

Teacher Resources

Scaling the Submarines!

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Introduction: It takes a lot of planning and many drawings to design a submarine. In this activity, students will learn about all of the different submarines during the Cold War by researching them, design one in 3-D, then build a model of the submarine.

Instructional goal: Students will research information about submarines in the Cold War and collaborate on a multimedia presentation. Students will then create a 3-D model of an assigned submarine in a program such as Solidworks or Google SketchUp or on graph paper. Students will build a scaled model of the submarine.

Materials:

“Submarines of the Cold War” - computer, internet

“Model of Subs” - 3-D software or graph paper, rulers, modeling clay

Estimated time: 2-3 class blocks

Teacher procedures/student activities:

1. Hook: Show the video from <http://www.usnavymuseum.org/>. It is in the “Virtual Tour” tab, “North Hall”, “Technology for the Nuclear Age”, “Special Projects Office”.
http://www.usnavymuseum.org/Ex1_SPO.asp
 2. Show the video “Anatomy of a Submarine”.
 3. Discuss “Classes of Fleet Ballistic Submarines” by using the PowerPoint.
 4. Show the video “Undersea Warfare – US Navy Submarines”.
 5. “Multimedia Presentation of Submarines of the Cold War” activity (students will collaborate on a multimedia presentation using Google Docs.)
 6. Create a 3-D drawing of an assigned submarine and create a model of it - “Scaling a Submarine” activity.
- **Closure activity** – Discuss the 3 different classes of submarines and have students observe the models created by their peers. Show the multimedia presentation completed by the class.
 - **Assessment** – Multimedia presentation (individual slides combined into one presentation); Sketch and model of submarine (individual)