

Sum of the Parts Questions

1. Grades 3–5 Science Constructed Response Item

In the space below, write a paragraph that explains how make-believe land developments along a pretend river can be like what happens along a real river. In your explanation, describe how make-believe land developments could be used to help protect the quality of water in a real river.

2. Grades 3–5/6–8 Science Selected Response Item

Which of the following statements is an example of nonpoint source pollution?

- A. Untreated sewage plant discharge spilled into a river.
- B. Coming out of the pipe from the factory was a thin stream of pea-green liquid.
- C. Every time it rained, fertilizer levels in the lake rose.
- D. A thin stream of oil was leaking from the offshore oil drilling rig.

Sum of the Parts Responses

1. Sample Top-Scoring Response

Pretend river properties are like what happens along a real river when everyone develops their land and makes water pollution. At the beginning of the river there's only a little pollution and it's not so bad. At the end of the river, all the pollution that everyone added is there. It all adds up. It's easy to tell where some of the pollution comes from. It's called point pollution. Other pollution is harder to tell where it comes from. It's called nonpoint pollution. If grown-ups played with pretend developments on pretend rivers they might find other ways to develop real properties and not make so much water pollution.

4-Point Response

1. Student demonstrates an understanding that the simulation activity is not reality. Indicator words and phrases might include 'pretend, make-believe, fake, imitation, imaginary, not real, game, play.'

2. Student demonstrates an understanding that simulations can be used to model real occurrences. Indicator words and phrases might include 'are like, similar, resemble, simulate, comparable, mimic, imitate, duplicate.'
3. Student demonstrates an understanding that projecting outcomes of development is desirable in order to consider its impact on others. Examples might include:
 - a. Acknowledgment that pollution prevention or reduction is desirable.
 - b. Specific statements that pollution is harmful to the environment and/or people.
 - c. Recognition that projecting outcomes is a prudent course of action prior to actual development.
4. Student uses supportive illustrations that demonstrate an ability to synthesize the relationship between development and pollution. Examples might be general and summative, such as "it all adds up," or specific and detailed, such as "different kinds of development make different kinds of pollution" or "one person making pollution isn't as bad as lots of people making pollution."

3-Point Response

1. Student demonstrates an understanding that a simulation is not reality. Indicator words and phrases might include 'pretend, make believe, fake, imitation, imaginary, not real, game, play.'
2. Student demonstrates an understanding that projecting outcomes of development is desirable in order to consider its impact on others.
3. Student uses supportive illustrations that may or may not demonstrate the ability to synthesize the relationship between development and pollution.

OR

1. Student demonstrates an understanding that simulations can be used to model real occurrences. Indicator words and phrases might include 'are like, similar, resemble, simulate, comparable.'
2. Student demonstrates an understanding that projecting outcomes of development is desirable in order to consider its impact on others.
3. Student uses supportive illustrations that may or may not demonstrate the ability to synthesize the relationship between development and pollution.

OR

1. Student demonstrates an understanding that a simulation is not reality. Indicator words and phrases might include 'pretend, make believe, fake, imitation, imaginary, not real, game, play.'

2. Student demonstrates an understanding that simulations can be used to model real occurrences. Indicator words and phrases might include ‘are like, similar, resemble, simulate, comparable.’
3. Student demonstrates an understanding that projecting outcomes of development is desirable in order to consider its impact on others.

2-Point Response

1. Student demonstrates an understanding that the simulation activity is not reality. Indicator words and phrases might include ‘pretend, make believe, fake, imitation, imaginary, not real, game, play.’
2. Student demonstrates an understanding that projecting outcomes of development is desirable in order to consider its impact on others.

OR

1. Student demonstrates an understanding that simulations can be used to model real occurrences. Indicator words and phrases might include ‘are like, similar, resemble, simulate, comparable.’
2. Student demonstrates an understanding that projecting outcomes of development is desirable in order to consider its impact on others.

OR

1. Student demonstrates an understanding that the simulation activity is not reality. Indicator words and phrases might include ‘pretend, make believe, fake, imitation, imaginary, not real, game, play.’
2. Student demonstrates an understanding that simulations can be used to model real occurrence. Indicator words and phrases might include ‘are like, similar, resemble, simulate, comparable.’

1-Point Response

1. Student demonstrates an understanding that the simulation activity is not reality. Indicator words and phrases might include ‘pretend, make believe, fake, imitation, imaginary, not real, game, play.’

OR

1. Student demonstrates an understanding that simulations can be used to model real occurrence. Indicator words and phrases might include ‘are like, similar, resemble, simulate, comparable.’

Benchmarks: Grades 3–5 — SC.G.2.2.3, SC.H.1.2.5, SC.H.3.2.3

Difficulty Level: Grades 3–5 — Hard

Prompt could also be used for an FCAT-like writing prompt using the FCAT Writing Rubric.

Correlated benchmarks (all additions to the correlations):

**Grades 3–5 LA.B.1.2.3, LA.B.1.2.4, LA.B.1.2.5,
LA.B.1.2.6, LA.B.1.2.7, LA.B.1.2.8, LA.B.1.2.9,
LA.B.1.2.10, LA.B.1.2.11, LA.B.1.2.12, LA.B.2.2**

2. **Correct Response:** C. Every time it rained, fertilizer levels in the lake rose.

Benchmarks: Grades 3–5 — SC.G.2.2.3
Grades 6–8 — SC.D.2.3.2, SC.G.1.3.4, SC.G.2.3.4

Difficulty Level: Grades 3–5 — Medium
Grades 6–8 — Easy