Research Simulation Case Study





Case Studies

- A detailed story or in-depth exploration about a particular person, group, situation or project
- May allow for the use of all intellectual behaviors described in Bloom's Taxonomy:
 - Knowledge
 - Understand
 - Apply
 - Analyze
 - Evaluate
 - Create



Research Simulation Case Study

- A major reason for the success of the scientific literacy curriculum
- Facilitate students' understanding of how scientists reason and think to draw scientific conclusions
- Emphasis is placed on the:
 - analysis and evaluation of tabular data, figures and illustrations
 - applying knowledge to the creation of experimental protocols and the interpretation of results
 - requiring student teams to solve research problems by assuming the role of research scientists.

Brain Eating Amoeba Research Simulation Case Study

Scientific Literacy is defined as:

- Enhances the <u>knowledge</u> and <u>understanding</u> of the nature and development of <u>science</u> and <u>scientific</u> research
- Facilitates learning of the interdisciplinary nature of STEM
- Improves the ability to <u>analyze and evaluate scientific evidence</u> and explanations
- Requires the <u>participation in scientific discourse with practice</u>
- <u>Improves aptitude</u> for quantitative literacy/reasoning, <u>scientific reasoning</u> and <u>critical and</u> <u>creative thinking</u>
- Provides a relevant <u>knowledge of STEM disciplines</u> and career opportunities in STEM
- Requires <u>in team</u> learning and <u>discovery</u>
- <u>Inhances a scientist identity</u> and STEM self-efficacy, as well as other relevant attitudes and intellectual behaviors for success in STEM

