From River to Tap

Annotate a model explanation that uses exact scientific language.

CCSS.ELA-Literacy.W.8.2d "Use precise language and domain-specific vocabulary to inform about or explain the topic."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline five domain-specific words or phrases, and circle two precise verbs that explain what happens to the water. These choices show how exact language makes an explanation clear.

How Drinking Water Is Treated

1. Before drinking water reaches homes, it travels through a treatment plant. Operators first guide river water through intake screens, which trap leaves, sticks, and other large debris. The water then enters a settling basin. During sedimentation, sand, silt, and other dense particles sink to the bottom because gravity pulls them downward. This step reduces the cloudiness, or turbidity, of the water before later treatment begins and protects equipment from clogging at the plant during later stages.

2. Next, the clarified water moves through filters made of layers of sand, gravel, and anthracite coal. The filter media capture smaller particles that did not settle in the basin. After filtration, workers add a carefully measured disinfectant, often chlorine or chloramine. This chemical treatment inactivates many harmful microorganisms, including bacteria and viruses. Sensors measure turbidity, disinfectant concentration, and pH, a scale that shows how acidic or basic water is. Operators use these readings to adjust the process and meet safety requirements.

3. Finally, pumps send treated water into distribution pipes beneath streets. Storage tanks and water towers maintain pressure, so water can travel to homes, schools, and businesses. Utility crews inspect pipes for leaks and collect samples at locations throughout the system. In a laboratory, technicians test the samples for contaminants, such as lead or disease-causing microbes. Regular monitoring does not replace treatment. Instead, it confirms that the water remains safe as it moves through the distribution system.

2 ANSWER WITH EVIDENCE

Use the passage

1. What does the domain-specific term “sedimentation” describe in this passage? Use one detail from the passage to explain.

2. What three materials are named in the filter media? Explain how naming these materials makes the explanation more precise.

3. In the second paragraph, what does the precise verb “inactivates” tell the reader about the disinfectant?

4. Name two measurements that sensors record. How do operators use those measurements?

3 YOUR TURN

Your own words

Write three sentences explaining how water becomes safer before it enters distribution pipes. Use at least four domain-specific terms from the passage, and include at least one precise verb in each sentence.

ANSWER KEY

From River to Tap

GRADE 8 · W.8.2d

PART 1 · READ AND MARK

Underline five domain-specific words or phrases, and circle two precise verbs that explain what happens to the water. These choices show how exact language makes an explanation clear. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What does the domain-specific term "sedimentation" describe in this passage? Use one detail from the passage to explain.	**Sedimentation is the step when dense particles, such as sand and silt, sink to the bottom of the settling basin because gravity pulls them downward.**
2	What three materials are named in the filter media? Explain how naming these materials makes the explanation more precise.	**The materials are sand, gravel, and anthracite coal. Naming them tells exactly what the filters contain instead of using a vague word such as materials.**
3	In the second paragraph, what does the precise verb "inactivates" tell the reader about the disinfectant?	**It tells the reader that the disinfectant stops many harmful microorganisms, including bacteria and viruses, from functioning.**
4	Name two measurements that sensors record. How do operators use those measurements?	**Sensors record turbidity, disinfectant concentration, and pH. Operators use the readings to adjust the treatment process and meet safety requirements.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

At the treatment plant, intake screens trap debris, and sedimentation lets dense particles sink in a settling basin. Filters containing sand, gravel, and anthracite coal capture smaller particles, reducing turbidity. A measured disinfectant inactivates many microorganisms before pumps send treated water into distribution pipes.

Accept responses that accurately explain treatment steps from the passage in three sentences. Students should use at least four appropriate domain-specific terms and precise verbs that clearly show actions or processes.