

# Lesson Plan: Creating 3-dimensional Models of Organism

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Lesson Title: Mobile Maker

Grades: 9-12

Communicative Objective/Standards	<p>Students will learn how to create a 3-dimensional model of an organism.</p> <p><u>Standards Addressed</u></p> <p>5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.</p> <p>7. Translate quantitative or technical information expressed in words in a text into visual form and translate information expressed visually or mathematically into words.</p> <p>8. Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.</p> <p>10. By the end of the respective grade student is currently in, read and comprehend science/technical texts independently and proficiently.</p>
Anticipatory Set	<p>Show students a completed mobile or model and start dialogue of how 3-D models are beneficial. Transition by having students write or draw ways that they could add to the creativity of the model.</p>
Input/Modeling/Presentation	<ul style="list-style-type: none"><li>➔ Demonstrate the process of creating a 3-dimensional object with simple origami shape. Students will all create same object collectively.</li><li>➔ Using the curriculum being covered, ask students to individually identify an organism that they wish to re-create as a 3-D model.</li><li>➔ Address materials available, require students to identify how their model will be displayed, and discuss appropriate hanging or standing applications.</li></ul>
Check for Understanding	<p>Ask students to confirm with shoulder partner the project, address any questions or confusion.</p>
Guided Practice	<p>Require students to create an outline of how they will be successful in the creation of their piece. Details should include: Materials necessary, estimated weight of final product, and how they will display piece (mobile or model). Sign off on each idea created by students.</p>
Independent Practice/Evaluation	<p>For homework, students are required to source and note a minimum of 5 examples of 3-dimensional modeling used to represent an idea or concept.</p>

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Enhancing Transfer and Retention	Wrap up lesson by requiring students to complete the <i>Blender</i> tutorial, ask that they include a brief summary of how they can use 3-D modeling software, Blender in other classes, or applications outside of school. Blender tutorial found here: <a href="https://www.youtube.com/watch?v=39-CWSn_kms">https://www.youtube.com/watch?v=39-CWSn_kms</a> Free Blender software found here: <a href="http://www.blender.org/">http://www.blender.org/</a>
ELL Modification	ELL's will be paired accordingly in groups of strong leadership. Individualized assignment modification will vary. Accommodations will include: Google translate for research component, audio and, or video support in native language for additional support and tutoring on every facet of project.
GT Modification	Students that show a mastery for content and complete the task at an accelerated rate may have the opportunity to dig deeper into the content. Encourage students to research other methods for creating the project being studied, as well as the history and direction of this art form.
SPED Modification	Students struggling to complete the task may have a modified workload, dependent on their IEP. If a GT student shows strong leadership skills, this is a great opportunity to encourage peer to peer teaching.