



# Exploring Comets and Modeling for Mission Success



## *National Science Education Standards Alignment*

Created for Deep Impact, A NASA Discovery mission

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Educator-Enrichment

## *Grades 5 – 8*

### *Science as Inquiry*

Abilities necessary to do scientific inquiry

- Identify questions that can be answered through scientific investigations.
  - *Exploring Comets: Reflections on comets, missions and modeling*
- Develop descriptions, explanations, predictions, and models using evidence.
  - *Make a Comet and Eat It!, Chemistry and Thermodynamics of Ice Cream, Comet on a Stick, Paper Comet with a Deep Impact, and Comet Models Based on the Deep Impact Mission*
- Think critically and logically to make the relationships between evidence and explanations.
  - *Make a Comet and Eat It!, Comet on a Stick, Paper Comet with a Deep Impact, and Comet Models Based on the Deep Impact Mission*
- Communicate scientific procedures and explanations.
  - *Make a Comet and Eat It!*

Understandings about scientific inquiry

- Different kinds of questions suggest different kinds of scientific investigations. Some investigations involve observing and describing objects, or events; some involve experiments; some involve seeking more information; some involve discovery of new objects and phenomena; and some involve making models.
  - *Make a Comet and Eat It!, Chemistry and Thermodynamics of Ice Cream, Comet on a Stick, Paper Comet with a Deep Impact, Comet Models Based on the Deep Impact Mission, and Deep Impact Comet Modeling*
- Current scientific knowledge and understanding guide scientific investigations. Different scientific domains employ different methods, core theories, and standards to advance scientific knowledge and understanding.
  - *A Comet's Place in the Solar System, Exploring Comets: Reflections on comets, missions and modeling, Deep Impact Comet Modeling, Deep Impact: Interesting Comet Facts, and Small Bodies Missions*











