Warnings Before Rain

How research and intellectual services such as technology and innovation (Quaternary Sector).

7.C.7.3.D "Research and intellectual services such as technology and innovation (Quaternary Sector)."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two actions that produce or analyze information. Circle the physical task the road crews do so you can compare the kinds of work.

How Brookport Plans for Floods

1. Imagine a town called Brookport, where heavy rain sometimes floods the streets. At a research center, a team studies old rainfall records and tests how quickly water rises near storm drains. They look for patterns that might help the town predict flooding. This work belongs to the quaternary sector, which focuses on research, information, and specialized knowledge. The researchers do not build drains or sell rain boots. Instead, they produce new information that others can use to make decisions about safety.

2. A data analyst on the team notices that streets beside steep hills flood sooner than other streets after similar storms. A software designer uses that finding to create a tool that estimates which streets may flood first. The team tests the tool against past storms and corrects errors before sharing it with town officials. Designing and improving the tool is another example of quaternary work because it turns research into a new way to use information. The tool cannot stop rain, but it can support earlier warnings.

3. Other workers put the information to use in different ways. Town road crews clear blocked drains, and a local shop sells waterproof boots. Those jobs matter, but they are not the team's research or information design work. Officials use the tool's estimates to decide when to warn families near flood-prone streets. If the research team finds new patterns in later storms, it updates the tool. Brookport's example shows how quaternary workers can help other people act, even when the researchers never repair a drain or sell a product.

2 ANSWER WITH EVIDENCE

Use the passage

1. What does the research team study or test, and why is that quaternary work?

2. How does the software designer turn a research finding into an innovation?

3. How is the road crews' task different from the research team's work?

4. Why might the research team update the tool after later storms?

3 YOUR TURN

Your own words

Choose a school or town problem other than flooding. In 3 to 4 sentences, describe what a quaternary worker would investigate, what information-based tool or advice they could create, and how someone else could use it.

ANSWER KEY

Warnings Before Rain

GRADE 7 · 7.C.7.3.D

PART 1 · READ AND MARK

Underline two actions that produce or analyze information. Circle the physical task the road crews do so you can compare the kinds of work. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What does the research team study or test, and why is that quaternary work?	**The team studies rainfall records or tests rising water near drains. This is quaternary work because it produces information that can help predict flooding.**
2	How does the software designer turn a research finding into an innovation?	**The designer uses the finding about streets beside steep hills to create a tool that estimates which streets may flood first.**
3	How is the road crews' task different from the research team's work?	**Road crews physically clear blocked drains. The research team studies information and develops a prediction tool.**
4	Why might the research team update the tool after later storms?	**Later storms may reveal new patterns. Updating the tool can help officials decide when to warn families.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

A researcher could measure which school rooms get hottest during the afternoon and compare the results with sun exposure. A data specialist could use those findings to create a schedule for closing shades in each room. School staff could follow the schedule to help keep classrooms cooler.

Accept other accurate examples of research, data analysis, or information-based innovation. For Part 3, look for a clear link between the investigation, the tool or advice, and its use by someone else.