Stawell.

Question 11c.

Marks	0	1	2	Average
%	33	31	36	1.0

Students were able to refer to actions listed in the study design or other individual actions that were appropriate for the area they had listed. The actions listed in the study design include green building design, Landcare, integrated farming and urban planning.

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

Individuals who build in the areas surrounding the Grampians could choose to undertake green building design as it would ensure developments are being constructed in a sustainable way and out of, for example recycled materials such as concrete to reduce the depletion of natural resources such as timber on a large scale.

Question 12a.

Marks	0	1	2	3	Average
%	28	17	28	26	1.5

Many students were not able to clearly express their thoughts and understanding of the concept of sustainable development. It is important that students develop their own position on what sustainable development is and how it can be implemented and that they strengthen their understanding and ability to articulate their thoughts clearly and confidently.

One way to approach the topic of sustainable development to help scaffold the concept is to look at the three pillars of sustainable development. This provides students with some structure while studying a topic that is very fluid. There is a need to have balance between economic, social and environmental characteristics to achieve sustainable development. This may help students understand that the concept of sustainable development looks at more than just the environment. A good example of this is the removal of old growth logging as a result of the expansion of the Otways National Park. The logging is being phased out over three years to allow the timber industry to transition to plantation timber harvesting, keeping local jobs with the notion of protecting the environment into the future.

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

Sustainable developments such as the Cape at Cape Patterson displays the role of sustainable development as it uphold the 3 pillars. The Cape does this as it considers the environment through its 7 star rated homes in which feature triple glazed windows & thermal mass heating to reduce energy consumption, it supports the economy via providing a larger customer base to buy from local food producers as well as being a development that has been welcomed by society who are wishing to expand the community at Cape Patterson.

Question 12b.

Marks	0	1	2	3	4	Average
%	14	12	28	25	20	2.3

Many students made a good attempt to answer this question by focusing on why people find sustainable development a difficult concept to accept.

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

Sustainable development as a concept is hard to accept as many view it as an oxymoron meaning the two terms or 'sustainability' and 'development' contradict each other and can therefore not occur in conjunction with each other successfully. Sustainable development can also be criticised as a concept because of the high cost associated with producing developments and products that sustain the environment in which can be hard to accept for third world countries in can only afford the basic necessities of survival, meaning it would be unfair and unattainable to force them to change their action along with the better off countries such as Australia.

Question 13

Marks	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Average
%	6	1	2	3	4	3	4	5	6	6	7	8	10	9	10	15	9.7

The extended question gave students an opportunity to demonstrate their knowledge in great depth. Most students took this opportunity to express their understanding of the different influences on the Australian environment throughout time prior to 1990 and also their knowledge of a specific environment. Students who used clear examples generally scored highly as their examples supported their response.

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

The 1840's saw the arrival of the first non-indigenous settlers to the Grampians region, in which saw Europeans perceiving the region as a place to start a new life and colonise. Because of this, settlers such as Lieutenant Robert Briggs Ledcourt set up the first pastoral run within the Grampians in 1841, in which resulted in small scale land clearing to produce land for paddocks and small scale soil compaction as a result of the hard hooved species such as sheep and horses.

The 1850's saw a time of increasing population within the Grampians after the discovery of small amounts of alluvial gold at pleasant creek in 1853. This time saw many perceiving the Grampians as place to "strike it rich" resulting in the heavy channelling of waterways such as Fyans creek to produce a water source for the influx of citizens to the region. Because of this, the region suffered a major decline in the natural water flow, resulting in a heavy decline in native biodiversity.

The 1880's saw a period of industrialisation within the Grampians in which many perceived the region as a large scale resource. Because of this, saw the large scale quarrying of sandstone at Heatherlie Quarry in the Northern Grampians to provide building materials for around the state. This saw large scale destruction of habitat as a result of the chopping down of trees to fuel the burners needed to extract the stone.

1901 and post federation saw a time of Nation Building within the Grampians which saw many perceiving the regions as a "canvas in which to build a nation." This perception let to the main construction of nation building projects such as the construction of Lake Bellfield to act as a water source to surrounding towns such as Stawell and Horsham. As a result, saw the introduction of European carp in which found their niche within the cold dark waters. This species breed quickly with the source acting as competition for food for native species, reducing biodiversity levels within the region. However, it was also a time that people started to value the environment more with the sections of the Grampians that had been established as state forest in 1872 further spread out and rehabilitated until it was declared a national park in 1984.