Cube Activity

Scientists often search the data they collect for certain patterns or regularities. Based on these regularities, scientists can, for instance, extrapolate their data in order to predict possible future behaviors of the phenomena under investigation.

Whether some patterns or regularities actually exist in nature, is a question similar to asking whether the models that students build to account for the cube phenomena that they investigated are actual copies of what exists on the cube. The main point to emphasize to your students is that patterns are partly based on evidence, but are also partly the product of the scientists' imagination and creativity.

Student groups are given a cube that has a pattern. They can see all the side of the cube except the bottom. They are asked to find out what is on the bottom of the cube.

The NOS discussion focuses on the notions that scientific knowledge is partly a product of human inference and creativity, is empirically based (based on and/or derived from observation and experiment), and tentative (subject to change).

**Materials:** One of cubes

**Video Clips:** NOS discussion 1 2

**Possible Scenario**