**Indicative Survey Questions**

The survey questions are adapted from the Colorado Learning Attitudes about Science Survey (Adams, Perkins, Podolefsky, Dubson, Finkelstein, & Wieman, 2006).

1. A significant problem in learning science is being able to memorize all the information I need to know.

Strongly Disagree 1 2 3 4 5 Strongly Agree

1. When I am solving a science problem, I try to decide what would be a reasonable value for the answer.

Strongly Disagree 1 2 3 4 5 Strongly Agree

1. I think about the science I experience in everyday life.

Strongly Disagree 1 2 3 4 5 Strongly Agree

1. It is useful for me to do lots and lots of problems when learning science. Strongly

Disagree 1 2 3 4 5 Strongly Agree

1. After I study a topic in science and feel that I understand it, I have difficulty solving problems on the same topic. page2image47001600

Strongly Disagree 1 2 3 4 5 Strongly Agree

1. Knowledge in science consists of many disconnected topics.

Strongly Disagree 1 2 3 4 5 Strongly Agree

1. As physicists learn more, most science ideas we use today are likely to be proven wrong.

Strongly Disagree 1 2 3 4 5 Strongly Agree

1. I find that reading the text in detail is a good way for me to learn science.

Strongly Disagree 1 2 3 4 5 Strongly Agree

1. I am not satisfied until I understand why something works the way it does.

Strongly Disagree 1 2 3 4 5 Strongly Agree

1. I cannot learn science if the teacher does not explain things well in class.

Strongly Disagree 1 2 3 4 5 Strongly Agree

1. I study science to learn knowledge that will be useful in my life outside of school.

Strongly Disagree 1 2 3 4 5 Strongly Agree

Adams, W. K., Perkins, K. K., Podolefsky, N. S., Dubson, M., Finkelstein, N. D., & Wieman, C. E. (2006). New instrument for measuring student beliefs about physics and learning physics: The Colorado Learning Attitudes about Science Survey. *Physical review special topics-physics education research*, *2*(1), 010101.