

2023 MCAS Sample Student Work and Scoring Guide

Grade 10 English Language Arts

Question 22: Essay

Reporting Categories: Language and Writing

Standard: [L.PK-12.1](#) - Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Standard: [L.PK-12.2](#) - Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Standard: [L.PK-12.3](#) - Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

Standard: [W.PK-12.1](#) - Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

Standard: [W.PK-12.4](#) - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Item Description: Write an argument in the form of a letter advocating for a topic addressed in two articles; use evidence from both articles for support.

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Essay Prompt

For this question, you will write an essay based on the passage(s). Your writing should:

- Present and develop a central idea/thesis.
- Provide evidence and/or details from the passage(s).
- Use correct grammar, spelling, and punctuation.

Based on “Can Algae Save the World?” and “The Ocean Farmers,” write an argument in the form of a letter to your state lawmakers advocating for algae and seaweed farming. Be sure to use details from **both** articles to develop your letter.

Continue to the following page to see the scoring guides for this question. Sample student responses begin on page 3. The annotations that appear above each sample response describe elements of the response that contributed to its score for Idea Development and Standard English Conventions.

Scoring Guide for Idea Development

Select a score point in the table below to view the sample student response.

| Score* | Description |
|--------------------|---|
| 5A | <ul style="list-style-type: none"> Central idea/thesis is insightful and fully developed Skillful selection and explanation of evidence and/or details Skillful and/or subtle organization Rich expression of ideas Full awareness of the task and mode |
| 5B | |
| 4 | <ul style="list-style-type: none"> Central idea/thesis is clear and well-developed Effective selection and explanation of evidence and/or details Effective organization Clear expression of ideas Full awareness of the task and mode |
| 3 | <ul style="list-style-type: none"> Central idea/thesis is general and moderately developed Appropriate selection and explanation of evidence and/or details Moderate organization Adequate expression of ideas Sufficient awareness of the task and mode |
| 2 | <ul style="list-style-type: none"> Central idea/thesis may be present and is somewhat developed Limited selection and explanation of evidence and/or details Limited organization Basic expression of ideas Partial awareness of the task and mode |
| 1 | <ul style="list-style-type: none"> Central idea/thesis is not developed Insufficient evidence and/or details Minimal organization Poor expression of ideas Minimal awareness of the task and mode |
| 0 | The response shows evidence the student has read the text, but does not address the question or incorrectly responds to the question. |

Scoring Guide for Standard English Conventions

Select a score point in the table below to view the sample student response.

| Score* | Description |
|--------------------|--|
| 3A | <ul style="list-style-type: none"> Consistent control of a variety of sentence structures relative to length of essay Consistent control of grammar, usage, and mechanics relative to complexity and/or length of essay |
| 3B | |
| 3C | |
| 3D | |
| 2 | <ul style="list-style-type: none"> Mostly consistent control of sentence structures relative to length of essay Mostly consistent control of grammar, usage, and mechanics relative to complexity and/or length of essay |
| 1 | <ul style="list-style-type: none"> Little control and/or no variety in sentence structure and/or Little control of grammar, usage, and mechanics relative to complexity and/or insufficient length |
| 0 | Sentences are formed incorrectly with no control of grammar, usage, and mechanics and/or insufficient length. |

*In both Scoring Guides, letters are used to distinguish between sample student responses that earned the same score (e.g., 5A and 5B).

Idea Development—Score Point 5A

This fully developed essay in the form of a letter opens with an appeal to find a solution to global warming. The introduction describes a concern for the environment and the “eco-friendly” role algae may play in mitigating global warming and its “horrific problems.” The essay also notes that algae undergo photosynthesis and produce oxygen, which is further developed in the body paragraphs. Information from both articles is organized to form a coherent and convincing argument. The first body paragraph presents multiple examples on the benefits of algae using evidence from “Can Algae Save the World?” The second body paragraph expands the argument with details from “The Ocean Farmers.” The essay includes details from the articles, and both forms of algae are described as essential to life. Rich expression of ideas is demonstrated through skillfully selected and carefully organized information. The writing shows full awareness of the task and mode.

Standard English Conventions—Score Point 3A

Consistent control of a variety of sentence forms is evident in the essay. Grammar, usage, and mechanics show control, despite some minor awkwardness in word usage: “As we struggle with the overproduction and flow of CO₂ into our environment, algae can be a solution to withhold this global warming crisis.” The length and complexity of sentences support meaning, as in “Creating a mass production of seaweed would not only help absorb carbon, but allow for other foods to produce and help feed the population.” The demonstrated control of standard English conventions supports a rich expression of ideas.

Dear Massachusetts State Lawmakers,

I am writing to you today to not only express my concern about the impact of global warming on our world, but also to propose a potential solution. If we do not make an immediate change in our strategies to defeat global warming, our population will be at extreme risk of food shortage, the dying out of species, and other horrific problems. As I stated earlier, there are possible solutions to this global warming crisis. One of these eco-friendly solutions is algae, the plant we all know that grows underwater. What some may not know is that algae are able to undergo photosynthesis, the process that is needed to extract oxygen into the atmosphere. Another potential plant solutions is to farm seaweed, which has similar benefits to producing large amounts of algae. I have read two articles, *Can Algae Save the World?*, by Edwina Langley, and *The Ocean Farmers*, by Melissa Godin. Both of these passages encouraged me to write this letter, and I hope to spark a sense of urgency and send through the message that these two solutions are vital in order to save our planet.

Algae production can fundamentally save our planet in numerous ways. As we struggle with the overproduction and flow of CO₂ into our environment, algae can be a solution to withhold this global warming crisis. Most of the world's oxygen actually comes from oxygen, contrary to the popular belief that trees are the main producer of oxygen. In the article *Can Algae Save the World?*, Langely expresses the importance of algae in everyday life: "In view of this speedy growth rate--combined with the fact they can thrive virtually anywhere in the right condition--growing marine microalgae could provide a variety of solutions to some of the world's most pressing problems" (Par 15). Not only can algae be used to produce oxygen, but the plant can be used to absorb CO₂ from the atmosphere, which which decrease the risk of global warming. In addition, algae could be used to produce biofuel, a more environmentally friendly replacement of fossil fuel. Algae production could also provide food for the entire global population. Professor Greene claims that algae has the potential to give "all of the protein necessary to feed a global population approaching 10 billion people" (Par 22). Not only can the nutrients themselves help cure hunger, but the way in which the algae is produced could be a main factor. Producing algae could free up space on land, which would give almost three million km² of cropland to reforestation and the production of new crops. Ultimately, the mass production of algae provides numerous benefits to our society.

Similarly, seaweed production is another popular idea in the fight against global warming. The solution of seaweed growth seemingly has become more and more popular in the past few years, as the production has doubled, and for good reason. Researchers have discovered that growing seaweed is the most natural way to absorb carbon from the atmosphere. Katie Lebling, a researcher with the World Resources Institute's carbon removal team, emphasizes the idea that seaweed does not take up land space to grow, as many other plants do: "When we're planting trees, we need to make sure it does not take away that land from food production... But that is not an issue with seaweed" (Par 4). Creating a mass production of seaweed would not only help absorb carbon, but allow for other foods to produce and help feed the population. Many climate change researchers support the idea of farming seaweed, as it can be a sustainable food source and help the ecosystem. Bren Smith, an executive director at Green Wave, an ocean farming company, explains, "The climate economy is wind at our back... The ocean is coming, the tide is rising, we can either run and hide and build sea walls, or we can turn around and embrace the sea as a climate change solution" (Par 7). The advantages of seaweed production can help to fight off climate change, and hopefully it can replace the mass production of fossil fuels put out in our atmosphere.

I hope that you will consider making an effort to look into algae and seaweed farming, and further research all the benefits that come with it. Global warming is an international crisis that needs to be addressed immediately if we have any hopes of saving our planet. Mass production of seaweed and algae might just be the key to protecting our lifespan on planet earth.

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Idea Development—Score Point 5B

This essay in the form of a letter begins by asking the state to “invest in seaweed/algae farming for its potential economic and ecological benefits.” Skillful selection of information from both articles supports a rich expression of ideas in the body paragraphs. The first body paragraph explains the ecological benefits of algae: “These plants can not only photosynthesize, but can also be converted into energy . . . thus reducing the need for as many fossil fuels.” The transition to an explanation of economic benefits in the next body paragraph is natural and links them with benefits to the environment: “While on the topic of energy, one can look [i]nto the economic benefits that this has too.” The paragraph then points to the existence of growing markets for algae biofuels and food products; therefore, “the state could make an extreme amount of money off the local production of seaweed/algae . . . especially consider[ing] we are a coastal state here in Massachusetts.” The third body paragraph explores counterclaims involving negative consequences of algal blooms, but strengthens the central idea of the essay by arguing that these issues can be managed. An appropriate argumentative tone is maintained throughout the essay.

Standard English Conventions—Score Point 3B

The essay demonstrates consistent control of standard English conventions, including a variety of sentence forms, grammar, usage, and mechanics. Consistent control is demonstrated in sentences that are long and complex, such as “These HABs, if uncontrolled, could produce rather worrying side effects not only for us and our water supply, but the creatures that inhabit these waters too.”

Dear State Lawmaker,

I am a student attending an unnamed highschool from the class of [Year] Using sources from *Can Algae Save the World* by Edwina Langley and *The Ocean Farmers* By Melissa Godin, I write to you today on behalf on my class to propose to you the idea that the state should invest in seaweed/algae farming for its potential economic and ecological benefits.

The ecological benefits are what one may look at as the main appeal to this idea. The article *Can Algae Save the World* delves into this idea with support from Professor Greene, explaining how "marine microalgae account for most of the primary production of living biomass in the ocean and nearly half of the photosynthesizing biomass produced on the planet." (CASW.10). This statistic proves the absolute impact that these small organisms have towards the world and the supply of readily available oxygen, without puping out CO2 as these organisms can perform photosynthesis on a massive scale. The article *The Ocean Farmers* similarly proves the vitality of these green sea organisms. Some examples are as follows- "Seaweed can play a huge role in fighting climate change by absorbing carbon emissions, regenerating marine ecosystems, creating biofuel and renewable plastics as well as generating marien protein." (TOF.3). Along with providing more oxygen due to the plant's photosynthesizing abilites, this excerpt provided another key detail into the ecological benefits that can come from thse farms- energy. These plants can not only photosynthesize, but can also be converted into energy and/or biofuel, thus reducing the need for as many fossil fuels.

While on the topic of energy, one can look knto the economic benefits that this has too. A statistic also brought by Melissa Godin's *The Ocean Farmers* is that "global seaweek production has doubled--- with an estimated value of over 59.61 billion [USD] in 2019--- as interest in seaweed as a food source, carbon sink option and renewabe product from consumers, farmers, researchers, and buisness leaders blossoms.(TOF.3). The previous excerpt not only shows that the market is large already, with a value of almost 60 billion, but that it is still actively expanding, with a solid variety of consumers. The value in these seaweed/algae farms is also roven in the other article, *Can Algae Save the World?*. The promise of a valued market in brought up in thsi article surrounding biofuels, stating that even now "algae biofuels are currentky in development. While progress has slowed in recent years, a joint research program between ExxonMobil and Syntheitic Genomics Inc recently predicted that by 2025, they will produce 10,000 barrels of algal biofuel a day."(CASW.21) The article

later mentions another source of profit too- food. "Yet perhaps even more excitingly is what algae--- marine microalgae, specifically--- could due to eradicate world hunger, According to Professor Greene, it has the potential to provide 'all of the protein necessary to feed a global population approaching 10 billion.'"(CASW.22) While asking for the state to fund a global population's worth of algae may be a stretch, the state could make an extreme amount of money off the local production of seaweed/algae as a food source on top of biofuel, especially consider we are a coastal state here in Massachusetts.

Now one may question the health benefits relating to this, and the truth is that until the process is refined to a polished state, it could prove more detrimental than positive towards us. One issue covered in *Can Algae Save the World* is the introduction and growing oace of HABs, or algal blooms. "Algal blooms refer to the aquatic systems which have become saturated with too much of one particular species of Algae... they become classified as HABs-" (Harmful Algal Blooms) "- when they start to turn toxic." (CASW.28). These HABs, if uncontrolled, could produce rather worrying side effects not only for us and our water supply, but the creatures that inhabit these waters too. While one could say that this is dangerous, it is lucky that these HABs can be monitored and stopped by not taking in too many of our carbon emissions as to not let this problem grow out of hand and become toxic.

Overall, the benefits to both the economy and the world are proven well through the two articles, and while the potential for HABs and more carbon emissions through refining processes is possible, they can be stopped through creativity and state funding, along with tight regulation. I ask that you consider my stance not only to better the economy, but to better the world.

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Idea Development—Score Point 4

The central idea of this essay in the form of a letter is clear and well developed. An effective but brief introduction states the danger of climate change and proposes a solution: “If we expand the production in algae and seaweed farming this can help to heal the planet of the emissions that harm it.” An appropriate argumentative tone is maintained throughout the essay. Relevant details from both articles reveal that algae and seaweed can remove excess CO₂ from the atmosphere and provide a reliable source of food. Two closely connected body paragraphs develop the vital role of algae and its impact on world hunger: “Aside from seaweed and algae’s ability to reduce harmful gases in our environment, they can also help to solve some of our other longstanding global issues.” The conclusion reiterates the need to support algae and seaweed farming: “If we want to provide a safe future for the generations to come as well as the planet and the beings that inhabit it, we need to act quick. The commencement of algae and seaweed farming can help to bring the change that we need so desperat[el]y.” The essay demonstrates a clear awareness of the writing task and mode.

Standard English Conventions—Score Point 3C

The essay shows consistent control of standard English conventions, including a variety of complex sentence structures: “Algae is already the main source of the Earth’s oxygen, so the increase in algae will not only lead to a decrease in CO₂ emissions, but it will increase the availabel oxygen in our air.” The complexity of the essay demonstrates control of grammar, usage, and mechanics. Spelling errors such as “deteriote” and “availabel” do not interfere with communication.

Dear Massachussets Lawmakers,

Climate change continues to deteriote our planet every single day. It is our duty to reverse the change to our planet that only we have caused. It has been brought to my attention of a possible solution for a large portion of CO₂ emissions. If we expand the production in algae and seaweed farming this can help to heal the planet of the emissions that harm it.

Algae and seaweed both already play a large role in absorbing carbon emissions so continuing the increase in the farming of both sea species, we can increase the impact they have on our effort to cure the enviornment of its toxins. Algae is already the main source of the Earth’s oxygen, so the increase in algae will not only lead to a decrease in CO₂ emissions, but it will increase the availabel oxygen in our air. According to Proffesor Green, "...they can grow between 10 and 100 times faster than land plants...they can thrive virtually anywhere". Due to the statistics of how easy it will be to continue the growth of algae, many scientists suggest growing it near large CO₂ emmision sites like factories for example. This will help remove CO₂ from the air as it is being released. In *The Ocean Farmers*, researches have concluded that "...seaweed is in fact the most effective natural way of absorbing carbon emissions from the atmosphere". If we begin to increase the production fo seaweed and algae together, it can be said that it will have a very positive impact on the environment.

Aside from seaweed and algae's ability to reduce harmful gases in our environment, they can also help to solve some of our other longstanding global issues. For example, both species have the possibility of becoming a high in protein food source in the future. Ronals Osinga of the Wageningen University found that growing 180,000 square kilometers of seaweed "...could provide enough protein for the entire world". Not only would this have a massive impact on the issue that is world hunger, but it is also an environmentally friendly subsistute for some meats. The production of these meats create harm for our enviornment, so replacing some of them with seaweed can not only help provide a sustainable food source, but can help the enviornment. Like seaweed, algae holds large amounts of protein that can contribute to our efforts to end world hunger. In *Can Algae Save the World?*, Professor Greene states that it has "...a much more diverse assemblage of amino acids in their proteins then terrestrial plants, and many essential nutrients that don't occur in plants". Not only is it a good source of protein, but it's a better source of protein. Both algae and seaweed fit this criteria and can help us begin to tackle a lot of our long-standing problems in our world.

Our environment is in dire need of support as climate change still ripples through it, bringing it closer and closer to its end. If we want to provide a safe future for the generations to come as well as the planet and the beings that inhabit it, we need to act quick. The commencement of algae and seaweed farming can help to bring the change that we need so desperatley. Please consider this proposal if you want fix the problems that we have created ourselves.

Thank you,

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Idea Development—Score Point 3

The central idea of this essay in the form of a letter is moderately developed. Appropriate details are selected from both articles and presented as logical reasons to promote algae farming. The environmental benefits of algae are discussed throughout the body paragraphs, but explanations mainly paraphrase evidence from the articles. The essay builds on a general argument and is enhanced by a conversational tone and awareness of the audience. In the introduction, the writer states that “algae and seaweed farming” is a “new way of life that could possibly save our environment.” An appropriate tone is sustained in the brief body paragraphs, including simple transitions that show moderate organization: “Have you heard of algal biofuel?” and “Now let’s talk about seaweed farming.” The essay shows an adequate expression of ideas and sufficient awareness of the task and mode.

Standard English Conventions—Score Point 3D

Consistent control of conventions is demonstrated in the use of correct and varied sentence forms as well as correct grammar, usage, and mechanics. Minor spelling and punctuation errors do not detract from the overall fluency of the writing: “Algae has potential to provide necessary proteins to feed a global population of about 10 billion people!” The essay is sufficiently long and complex enough to demonstrate consistent control of standard English conventions.

Dear Ms. State Lawmaker,

My name is [Student Name] and I am an advocate for algae and seaweed farming. This may sound like a reach, but I believe that this new way of life could possibly save our environment. Sounds amazing, right? Let me explain!

First off is algae farming. Algae are technically not considered plants (since they don't have roots, leaves, or flowers). However, they share a few similarities to plants; one of which being their ability to perform photosynthesis. Did you know that algae accounts for most of the primary production of living biomass in the ocean, as well as almost half of the photosynthesizing biomass on our planet?

Have you heard of algal biofuel? When algae oil is extracted, it can be used as a eco-friendly replacement for fossil fuels (biodiesel). Aside from serving as fuel, algae can also be food! Algae has potential to provide necessary proteins to feed a global population of about **10 billion people!** It also happens to have many more essential nutrients than in plants, which means algae has more nutrients than many plant based items that may be sold at the supermarket. In addition, algae can be made into snacks, protein powders, and meat/seafood substitutes.

Now, lets talk about seaweed farming. Like algae, seaweed has the potential to fight off climate change. Seaweed has the ability to absorb carbon emissions, regenerate marine ecosystems, create biofuel and renewable plastics, and generate marine protein. Researchers have found that seaweed is the **most** effective natural way of absorbing carbon emissions from the atmosphere. As a plus, seaweed does not require fresh water/fertilizers *and* grows at a much faster rate that trees do.

In addition to being **very** good for the environment, a seaweed farm could bring jobs into the area. British Columbia, Canada, is a hotspot for seaweed biodiversity *and* their industry is just taking off. Imagine if we had seaweed algae farming!

In conclusion, both seaweed and algae farming would have an *incredibly* positive impact on our state (and maybe even in the long run, our planet.) Thank you for your time and consideration.

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Idea Development—Score Point 2

This brief essay in the form of a letter is a somewhat developed response to the prompt. An argument is attempted in direct address: “Today I am writing this letter to you because I wanted to let you know about the amazing thing that algae farming is.” The single paragraph is an elaborated list of the benefits of algae, showing limited organization. The essay includes a basic explanation that stresses the urgency of expanding algae farming: “By the time we need the benefits it could be too late if we only start then, plus there’s no harm in starting now if it will help the planet.” Overall, ideas are evident but basic. There is partial awareness of the writing task, and the use of language is appropriate to an argument.

Standard English Conventions—Score Point 2

The essay is brief and demonstrates mostly consistent control of standard English conventions. Some sentences and word usage are awkward: “I think that there should be government incentive to start an algae farm so that we could make headway towards the amazing benefits the seaweed has to offer.” Still, mostly consistent control of a variety of sentence forms is shown. Spelling errors such as “because” and “environment” do not interfere with communication.

To whom it may concern,

Today I am writing this letter to you because I wanted to let you know about the amazing thing that algae farming is. In case you haven't heard, algae could be a great, environmentally friendly way to absorb carbon dioxide on our planet. It can grow somewhere between 10 and 100 times faster than land plants, can cover wider areas, and also absorb more carbon dioxide. Not to mention that seaweed is a source of protein so it could replace the environmental impact of so many people eating meat every day. Seaweed could be the only way to feed the population without hurting the environment. I think that there should be government incentive to start an algae farm so that we could make headway towards the amazing benefits the seaweed has to offer. By the time we need the benefits it could be too late if we only start then, plus there's no harm in starting now if it will help the planet. Most people don't know about the wonderful things seaweed can do and the only way for them to learn is to educate them. In turn they might decide that they might want to start farming which would be great! Even though not everyone would be able to help, that's okay and maybe as time goes on more and more people will be able to get involved.

Sincerely,

A citizen who's concerned for our planet's health

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Idea Development—Score Point 1

This response is written in the form of a letter and opens with an opinion: “I think that algae is a great natural resource that could help solve some of our problems. . . .” This statement is followed by a minimal list of details. The rhetorical question, “Algae may help how?” shows some, though minimal, attention to the task of an argument. Ideas are incomplete and poorly expressed.

Standard English Conventions—Score Point 1

The response is too minimal to demonstrate more than little control of standard English conventions. In addition, the initial run-on sentence takes up nearly half of the single-paragraph response. Further errors in sentence formation, grammar, and usage interfere with meaning: “Most of the worlds oxygen comes from algae, and they can grow 10 to 100 times faster than land plant which in the case of global warming algae can cover a wider area and be used in bioreactors to absorb CO2.”

Dear Massachusetts State Lawmakers,

I think that algae is a great natural resource that could help solve some of our problems, the text states if emissions continue to rise global warming will impact agriculture to the point that almost 90 percent of the populations will lose food. Algae may help how ? Most of the worlds oxygen comes from algae, and they can grow 10 to 100 times faster than land plant which in the case of global warming algae can cover a wider area and be used in bioreactors to absorb CO2. Algae can also be used as a food, it can be turned into snacks and protein powder. Algae has many use and i think it could help us a lot.

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Idea Development—Score Point 0

It is clear that the student has read the article(s), but the response does not address the question.

Standard English Conventions—Score Point 0

Though the response can be understood, it contains several errors and is too minimal to demonstrate any control of standard English conventions.

if someone were to profit from algae it would first have to be easier to make

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