**Catapults: Launching into Physics**

**Performance-Based Rubric**

**Stem Grant Grade Band Team: 6-8A**

**July 25, 2011** Jo Brinks

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**Description:**

The students will create a blueprint using geometric skills to aid in and document the construction of a catapult. They will use prior knowledge about force to choose an effective catapult before creating the blueprint and then use the blueprint to construct their catapult.

**Rubric: Catapult Blueprint Design**

Using graph paper provided, draw a blueprint for your selected catapult following the guidelines.

**Barely there Almost You Got It!**

All parts of the catapult are included 1 2 3

Parts are drawn 2-dimensionally in two views (top/side) 1 2 3

(As close as possible to actual size)

Parts are labeled with 2-dimensional and 3-dimensional names 1 2 3

Area has been calculated for all parts 1 2 3

Work is shown for all calculations 1 2 3

Congruent figures are indicated by shading the shapes red 1 2 3

Similar figures are indicated by horizontal/vertical stripes 1 2 3

Identify one shape that is rotated (labeled in blue) 1 2 3

Identify one shape that is translated (labeled in blue) 1 2 3

Bonus: Identify one shape that is reflected (labeled in blue) 1 2 3

Dimensions are labeled in metric units 1 2 3

Materials needed for construction are attached to blueprint 1 2 3

Total Points: \_\_\_\_\_\_\_\_\_\_

**Scoring System**

Students will earn points using the rating scale of one through three. If they have met the requirement completely, they will earn three points. If most of the requirement is met, they will earn two points. If the requirement has been minimally addressed, they will earn one point. If the requirement is not address at all, no points will be earned. The total point value for the project is 33 points with three extra points available to earn.