

Discovering STEM Program

Kit name: Proof of Play Time (Grades: Geometry to Algebra 2)

Description: to write a proof, it's important to recognize a chain of reasoning; how one statement leads to another. In this activity, you will put together a cartoon, giving reasons for your choice, and then do the same for two different geometry proofs. Challenge your family members to see if they can put the "proofs" together!



Alignment for Proof of Play Time (Grades: Geometry to Algebra 2) to the Common Core State Standards Mathematics <http://www.corestandards.org>

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- G.CO.10 Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to 180 degrees; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.*
- G.SRT.4 Prove theorems about triangles. *Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.*
- G.SRT.5 Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.
- L3.1.1 Inductive vs. deductive reasoning.
- L3.3.1 Know basic structure of proof of if...then statement.
- G1.1.1 Solve problems & proofs involving vertical, supplementary, complementary, right angles.
- G1.2.3 Know and use Pythagorean Theorem proof.
- G1.4.4 Proofs about interior and exterior angles of quadrilaterals.
- G2.3.1 Use triangle congruence theorems, SSS,SAS,ASA,AAS, hypotenuse-leg.
- G2.3.2 Extend triangle congruence theorems to prove other theorems.
- G2.3.3 Prove similar triangles using SSS,SAS,AAA.

When reserving kits, please be sure to:

- **Return** the filled out reservation form
- **Review** required kit materials prior to event
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