Lesson 2: KWL-Mars

Purpose: To probe students’ prior knowledge about Mars, what students wish to learn about Mars, and chart new understandings during the course of the module.

Standards

NCTE/IRA Standards for English Language Arts

Standard 5- Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.

Standard 7- Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

Standard 12- Students use spoken, written, and visual information to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

National Science Education Standards

Science as Inquiry – Content Standard A

1. Abilities necessary to do scientific inquiry.
2. Understanding about scientific inquiry.

Overview

Your students have many ideas about Mars and robotic exploration of Mars. Some will be correct others will be incorrect. In this lesson you will review what your students know and what they would like to know. This is an exercise to help present the MarsBots lessons using the knowledge your students bring to the classroom and the knowledge they wish to gain. Revisiting the KWL chart throughout the MarsBots learning module will assess what the students have learned.

Understandings

1. Our knowledge and understanding of our Earth and Solar System changes and/or expands as new discoveries are made.

Materials

1. 3 large sheets of butcher or chart paper
2. Sticky notes (3” x 3”) 4 per student
3. Markers

Time

Initial lesson 45 to 60 minutes
Daily revisit and revision 20 to 30 minutes

Directions

1. Create a large KWL chart for the entire class. Label chart #1 “What I Know About Mars,” #2 “What I Want to Know About Mars,” #3 “What I Have Learned About Mars.” Explain that the charts will be revised as new knowledge and understandings are acquired.

<table>
<thead>
<tr>
<th>What I Know About Mars.</th>
<th>What I Want to Know About Mars.</th>
<th>What I Have Learned About Mars.</th>
</tr>
</thead>
</table>

2. Hand out sticky notes. Ask students to write two things they know about Mars and two things that they want to know about Mars on separate sticky notes.

3. Have each student place the sticky notes with what they know on chart #1 and what they want to know on chart #2.

4. As a class, read each sticky. This is not the time to discuss or debate statements. Discuss what the class wrote down as what they know or want to know. Explain to the class that the sticky notes will move over to chart #3 as they learn about Mars through their activities.
5. Each day before beginning a new MarsBots lesson, revisit charts. Discuss new knowledge, new understandings, and possible misunderstandings. Move sticky notes as needed.