

Answer Justification Worksheet - **SAMPLE**

Complete part I of this worksheet before engaging in debate with your classmates. Complete part II during and after discourse to gain more ideas from your classmates.

This example comes from the introduction to a lab activity, where students will be testing various ways in which plants grow better or worse under certain conditions.

Part I

Record the question:

Select a hypothesis for what you think will happen if a 15% detergent solution is added to our bean plants compared to our control bean plants?

A It will grow better

B It will not grow well

C There will be no difference

Record your Answer:

I think there will be no difference when comparing the two plants.

Describe the evidence for your answer:

I have washed dishes with soap and poured them onto the soil of some plants in my garden and they were not affected.

Plants only need soil, sunlight, and water.

Describe your justification and arguments for using specific evidence and details:

Adding detergent to the soil doesn't change the fact that the plants still are receiving soil, sunlight, and water. Because of this, it is likely that the plant will grow the same as the plant that doesn't receive the detergent.

Part II

Did anyone else select the same answer choice as you? What additional ideas and evidence did they use that was different from your evidence? Record it below:

The detergent could affect the plant, but it is only a 15% concentration, so there probably is not enough detergent to make a difference in the plant's growth.

What answers did other students choose? What evidence and rationale did they state to justify their different answer choice? Record their thoughts below:

The detergent could get in the way of how the nutrients are absorbed by the roots, so the plant could grow less.

The detergent might provide extra minerals to the roots of the plant, so the plant could grow more.

Will I change my response after hearing arguments from my peers?

YES

NO

Why or why not?

I think those arguments are good, but since I have personal experience with pouring soap onto one of my plants in my garden, I still think my hypothesis will turn out correctly.