

From River to Tap

Trace how an explanatory text organizes a technical process.

CCSS.ELA-Literacy.WHST.9-10.2 "Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline sequence transitions and number the treatment steps in order. These moves show how an explanatory text guides a reader through a technical process.

How Drinking Water Is Treated

- ① At a drinking-water treatment plant, the process begins long before water reaches a kitchen tap. Operators draw water from a river, lake, reservoir, or underground aquifer and send it through screens. The screens remove large debris such as leaves, sticks, and plastic. Next, workers add carefully measured chemicals called coagulants. These substances help neutralize electrical charges that keep tiny suspended particles apart, allowing them to clump together. In a mixing basin, paddles stir the water quickly at first, spreading the coagulant evenly. The goal is not yet to make water safe to drink, but to prepare the smallest particles for removal.
- ② After the rapid mixing, the water moves into a basin where it is stirred slowly. The small clumps collide and grow into larger, visible pieces called floc. Then the flow enters a settling tank. Because many floc particles are heavier than water, gravity pulls them to the bottom as sludge. Plant staff remove this sludge for further handling. Water near the top travels to filters made of layers such as sand, gravel, and anthracite coal. As water passes through these materials, the filters trap remaining particles that were too small to settle.
- ③ Filtration improves clarity, but clear water can still contain microorganisms that cause disease. Therefore, the plant disinfects the filtered water, often with chlorine, chloramine, ozone, or ultraviolet light. The method and dose depend on the source water and local treatment system. Before distribution, technicians test samples for measures such as turbidity, disinfectant level, and microbial indicators. They also adjust pH or add corrosion-control chemicals when needed to help protect pipes. Finally, pumps send the treated water into storage tanks and distribution mains. Continuous monitoring matters because treatment is a process, not a single step, and water quality must remain safe as conditions change.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What is the passage's main purpose? Answer in one sentence.

2 How does paragraph 2 develop the explanation? Name two steps and explain how they are connected.

3 Quote one precise technical detail from paragraph 3. What does that detail clarify for the reader?

4 Identify two sequence transitions from the passage. Explain what step each transition signals.

3 YOUR TURN _____ Your own words

Choose a technical, scientific, or historical process different from water treatment. Write a 130-170-word explanatory account in exactly three paragraphs that states the process's purpose, explains at least four steps in order, uses at least two accurate domain-specific terms, and includes three sequence transitions.

PART 1 • READ AND MARK

Underline sequence transitions and number the treatment steps in order. These moves show how an explanatory text guides a reader through a technical process. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What is the passage's main purpose? Answer in one sentence.	The passage explains the sequence of steps used to treat source water before it is distributed as drinking water.
2	How does paragraph 2 develop the explanation? Name two steps and explain how they are connected.	Slow stirring forms larger floc particles, then settling uses gravity to remove much of that floc before filtration traps smaller remaining particles.
3	Quote one precise technical detail from paragraph 3. What does that detail clarify for the reader?	The detail "turbidity" identifies a specific measure technicians test, clarifying that they monitor water clarity and suspended particles.
4	Identify two sequence transitions from the passage. Explain what step each transition signals.	"Then" signals that water enters the settling tank after floc forms, and "Finally" signals that pumps send treated water into storage tanks and distribution mains.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Solar panels convert sunlight into electric current that can power a building. Each panel contains photovoltaic cells, usually made from silicon. When photons strike a cell, they transfer energy that frees electrons within the material. The cell's internal electric field directs those electrons, creating direct current, or DC. First, wires carry DC from several panels to an inverter. The inverter changes it into alternating current, or AC, which most household appliances use. Next, the AC passes through electrical equipment that connects the system to the building's circuits. A meter records how much electricity the system produces. Finally, the building uses solar electricity as it is generated. If the panels produce more electricity than the building needs, systems send the excess to the electric grid, depending on local rules and equipment. At night or during low sunlight, the building may draw electricity from the grid or a battery system. Thus, panels create power only when light reaches their cells, while other parts of the system deliver usable electricity when demand changes.

Accept equivalent responses that accurately explain the process and support claims with passage details. For the writing task, look for a clear purpose, logical sequencing, accurate details, precise vocabulary, and the required structure.