

ELA.05.PT.2.04.085 C2 T4

Sample Item ID:	ELA.05.PT.2.04.085
Title:	Pollution on Land and in Space
Grade/Model:	5/1
Claim(s):	<p>Primary Claims</p> <p>2. Students can produce effective writing for a range of purpose and audiences.</p> <p>4. Students can engage in research / inquiry to investigate topics, and to analyze, integrate, and present information.</p>
Assessment Target(s):	<p><i>These claims and targets are eligible to be measured by scorable evidence.</i></p> <p>CLAIM 2</p> <p>4. COMPOSE FULL TEXTS: Write full informational/explanatory texts on a topic, attending to purpose and audience: organize ideas by stating a focus, include structures and appropriate transitional strategies for coherence, include supporting details (from sources when appropriate to prompt), and an appropriate conclusion.</p> <p>8: LANGUAGE & VOCABULARY USE: Strategically use language and vocabulary (including academic or domain-specific vocabulary) appropriate to the purpose and audience when revising or composing texts</p> <p>9. EDIT/CLARIFY: Apply or edit grade-appropriate grammar usage and mechanics to clarify a message and edit narrative, informational, and opinion texts</p> <p>CLAIM 4</p> <p>2. ANALYZE/INTEGRATE INFORMATION: Locate information to support central ideas and subtopics; Select and integrate information from data or print and non-print text sources</p> <p>3. EVALUATE INFORMATION/SOURCES: Distinguish relevant-irrelevant information (e.g., fact/opinion)</p> <p>4. USE EVIDENCE: Generate conjectures or opinions and cite evidence to support them based on prior knowledge and evidence collected and analyzed</p>
Secondary Target(s):	N/A
Standard(s):	<p>Primary Standards:</p> <p>Writing W-2a through W-2e, W-3b, W-4, W-5, W-8, W-9; W-3d, L-3a, L-6, L-1, L-2, L-3b</p> <p>Research RI-1; W-8, W-9; RI-9; W-1-a, W-1b</p>
DOK:	4
Difficulty:	Medium
Item Type:	PT
Score Points:	TBD
Task Source:	Testing Contractor
How this task addresses the sufficient evidence	<p>In order to complete the performance task, students</p> <ol style="list-style-type: none"> 1. Gather, select, and analyze information in a series of sources 2. Write an informational essay effectively demonstrating the

for this claim:	following: <ul style="list-style-type: none"> • a clearly-established claim about the topic • presentation of relevant supporting evidence, details, and elaboration consistent with the position, sources, purpose, and audience • effective organization of ideas • adherence to conventions and rules of grammar, usage, and mechanics • control of language for purpose and audience
Target-Specific Attributes (e.g., accessibility issues):	Students with hearing and visual impairment will need to be provided with a transcript of the video material.
Stimulus:	<p>Sources (1 video, 2 texts, presented in the order in which they are used)</p> <p>Video 1 “Tracking Space Debris” http://www.youtube.com/watch?v=EIsubVLN9uE 4:30</p> <p>Passage 1 Pollution</p> <p>There are many kinds of pollution. Some kinds of pollution affect the air, soil, and water. Other pollution is in the form of noise and light.</p> <p>Air pollution is caused by microscopic bits of trash, droplets of liquid or harmful gases in the air. Breathing air with these types of debris is harmful. There are two main types of air pollution: primary and secondary. Primary pollutants enter the air directly. Some examples of primary pollutants are smoke from factories or car exhaust. Secondary pollutants are chemicals that mix together to dirty the air. For example, exhaust smoke from vehicles mixes with factory smoke to form dangerous combinations.</p> <p>Soil pollution is caused when harmful chemicals get into soil. These chemicals seep into soil through accidental spillage or purposeful dumping. Pesticides, or chemicals used to kill insects, leak from holding tanks, and oil leaks into underground water supply systems. Water pollution can have a far-reaching impact on the environment. Some scientists believe that water pollution is the largest cause of death and disease in the world. Some other forms of pollution are not as well known. Noise and light pollution also have negative effects on the environment. Noise pollution is caused by the loud sounds made by cars, airplanes, and factories. People who are exposed to loud noises for long periods of time can suffer from high blood pressure, heart problems, sleep disturbances, and hearing problems. In animals, noise pollution can cause communication and reproductive problems. For some animals, noise can even affect the ability to navigate, or find the way to breeding grounds or away from harm. Noise from underwater sonar equipment has been known to confuse whales. When a whale</p>

responds to the sonar as if it were another whale, it may become beached along a shore, unable to swim back into the ocean.

Pollution from artificial light is caused by glowing roadside signs, bright stadium lights, headlights from cars, and street lamps. Long-term exposure to these sources of lighting has negative health effects on both people and animals. In humans, artificial lighting has been known to cause high blood pressure. It can also affect sleeping and waking rhythms, as well as the body's natural ability to fight illness. In animals, artificial lighting can affect sleeping and waking rhythms, navigation, and reproduction.

No one can accurately predict the timing and effects of pollution on Earth. Scientists can agree that pollution affects people, animals, and the climate on Earth. Scientists believe that humans need to begin taking the first steps toward conserving fossil fuels and reducing waste into the atmosphere.

Passage #2
Cleaning up the Space Junk

Have you ever looked around your room and thought "What a mess!" Would it look like a mess if every day you put away a couple toys, some clothes, or cleaned just a little bit? Now imagine your room is actually outer space and the junk is piling up! That's exactly what scientists are encountering now. And they are starting to realize that a little cleaning can make a big difference over time.

A large cloud of space garbage actually orbits around the Earth every day. The National Aeronautics and Space Administration (NASA) estimates that about 22,000 pieces of this debris are as large as a softball. The smaller pieces, about 500,000 of them, are closer to the size of a marble. Possibly hundreds of millions of smaller pieces are also floating around the planet.

Luckily, this isn't considered to be too much garbage. Steps need to be taken to control the problem, though. As J.C. Liou, an employee of NASA's Orbital Debris Program Office in Houston, says, "Orbital debris is a serious issue, but at the same time, the sky is not falling."

How Did it Get There?

When a space shuttle, satellite, or other spacecraft launches into space, booster rockets and other "waste" parts are left to float in space when the shuttle or satellite detaches. When satellites become too old to use or stop functioning, they add to the rest of the junk. Sometimes these large chunks of space junk can crash into other objects making thousands of smaller pieces of junk. Satellites still in use become junk when they collide with debris in space. For example, a communication satellite smashed into an abandoned Russian satellite in 2009, shattering both into thousands of smaller pieces of space junk.

The danger isn't necessarily from space junk falling to the Earth. The

	<p>larger threat comes from space junk damaging or destroying useful satellites and other craft that people send into space. Small, marble-sized bits of junk traveling at high speeds in space can cause a great amount of damage to working equipment.</p> <p>Plenty of Time...But Not Too Much The good news about all of this is that there is time to act. Liou estimates we have between ten to twenty years to think of an answer. He also believes that the problem can be helped by removing five large pieces of junk, like abandoned satellites or rockets, from outer space each year. Some researchers feel that the amount of space junk has already reached a problematic level; however, many agree that removing junk from space is the best solution.</p> <p>But even though twenty years seems like a long time, and five pieces doesn't seem like much junk to remove, a problem still remains. How do you catch and remove a large chunk of space garbage that is speeding at over 22,000 miles per hour?</p> <p>Working Together Researchers and scientists from around the world have come up with some strategies to help solve the problem. For example, some have suggested programming satellites to discharge their fuel and batteries at the end of their lives to avoid explosions upon impact with debris.</p> <p>Liou claims that it is not enough to lessen the problem caused by future objects sent into space. "There is a need for a more aggressive measure to protect and preserve the environment," he said. "The time has come for us to consider active debris removal."</p> <p>Some scientists have suggested lasers to push junk out of orbit and away from our planet into the far reaches of space. Others have suggested equipping spacecraft with large nets to catch and haul away debris like fish in the sea. Any of these methods would require a large amount of money and time to create and perfect the technology needed.</p> <p>Whatever the answer may be, the issue is not going away on its own. It is actually becoming worse every day that nothing is done to help. The large cost and complexity of the problem, requires the help of every nation on Earth to solve it. "This is an international problem," Liou said. "We cannot do this by ourselves."</p>
Stimuli/Text Complexity:	
Acknowledgments:	http://www.youtube.com/watch?v=EIsubVLN9uE library.thinkquest.org/C0111040/Types/types.php http://environment.nationalgeographic.com/environment/global-warming/pollution-overview/ http://www.msnbc.msn.com/id/46542521/ns/technology_and_science-space/
Notes:	

Task Overview:

Title: Pollution on Land and in Space

Part 1- (35 minutes)

Before writing an essay comparing the problem of pollution on Earth to the problem of pollution in space, students will be introduced to the topic through watching a short video, reading two informative texts, and answering research questions on the topic. Students may take notes on what they view and read. Students should also have access to the video and texts throughout the performance task. After watching and reading, students will then respond individually to selected-response items and constructed-response items.

Part 2- (70 minutes)

Finally, students will work individually to compose a full-length informational essay comparing the problem of pollution on Earth to the problem of pollution in space, referring to details from the video or the texts. Students may also refer to their notes or back to the video or passages as needed. Drafting and revising will be involved.

Scorable Products: Student responses to the selected-response and constructed-response questions in part 1 and the essay in part 2 will be scored.

Teacher preparation/Resource requirements

The teacher should ensure that sufficient blank paper and writing utensils are available for student note taking. Teacher should conduct standard preparation, registration, etc., for computer-based testing. The testing software will include access to spell check but not to grammar check.

Teacher Directions:

Students are given the texts, research, and any additional information about the essay.

Part 1 (35 minutes)

- Initiate the online testing session.
- Alert the students when 15 minutes have elapsed.
- Alert the students when there are 5 minutes remaining in part 1.

Stretch Break

Part 2 (70 minutes)

- Initiate the testing part 2.
- Allow students to access the sources and their answers to the constructed response questions presented in part 1. They will not be allowed to change their answers.
- Once 15 minutes have elapsed, suggest students begin writing their essays.
- Alert the students when 35 minutes have elapsed.
- After students have been writing for 50 minutes, alert them that there are 20 minutes remaining and suggest they begin revising their essays.
- Alert the students when there are 10 minutes remaining in the session.
- Close the testing session.

Pre-Task Activity:

There are no specific pre-task activities to be conducted.

Time Requirements:

This Performance Task will take 105 minutes in one session.

Student Directions:

Part 1 (35 minutes)

Your assignment:

You will watch a video and read two articles about pollution on Earth and pollution in space, taking notes on all of these sources, and answer three questions about the sources. You will then write an informational essay comparing the problem of pollution on Earth to the problem of pollution in space, discussing how these problems are similar and different, and considering various possible solutions to each problem.

Steps you will be following:

In order to plan and compose your essay, you will do all of the following:

1. Watch the video and then read two articles.
2. Answer three questions about the sources.
3. Plan and write your essay.

Directions for beginning:

You will now watch one video and read two articles. Take notes because you may want to refer to your notes while writing your essay. You can look back at any of the sources as often as you like while you are taking notes. You will need to use your notes and sources to write your final essay.

(video 1)
(article 1)
(article 2)

Questions

Use the remaining time to answer the questions below. Your answers to these questions will be scored. Also, they will help you think about the sources you have read and viewed. You may click on the appropriate buttons to refer back to the sources or your notes when you think it would be helpful. Answer the questions in the spaces provided.

1. What is one detail about pollution in space that appears in both the video and the “Cleaning up the Space Junk” article you read?

2. Which sentence or sentences from the two articles support the idea that pollution on Earth and in space is harmful? Select all the sentences that apply.

A. Some scientists believe that water pollution is the largest cause of death and disease in the world.

B. People who are exposed to loud noises for long periods of time can suffer from high blood pressure, heart problems, sleep disturbances, and hearing problems.

C. No one can accurately predict the timing and effects of pollution on Earth.

D. Small, marble-sized bits of junk traveling at high speeds in space can cause a great amount of damage to working equipment.

E. Researchers and scientists from around the world have come up with some strategies to help solve the problem.

3. Read this statement: “Humans are learning from their mistakes involving pollution.” Do you agree with this statement? Explain your answer using evidence from the video or the text to support your opinion.

Part 2 (70 minutes)

You will now have 70 minutes to review your notes and sources, plan, draft, and revise your essay. While you may use your notes and refer to the sources, you must work on your own. You may also refer to the answers you wrote to earlier questions, but you cannot

change those answers. Now read your assignment and the information about how your essay will be scored, and then begin your work.

Your assignment:

You have watched one short video and read two informational texts about pollution. Consider how the problems of pollution on Earth and in space are similar and different. Write an informational essay comparing the problem of pollution on Earth to the problem of pollution in space. In your essay, discuss the ways in which pollution on Earth and in pollution in space are similar and different in terms of the problems they create and the solutions required to deal with them. Support your essay with details from the informational texts you have read and the video you have watched.

How your essay will be scored: The people scoring your essay will be assigning scores for

- 1. Statement of Purpose/Focus**—how well you clearly state and maintain your controlling idea or main idea
- 2. Organization** – how well the ideas progress from the introduction to the conclusion using effective transitions and how well you stay on topic throughout the essay
- 3. Elaboration of Evidence** – how well you provide evidence from sources about your topic and elaborate with specific information
- 4. Language and Vocabulary** – how well you effectively express ideas using precise language that is appropriate for your audience and purpose
- 5. Conventions** – how well you follow the rules of usage, punctuation, capitalization, and spelling.

Now begin work on your essay. Manage your time carefully so that you can:

- plan your essay
- write your essay

- revise and edit for a final draft

Word-processing tools and spell check are available to you.

Scoring Information

CR #1 C4T2

Sample Generic 2-point Research (Grades 3-5): Interpret & Integrate Information Rubric (Claim 4, Target 2)	
2	• The response gives sufficient evidence of the ability to locate, select, interpret and integrate information within and among sources of information.
1	• The response gives limited evidence of the ability to locate, select, interpret and integrate information within and among sources of information.
0	A response gets no credit if it provides no evidence of the ability to locate, select, interpret and integrate information within and among sources of information.

Scoring Notes:

Responses may include but are not limited to:

Space junk is made up of old satellites, booster rockets, and other waste parts.

Space junk can crash into other space junk and create even more junk.

Even the smallest pieces of space junk can damage or destroy useful satellites or craft with people.

Scientists suggest discharging fuel or batteries at the end of the life of a satellite to prevent

explosions (and the production of smaller bits of junk) when/if space junk collides with other junk.

Sample 2-point Response:

The video says that pollution in space is made up of a lot of old satellites and other waste parts. It shows a shot of a shuttle ejecting parts when it gets into space. And the article talks about how when a shuttle goes into space it leaves debris. "When a space shuttle, satellite, or other spacecraft launches into space, booster rockets and other 'waste' parts are left to float in space when the shuttle or satellite detaches."

SR #1: C4T3 Key: A, B, D

CR #2: C4T4

Sample Generic 2-point Research (Grades 3-5): Use Evidence Rubric (Claim 4, Target 4)	
2	• The response gives sufficient evidence of the ability to cite evidence to support opinions and ideas.
1	• The response gives limited evidence of the ability to cite evidence to support opinions and ideas.
0	A response gets no credit if it provides no evidence of the ability to cite evidence to support opinions and ideas.

Scoring Notes:

Responses may include but are not limited to:

In the video or the article "Cleaning up the Space Junk"--

Humans are not learning from their mistakes because they have been letting space junk build up in

space for many years.

Humans are learning from their mistakes because scientists are starting to think of ways to clean up junk in space and prevent more junk from being left in space.

In the article "Pollution"--

No because the article says sometimes humans do "purposeful dumping" of chemicals into the soil so they are not learning from their mistakes about pollution.

Yes I do think humans are learning because the article says scientists think humans need to begin conserving fossil fuels and reducing waste into the atmosphere so scientists are learning from mistakes people make with pollution.

Sample 2-point Response:

I don't agree. I don't think humans are learning from their mistakes with pollution because the article shows that humans keep dumping harmful chemicals into the soil on purpose. Everybody knows pollution is bad but they keep doing it so they're not learning.

Sample Generic 4-point Informative-Explanatory (Grades 3-5) Writing Rubric					
Score	Statement of Purpose/Focus and Organization		Development: Language and Elaboration of Evidence		Conventions
	Statement of Purpose/Focus	Organization	Elaboration of Evidence	Language and Vocabulary	Conventions
4	<p>The response is fully sustained and consistently and purposefully focused:</p> <ul style="list-style-type: none"> controlling idea or main idea of a topic is focused, clearly stated, and strongly maintained controlling idea or main idea of a topic is introduced and communicated clearly within the context 	<p>The response has a clear and effective organizational structure creating unity and completeness:</p> <ul style="list-style-type: none"> use of a variety of transitional strategies logical progression of ideas from beginning to end effective introduction and conclusion for audience and purpose 	<p>The response provides thorough and convincing support/evidence for the controlling idea or main idea that includes the effective use of sources, facts, and details:</p> <ul style="list-style-type: none"> use of evidence from sources is smoothly integrated, comprehensive, and relevant effective use of a variety of elaborative techniques 	<p>The response clearly and effectively expresses ideas, using precise language:</p> <ul style="list-style-type: none"> use of academic and domain-specific vocabulary is clearly appropriate for the audience and purpose 	<p>The response demonstrates a strong command of conventions:</p> <ul style="list-style-type: none"> few, if any, errors are present in usage and sentence formation effective and consistent use of punctuation, capitalization, and spelling

<p>3</p>	<p>The response is adequately sustained and generally focused:</p> <ul style="list-style-type: none"> • focus is clear and for the most part maintained, though some loosely related material may be present • some context for the controlling idea or main idea of the topic is adequate 	<p>The response has an evident organizational structure and a sense of completeness, though there may be minor flaws and some ideas may be loosely connected:</p> <ul style="list-style-type: none"> • adequate use of transitional strategies with some variety • adequate progression of ideas from beginning to end • adequate introduction and conclusion 	<p>The response provides adequate support/evidence for controlling idea or main idea that includes the use of sources, facts, and details:</p> <ul style="list-style-type: none"> • some evidence from sources is integrated, though citations may be general or imprecise • adequate use of some elaborative techniques 	<p>The response adequately expresses ideas, employing a mix of precise with more general language:</p> <ul style="list-style-type: none"> • use of domain-specific vocabulary is generally appropriate for the audience and purpose 	<p>The response demonstrates an adequate command of conventions:</p> <ul style="list-style-type: none"> • some errors in usage and sentence formation may be present, but no systematic pattern of errors is displayed • adequate use of punctuation, capitalization, and spelling
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<p>2</p>	<p>The response is somewhat sustained and may have a minor drift in focus:</p> <ul style="list-style-type: none"> • may be clearly focused on the controlling or main idea, but is insufficiently sustained • controlling idea or main idea may be unclear and somewhat unfocused 	<p>The response has an inconsistent organizational structure, and flaws are evident:</p> <ul style="list-style-type: none"> • inconsistent use of transitional strategies with little variety • uneven progression of ideas from beginning to end • conclusion and introduction, if present, are weak 	<p>The response provides uneven, cursory support/evidence for the controlling idea or main idea that includes partial or uneven use of sources, facts, and details:</p> <ul style="list-style-type: none"> • evidence from sources is weakly integrated, and citations, if present, are uneven • weak or uneven use of elaborative techniques 	<p>The response expresses ideas unevenly, using simplistic language:</p> <ul style="list-style-type: none"> • use of domain-specific vocabulary that may at times be inappropriate for the audience and purpose 	<p>The response demonstrates a partial command of conventions:</p> <ul style="list-style-type: none"> • frequent errors in usage may obscure meaning • inconsistent use of punctuation, capitalization, and spelling
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<p>1</p>	<p>The response may be related to the topic but may provide little or no focus:</p> <ul style="list-style-type: none"> • may be very brief • may have a major drift • focus may be confusing or ambiguous 	<p>The response has little or no discernible organizational structure:</p> <ul style="list-style-type: none"> • few or no transitional strategies are evident <p>frequent extraneous ideas may intrude</p>	<p>The response provides minimal support/evidence for the controlling idea or main idea that includes little or no use of sources, facts, and details:</p> <ul style="list-style-type: none"> • use of evidence from the source material is minimal, absent, in error, or irrelevant 	<p>The response expression of ideas is vague, lacks clarity, or is confusing:</p> <ul style="list-style-type: none"> • uses limited language or domain-specific vocabulary • may have little sense of audience and purpose 	<p>The response demonstrates a lack of command of conventions:</p> <ul style="list-style-type: none"> • errors are frequent and severe and meaning is often obscure
<p>0</p>	<p>A response gets no credit if it provides no evidence of the ability to write an organized informational/explanatory essay.</p>				