Beyond the Tornado

Trace how severe weather affects people at different scales

ESS.8.c "Communicate scientific information to explain the personal, local, and statewide implications of severe weather events in Alabama."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline one personal effect of the tornado, circle one local effect, and number two statewide effects. Next to each mark, write a few words naming its cause.

One Storm, Many Effects

1. On a spring afternoon in central Alabama, warm, moist air helps fuel a powerful thunderstorm. Changing wind speed and direction with height can help the storm rotate, and a tornado may form. Imagine that radar indicates rotation and a tornado warning is issued for one county. A family moves to a small interior room on the lowest floor, away from windows. Even if the tornado misses their home, strong winds can break glass and send debris through the air. The warning gives them time to reduce their risk of injury.

2. After the storm, fallen trees block streets near a school, and downed power lines cut electricity to several blocks. The school delays dismissal because buses cannot use their usual routes. A neighborhood clinic switches to backup power to keep essential equipment running. If an electric pump at the town's water plant stops, some homes may lose water service until workers restore power or use another source. These problems reach people whose buildings were never hit by the tornado. A local emergency message can name closed roads and tell residents where to get safe water.

3. The same weather system may produce severe storms in several Alabama counties. If tornadoes damage power lines in more than one county, repair crews and supplies may be needed in many places at once. Alabama emergency managers can coordinate requests and decide where limited help should go first. A county with fewer outages might send trained workers to a harder-hit county. This statewide response matters to one family, too: the timing of road clearing, repairs, and aid affects how soon its members can return to regular routines. Reports should separate confirmed damage from possible effects.

2 ANSWER WITH EVIDENCE

Use the passage

1. Why does the family move to an interior room after the warning? Explain the danger this action reduces.

2. Explain how a fallen tree can change what happens at the school, even if the school building is not hit.

3. If tornadoes damage power lines in several Alabama counties, why might emergency managers need to coordinate help across the state?

4. A classmate says a tornado affects only buildings it hits. Use two different cause-and-effect links from the passage to explain why that claim is incomplete.

3 YOUR TURN

Your own words

A severe thunderstorm drops heavy rain on your Alabama town. A creek floods a road used by school buses, and rain damages roads in two nearby counties. Write a four- or five-sentence public update explaining a possible personal, local, and statewide effect. Link each effect to a cause, and do not report possible effects as confirmed damage.

ANSWER KEY

Beyond the Tornado

PART 1 · READ AND MARK

Underline one personal effect of the tornado, circle one local effect, and number two statewide effects. Next to each mark, write a few words naming its cause. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Why does the family move to an interior room after the warning? Explain the danger this action reduces.	**Strong winds can break glass and send debris through the air. Moving to an interior room away from windows reduces the family's risk of injury.**
2	Explain how a fallen tree can change what happens at the school, even if the school building is not hit.	**Fallen trees block streets near the school, so buses cannot use their usual routes and the school delays dismissal.**
3	If tornadoes damage power lines in several Alabama counties, why might emergency managers need to coordinate help across the state?	**Several counties may need repair crews and supplies at the same time. Emergency managers can coordinate requests and direct limited help where it is needed most.**
4	A classmate says a tornado affects only buildings it hits. Use two different cause-and-effect links from the passage to explain why that claim is incomplete.	**Strong winds can send debris toward a family whose home the tornado misses. Downed power lines can also stop a water plant's electric pump, leaving some homes without water service.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Heavy rain has flooded a road used by school buses in our Alabama town, so students who use that road may need another way home. The school district may have to change bus routes while the road is flooded. Rain has also damaged roads in two nearby counties, so Alabama transportation crews may have to divide repair resources among several places. Those demands could affect how quickly roads are repaired.

Accept other cause-and-effect links supported by the passage. For the public update, look for distinct personal, local, and statewide effects, with uncertain outcomes clearly stated as possibilities.