Five-Day Nonfiction Warm-Up Pack

A01 · v0.1.2 · Learner pack

Day 1 · Wetlands and flood peaks

Read this passage, then answer all three questions using details from this page. Explain how a detail supports your thinking. You do not need information from another day.

Where Can Floodwater Go?

After heavy rain, some water runs across land toward streams. A wetland can hold part of that water for a time. Wetland soils and low areas create space for water to collect, while plants slow water as it moves. Slower movement and temporary storage may lower the height of a flood peak and reduce some damage. They do not make every flood disappear.

How much help a wetland provides depends on its size, plants and their condition, slope, place in a flood path, and how wet its soil was before a storm. A small wetland with soil already full of water may work differently from a larger wetland with room to store runoff. Wetlands can be one part of flood protection, alongside other measures.

Fact check: U.S. EPA, “Basic Information about Wetland Restoration and Protection,” and “Wetlands: Protecting Life and Property from Flooding.” Original paraphrase; no source text reproduced.

Question 1

How can a wetland help lower a flood peak? Explain two different ways described in the passage.

Use evidence and explain your thinking:

Question 2

Name two conditions that affect how much floodwater a wetland can manage. Why do those conditions make a single prediction difficult?

Use evidence and explain your thinking:

Question 3

A neighbor says, “A wetland guarantees homes will never flood.” Revise the claim so it matches the passage, and explain why your version is more accurate.

Use evidence and explain your thinking:

Day 2 · Spring and neap tides

Read this passage, then answer all three questions using details from this page. Explain how a detail supports your thinking. You do not need information from another day.

Why Is a Spring Tide Not Seasonal?

The word spring can make a spring tide sound like a seasonal event. Here it describes a tide that "springs" toward a larger tidal range—the span between average high and low water. Spring tides occur near new and full moons, when the sun, Earth, and moon are nearly lined up. The sun's pull adds to the moon's effect, so the average range grows. This happens about twice each lunar month.

Near first- and third-quarter moons, the sun and moon are at right angles. Their effects partly counter one another, and a neap tide has a more moderate range. These patterns do not give the exact water level at every shore. Continents and local shore shape affect tides, while wind and weather can change local water levels. A place-and-date prediction needs more than the moon phase.

Fact check: NOAA National Ocean Service, "What are spring and neap tides?" and NOAA NESDIS, "What Causes Tides?" Original paraphrase; no source text reproduced.

Question 1

Compare spring and neap tides. How are the sun and moon positioned, and what happens to the average tidal range in each pattern?

Use evidence and explain your thinking:

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Question 2

Why does the passage say the name "spring tide" is not seasonal? Use a detail to explain what "spring" describes instead.

Use evidence and explain your thinking:

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Question 3

A student uses the moon phase alone to predict the exact high-water level at a local beach. What does the passage suggest is missing from that prediction? Explain.

Use evidence and explain your thinking:

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Day 3 · Monarch migration

Read this passage, then answer all three questions using details from this page. Explain how a detail supports your thinking. You do not need information from another day.

A Journey Shared Across Generations

Many eastern North American monarchs travel south each fall to overwintering places in Mexico. The migration can reach 3,000 miles and may last more than two months. These describe a possible long journey, not the exact distance or schedule of every butterfly. More than two months does not set a maximum duration. Tagging and observations suggest that monarchs can sometimes travel about 70 to 75 miles in one day.

In spring, surviving butterflies that made the southward journey move back through breeding areas. Several generations of their offspring follow during spring and summer. Then a new generation begins the fall migration for the first time. The cycle therefore stretches across generations; one butterfly does not make the whole annual journey in both directions. Some monarch groups also live and breed year-round where conditions allow, so this migration pattern does not describe every monarch.

Fact check: U.S. Fish and Wildlife Service, “Monarch (Danaus plexippus).” Original paraphrase; no source text reproduced.

Question 1

Trace the migration cycle described. Which butterflies travel north in spring, and which generation starts the next fall migration?

Use evidence and explain your thinking:

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Question 2

Why do “can reach 3,000 miles” and “may last more than two months” not describe a fixed trip for every butterfly? Does the time statement give a maximum duration? Explain.

Use evidence and explain your thinking:

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Question 3

A learner concludes that every monarch makes the same yearly trip south and back north. Use two details to evaluate that claim.

Use evidence and explain your thinking:

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Day 4 · Saguaro adaptations

Read this passage, then answer all three questions using details from this page. Explain how a detail supports your thinking. You do not need information from another day.

How a Saguaro Handles a Shower

Desert rain may arrive as a light shower. Cacti often have shallow roots that can quickly take in water near the surface. A saguaro's pleats expand as the plant absorbs rain and shrink as it uses stored water. The folds let its body change size as its water store changes. Cactus pores also open at night, when desert air is cooler and usually more humid, which helps reduce water loss.

These features help cacti manage scarce water, but they do not make storage unlimited. A saguaro can sometimes take in more water than its pleats can accommodate, and its skin may split. The adaptations help the plant respond to changing water supplies; they do not prevent every kind of damage or guarantee that water will always be available.

Fact check: National Park Service, Saguaro National Park, "Cacti and Desert Succulents." Original paraphrase; no source text reproduced.

Question 1

Explain how two features in the passage help a cactus manage water. Connect each feature to what it does.

Use evidence and explain your thinking:

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Question 2

How do saguaro pleats help as the plant takes in and uses water? What detail shows that the pleats have a limit?

Use evidence and explain your thinking:

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Question 3

A reader claims, "A cactus can store any amount of rain safely." Use the passage to revise or reject that claim.

Use evidence and explain your thinking:

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Day 5 · Groundwater flow

Read this passage, then answer all three questions using details from this page. Explain how a detail supports your thinking. You do not need information from another day.

Where Does Groundwater Move?

Most groundwater does not flow through open underground rivers. Instead, it occupies small spaces among soil and rock, a little like water filling gaps in a packed material. Rain and snowmelt can seep into the ground. After reaching the saturated zone, water may move down or sideways. Open cave passages, lava tubes, and some springs can carry water through larger spaces, but these are exceptions.

Layers affect the route. If moving water meets dense material that is harder to pass through, some may turn and travel more horizontally. The speed also depends on how much open space the rock has and how easily water can move through it, along with the aquifer and nearby layers. Because these conditions differ from place to place, one picture or depth label cannot predict groundwater speed everywhere.

Fact check: U.S. Geological Survey Water Science School, “Groundwater Flow and the Water Cycle.” Original paraphrase; no source text reproduced.

Question 1

How does the passage challenge the idea that most groundwater flows in underground rivers? Use two details.

Use evidence and explain your thinking:

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Question 2

What may happen when groundwater reaches a dense layer that is hard to pass through? Explain the change in direction.

Use evidence and explain your thinking:

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Question 3

Why would one diagram or depth label not be enough to predict groundwater speed everywhere?

Use evidence and explain your thinking:

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