



Teacher Directions: Stormwater Pollution



GRADE 5

(Two 60 to 90 minute testing periods -These times are approximate. Sessions are untimed)

Part 1 (Approximately 60-90 minutes)

Students research from three sources; two videos and a job description and take notes on these sources. They then respond to three questions about the sources.

Part 2 (Approximately 60 -90minutes)

Students compose full-length informational essays on the important work of the stormwater engineer. Pre-writing, drafting, and revising will be involved.

Scorable Products: Student responses to the constructed-response questions and the essay will be scored.

Pre- Task Activity:

There are no specific pre-task activities to be conducted. You may want to talk with students about how all communities, including theirs, have problems with stormwater runoff. Explain that stormwater pollution is a big problem for our oceans. Students will learn more about stormwater pollution in this task!

Teacher Directions:

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

Part 1 (Approximately 60-90 minutes)

- Initiate the testing session. Review the task and note taking template.
- Show the video twice while students take notes. Then instruct students to read the article and illustration and take notes.
- Alert students when there are 10 minutes remaining in part 1.

Stretch Break (Or overnight break)

Part 2 (Approximately 60-90 minutes)

- Initiate the testing part 2: Review the task and the essay planning template.
- 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.
- Alert the students when 15 minutes remain in the testing session and suggest they begin revising their essays.
- Alert the students when there are 5 minutes remaining in the session.

Close the testing session.



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Scoring Rubrics:

Question #1	Claim 4, Target 2
Question #2	Claim 4, Target 3
Question #3	Claim 4, Target 4
Essay	Explanatory Essay Writing Rubric (Grades 3-5 or 6-11)

Explanatory Essay Rubric (Grades 3-5 or 6-11)

4 - Points	Statement of Purpose / Focus; Organization
4 - Points	Language and Elaboration
2 - Points	Conventions

Rubrics and scoring notes for the three research questions are available for this task with student worksamples.



Scoring Notes: Stormwater Pollution



Question 1: What is stormwater runoff? Be sure to name your source. (Claim 4, Target 2)

ANALYZE / INTEGRATE Information Rubric Claim 4, Target 2	
	<ul style="list-style-type: none"> The response gives sufficient evidence of the ability to gather, analyze and integrate information within and among multiple sources of information.
	<ul style="list-style-type: none"> The response gives limited evidence of the ability to gather, analyze and integrate information within and among multiple sources of information.
	<ul style="list-style-type: none"> A response gets no credit if it provides no evidence of the ability to gather analyze and integrate information within and among multiple sources of information.

Scoring Notes

Let's Visit Stormville!: Rain that doesn't soak into the ground. The runoff carries pollutants into pipes that lead to the sea.

The Culprits: Rainwater that is not absorbed into the ground, intercepted by vegetation, or evaporated. This water flows into our streams, lakes and ocean carrying pollutants.

The Video: Rain landing on our pavements and flows into our storm drains. This water picks up pollutants.

2---point Response

- Defines stormwater runoff as rainwater that is not absorbed into the ground and carries pollutants to our lakes, rivers, and ocean.
- Cites at least one of the three sources.

1---point Response

- Correctly defines stormwater runoff
- Does not name a source.

0---point Response

- Incorrect definition or Off Topic



Scoring Notes: Stormwater Pollution



Sample 2 Point Responses:

The meaning of stormwater runoff is rain that doesn't get soaked into nature. The stormwater flows and picks up pollution that goes into pipes and storm drains and is sent to lakes and rivers. The article says about stormwater that "...rain that does not soak into the ground is called Stormwater runoff" Source: Let's Visit Stormville! Pg.1

Stormwater runoff is when rain falls, and it collects pollutants, pesticides, animal waste, salt, oil, and litter. This stormwater runoff goes into storm drains where it travels to underground pipe that goes directly into rivers. I found his information from the video "It takes 15-30 min. from the pipes to the river."

Sample 1 Point Responses:

A stormwater runoff is when water does not get soaked up and gets on dirty surfaces. And it picks up all the pollution around it. Then it gets into pipes. The stormwater with pollution gets into lakes, rivers, or even the ocean. Which makes it very unhealthy to swim in it for humans and fish. (Does not name the source of the information)

A stormwater runoff is a rain that does not soak into the ground. Stormwater goes into storm drains that carry pipes and ditches to local streams like lakes and Puget Sound. Storm water runoff flows into storm drain and travels into rivers. (No mention of carrying pollutants. Source is not named.)

Sample 0 Point Responses:

A Stormwater runoff are like canals, ditches, or storm drains. (Let's Visit Stormville!) (Culprits) (Fifteen Minutes to the River) (Incorrect definition)

Soap, oil, and other pollutants in the wash water are harmful. Fish and other animals that live in the water. These pollutants can destroy the protective covering in fish and injure or even kill them. And they are animals that live in the waters. (Off topic response)



Scoring Notes: Stormwater Pollution



Question 2: What do you learn from the article about types of stormwater pollution that you don't learn in the diagram? (*Claim 4, Target 3*)

EVALUATE Information/Sources Rubric Claim 4, Target 3	
	<ul style="list-style-type: none"> The response gives sufficient evidence of the ability to evaluate the credibility, completeness, relevancy, and/or accuracy of the information and sources.
	<ul style="list-style-type: none"> The response gives limited evidence of the ability to evaluate the credibility completeness, relevancy, and/or accuracy of the information and sources.
	<ul style="list-style-type: none"> A response gets no credit if it provides no evidence of the ability to evaluate the credibility, completeness, relevancy, and/or accuracy of the information and sources.

Scoring Notes

Pet waste is a major source of pollution. Car washing can also pollute.

2---point Response

Names either pet waste or car washing as another source of stormwater pollution.

1---point Response

Names a difference between the two sources, but not focused on types of stormwater pollution.

0---point Response

No reference to differences in the two sources and/or off topic Inaccurate information



Scoring Notes: Stormwater Pollution



Sample 2 Point Responses:

Types of stormwater pollution that I learn in the article but are not mentioned in the diagram are bacteria in pet waste and chemical results made from car washing. Pet waste bacteria that is not picked up can end up being taken by stormwater runoff and go to natural bodies of water. Car washes can drop soap, oil, and other things which can end up in rivers, lakes, and streams from stormwater runoff.

We learn about pet waste in the article. The diagram does not talk about pet waste. (Let's Visit Stormville! Pg.2) We also learn how to help or prevent it from happening.

You learn that water also picks up chemicals that we can't see like chemicals sprayed on lawns and bacteria from pet waste and chemicals leached from cars and trucks.

Sample 1 Point Responses:

What I learned in the article about types of stormwater pollution that I didn't learn in the diagram was that stormwater pollution is 75% of all pollution in Puget Sound comes from stormwater runoff that starts in our neighborhoods. (Let's Visit Stormville! Pg. 1) (Names a difference between the two sources but not related to types of stormwater pollution.)

In the article "Let's visit Stormville!" there are headings that teach us how we can prevent pollution in stormwater runoff. In "The Culprits" it shows us a diagram about how stormwater gets polluted, but they don't show how to prevent it. (Accurate comparison but not related to types of stormwater pollution.)

Sample 0 Point Responses:

What I learned in the article about types of stormwater pollution was that the three different types of stormwater pollution are car washing on pavement, pet waste, and yard chemicals and what I didn't learn in the diagram is that how storm water gets polluted. (No comparison of types of pollution named in both sources; inaccurate information about diagram which does show how stormwater is polluted.)

In the diagram the same types of stormwater pollution is pesticides, litter, animal wastes, salts, oil. I learned that many of them pollute our lakes and rivers. (No comparison between sources.)



Scoring Notes: Stormwater Pollution



Question 3: Defend this statement using information from two of the sources. Be sure to name your sources. *“We can make a difference in keeping our water clean and healthy.”* (Claim 4, Target 4)

USE EVIDENCE Rubric Claim 4, Target 4	
	<ul style="list-style-type: none"> The response gives sufficient evidence of the ability to cite evidence to support arguments and/or ideas.
	<ul style="list-style-type: none"> The response gives limited evidence of the ability to cite evidence to support arguments and/or ideas.
	<ul style="list-style-type: none"> A response gets no credit if it provides no evidence no evidence of the ability to cite evidence to support arguments and/or ideas.

Scoring Notes

Article: Wash your car at a car wash; scoop pet waste; use only what you need for lawn chemicals

Video: Use rain barrels; create more green space; use porous pavement; limit the amount of dense, impermeable surfaces; put in less pavement

Diagram: We can infer the following: Avoid using too much lawn fertilizer; keep roads clean by not littering and picking up trash; don't put grass clippings into storm drains; don't work on your car on grass because oil can leak out and pollute the ground water.

2---point Response:

- Names two specific things we can do to prevent stormwater pollution
- Uses two of the three sources for information
- Cites each source

1---point Response:

- Names two things we can do to prevent stormwater pollution but draws from just one source or does not cite any source
- Names only one thing we can do to prevent stormwater pollution

0---point Response:

Off Topic or makes general statements with no specific examples of what we can do to prevent water pollution



Scoring Notes: Stormwater Pollution



Sample 2-point Responses:

In “Fifteen Minutes to the River,” to help make a difference in keeping our water clean and healthy is limit the amount of dense surfaces in your community and having rain gardens. In “Let’s Visit Stormville!” to help make a difference in keeping our water clean and healthy is to only use fertilizer and pesticides when absolutely necessary so when it rains all the chemicals won’t go into the storm drain and hurt the wildlife in the se, lakes or rivers.

I believe that we can make a difference in keeping out water clean and healthy because in the article Let’s Visit Stormville” it gives solutions for some of the most everyday things people do such as washing your car, fertilizing your plants, and even pet waste if you have a pet. I learn to not use too many chemicals and to pick up pet waste. In the video, it helps me believe that we can make a difference because it tells me how we can keep storm water from being polluted and into bodies of water by simply catching the water in a rain barrel and pouring it into the natural ground to help grow plants.

Sample 1-point Responses:

First source, Let’s Visit Stormville says you should use the car wash because its cleaner, pet waste you should clean it up with a small plastic bag. Last, yard chemicals you don’t use it every day because it’s bad for wild life and real people. Next source, the video, talks about what happens to the bad rain and it tells some ways to help things. (Has specific examples from one source but not from the second source.)

We can make a difference in keeping our water clean and healthy by taking “your family to take the car to a commercial car wash.” (Let’s Visit Stormville! Pg.2) Another thing you can do is “Scoop the poop. Put it in a bag and place it in the trash.” (Let’s Visit Stormville! Pg. 2) (Names two ways we can help but only draws information from one of the sources.)

Sample 0-point Responses:

“We can make a difference in keeping our water clean and healthy” about the information is that “what types of pollution can get into drains and make our water unhealthy.” Helping the water to be clean is also “Here’s what you can do!” paragraphs. (Does not name any specific things people can do to make a difference in keeping the water clean.)

Pet waste- when it rains pet waste is left on the ground and melts into the stormwater. The pollution stormwater flows into nearby storm drains and then into waterways like streams, rivers, or Puget Sound. (Off topic: does not directly focus on what we can do to make a difference in keeping our water clean)

**Informative / Explanatory
Performance Task Writing Rubric (Grades 3-5)**



Score	4	3	2	1
Statement of Purpose/Focus	<p>The response is fully sustained and consistently and purposefully focused:</p> <ul style="list-style-type: none"> controlling or main idea of a topic clearly communicated, and the focus is strongly maintained for the purpose, audience, and task 	<p>The response is adequately sustained and generally focused:</p> <ul style="list-style-type: none"> controlling or main idea of a topic is clear, and the focus is mostly maintained for the purpose, audience, and task 	<p>The response is somewhat sustained and have a minor drift in focus:</p> <ul style="list-style-type: none"> controlling or main idea may be somewhat unclear, or the focus may be insufficiently sustained for the purpose, audience, and task 	<p>The response has little or no discernable organizational structure:</p> <ul style="list-style-type: none"> controlling or main idea may be confusing or ambiguous; response may be too brief or the focus may drift from the purpose, audience, and task
Organization	<p>The response has a clear and effective organizational structure creating unity and completeness:</p> <ul style="list-style-type: none"> consistent use of a variety of transitional strategies to clarify the relationship between and among ideas effective introduction and conclusion logical progression of ideas from beginning to end; strong connections among ideas with some syntactic variety 	<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 to clarify the relationship between and among ideas adequate introduction and conclusion progression of ideas from beginning to end; strong connections among ideas 	<p>The response has an inconsistent organizational structure, and flaws are evident:</p> <ul style="list-style-type: none"> inconsistent use of transitional strategies and/or little variety introduction and conclusion, if present, may be weak uneven progression of ideas from beginning to end; and/or formulaic; inconsistent or unclear connections between and among ideas 	<p>The response may be related to the topic but may provide little or no focus:</p> <ul style="list-style-type: none"> few or no transitional strategies are evident introduction and/or conclusion may be missing frequent extraneous ideas may be evident; ideas may be randomly ordered or have an unclear progression
Elaboration of Evidence	<p>The response provides thorough and convincing support/evidence for the controlling idea and supporting idea(s) that includes the effective use of sources, facts, and details:</p> <ul style="list-style-type: none"> comprehensive evidence from sources is integrated; references are relevant and specific effective use of a variety of elaborative techniques* 	<p>The response provides adequate support/evidence for the controlling idea and supporting idea(s) that includes the use of sources, facts, and details:</p> <ul style="list-style-type: none"> adequate evidence from sources is integrated, some references may be general adequate use of some elaborative techniques* 	<p>The response provides uneven, cursory support/evidence for the controlling idea and supporting idea(s) that includes partial or uneven use of sources, facts, and details:</p> <ul style="list-style-type: none"> some evidence from sources may be weakly integrated, imprecise, or repetitive; references may be vague weak or uneven use of elaborative techniques*; development may consist primarily of source summary 	<p>The response provides minimal support/evidence for the controlling idea and supporting idea(s) that includes little or no use of sources, facts, and details:</p> <ul style="list-style-type: none"> evidence from the source material is minimal or irrelevant; references may be absent or incorrectly used minimal, if any, use of elaborative techniques*
Language	<p>The response clearly and effectively expresses ideas, using precise language:</p> <ul style="list-style-type: none"> vocabulary is clearly appropriate for the audience and purpose effective, appropriate style enhances content 	<p>The response adequately elaborates ideas, employing a mix of precise and more general language:</p> <ul style="list-style-type: none"> vocabulary is generally appropriate for the audience and purpose generally appropriate style is evident 	<p>The response expresses ideas unevenly, using simplistic language:</p> <ul style="list-style-type: none"> vocabulary use is uneven or somewhat ineffective for the audience and purpose inconsistent or weak attempt to create appropriate style 	<p>The response is vague, lacks clarity, or is confusing:</p> <ul style="list-style-type: none"> vocabulary is limited or ineffective for the audience and purpose little or no evidence of appropriate style
Score	2	1	0	
Conventions	<p>The response demonstrates an adequate command of conventions:</p> <ul style="list-style-type: none"> adequate use of correct sentence formation, punctuation, capitalization, grammar usage, and spelling 	<p>The response demonstrates a partial command of conventions:</p> <ul style="list-style-type: none"> limited use of correct sentence formation, punctuation, capitalization, grammar usage, and spelling 	<p>The response demonstrates little or no command of conventions:</p> <ul style="list-style-type: none"> infrequent use of correct sentence formation, punctuation, capitalization, grammar usage, and spelling 	
NS	<p>Unintelligible, in a language other than English, off-topic, copied text. (Off-purpose writing will still receive a score in Conventions.)</p>			

*Elaborative techniques may include the use of personal experiences that support the controlling idea.

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