



The Scenario

Students examine a cube covered in symbols. The one restriction is that they are not allowed to look at the bottom of the cube. Using the clues on the other five sides of the cube, they must predict what will be on the bottom.

Open-Ended Inquiry Questions

What shape, number and letter might be found on the bottom of the cube?

What important scientific idea is connected to not seeing the bottom of the cube?

Process Skill(s)

Observation, inferring, predicting, comparing, contrasting, analyzing, communicating

Instructions

Stress to the students that they must not look at the bottom of the cube. The basic scientific principle that comes out of this exercise is that not everything is known for a fact in science. Observations and inferences lead to the creation of theories. For example, gravity is a theory. All evidence supports that an object thrown upwards will always come down. But the actual phenomenon of gravity is still not fully understood by scientists. So it remains a theory.

In the cube puzzle all evidence points to the answer at the bottom of the cube. However it's a theory. If it were turned over and confirmed, it is no longer a theory but a fact.

Suggested templates for this activity can be found at:

<http://www.raftbayarea.org/readpdf?isid=517>

Curriculum Connections

Problem solving, mathematical reasoning, investigation and experimentation, hypothesizing.