

Geometry by Design and Modeling



Reasoning & Proof

Geometry by Design Curriculum

Power Objective

P.O. #2: Create and develop reasoning and proofs: inductive and deductive reasoning. (P.O. #2 Proficiency Rubric)

Academic Vocabulary

<input type="checkbox"/> biconditional	<input type="checkbox"/> contrapositive	<input type="checkbox"/> inductive reasoning
<input type="checkbox"/> conclusion	<input type="checkbox"/> converse	<input type="checkbox"/> inverse
<input type="checkbox"/> conditional	<input type="checkbox"/> deductive reasoning	<input type="checkbox"/> negation
<input type="checkbox"/> conjecture	<input type="checkbox"/> hypothesis	<input type="checkbox"/> theorem

Enduring Understandings

Students understand that...

- Patterns in some number sequences and some sequences of geometric figures can be used to discover relationships.
- Some mathematical relationships can be described using a variety of if-then statements.
- Given true statements, deductive reasoning can be used to make a valid or true conclusion.
- Algebraic properties of equality are used in geometry to solve problems and justify reasoning.
- Given information, definitions, properties, postulates, and previously proven theorems can be used as reasons in proof.

Essential Question

- How can you make a conjecture and prove that it is true?