

## Anticipation-Reaction Guide: Science Sample

**Before reading:** Think about whether you agree or disagree with each statement written below. Tell why or why not.

**During reading:** Look for evidence that supports or presents a counterargument for each statement. Write your evidence in the Evidence column and record the page number where you found it.

Statement	Reader's Opinion	Evidence	Page	Discussion	Reader's Conclusion
1. You would expect people to get hungry whenever they see or smell food.	I agree because I feel hungry when I see a food commercial or smell my neighbor's barbecue.	Hunger is an internal stimulus that happens when the body sends signals that it needs more food.	204	The text evidence does not support the statement. I change my opinion, because hunger is an internal stimulus that comes from the body.	Hunger is an internal stimulus, and the desire to eat caused by the sight or smell of food is different from actual hunger.
2. Because earthworms spend most of their time living underground, internal stimuli should be more important for their survival than external stimuli.	I disagree because I have noticed that earthworms respond to rain and that might be an external stimulus.	Earthworms respond to external stimuli because they move away from light. During the daylight hours, they usually stay in the soil so their skin will not dry out.	208 209	The text evidence supports my opinion that earthworms respond to important external stimuli, like light.	Earthworms need to respond to external stimuli for their survival, just like other animals.
3. If you look at a vine growing in a clear glass vase, you can easily see how plants respond to external stimuli.	I agree because you can see the plant roots and leaves through the glass.	Plants respond to light by bending toward it. Also, the roots of plants respond to gravity when they grow down into the water or soil. Plants may also respond to touch. Some vines have tendrils that grow around supports, like stems of nearby plants.	210 211 212	The text evidence does not support the statement. I change my opinion because although you can see the roots, you cannot observe the actions of the plants the way we can observe animals moving.	Plants respond to external stimuli, but it is difficult to observe the responses in real time.

**After reading:** Discuss how the evidence relates to your opinion. State your conclusion about the statement, using the text evidence.

TEKS information on the next page.

## Science TEKS

### Grades 6–8:

- (3) Scientific investigation and reasoning. The student uses critical thinking, scientific reasoning, and problem-solving to make informed decisions and knows the contributions of relevant scientists. The student is expected to:
- (A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student;

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*The Anticipation-Reaction Guide prompts students to use critical thinking as they formulate an opinion and give their rationales, identify and analyze text evidence that either supports or presents counterarguments for their opinion, and finally articulate their conclusions based on the evidence. This approach can help students to effectively engage in science texts at any stage of the science lesson.*

SOURCE: TEA, 2009.