NAMES: _____

NAME: _____ --_____

PROBLEM SOLIVING PORTFOLIO Mechanical

1. Before a problem can be solved, it must be understood. Read the following problem statement very carefully. Discuss the nature of the problem with the team members. Make sure everyone understands what needs to be done.

ANALYZING THE PROBLEM:

Any of you could be in this position some day. Your airplane crashed in a deep canyon with steep walls. You are the only three survivors. In order to get rescued you probably need to launch a flare as high as possible so you can signal a rescue crew.

Your team has been charged with creating a system that will cause a ping -pong ball vertically (the flare) high into the sky above the canyon rim starting from the gym floor.

The only materials you have to do this with are. Five rubber bands. Two brass tubes, a mousetrap, duck tape, five nails, two 1' by 1" wood strips. Three balloons, 30" of string a Ping-Pong ball, a spoon, six Popsicle sticks and a hot glue gun.

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Hayward High School
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2. GENERATING ALTERNATIVE SOLUTIONS.

Use this space below to record your brainstorming ideas is the form of simple sketches and notes.

3. DEVELOPING THE BEST SOLUTION:

Evaluate your ideas . Discuss each idea carefully. Identify each one's advantages. Lastly, use your ideas to develop the best solution to the problem. Use the space below to draw your final solution to the problem. Feel free to make improvements and add detail to your design.

BUILDING A MODEL OF THE SOLUTION.

Now that you have your final design, it is time to show your solution. Using your final sketch as a guide, build a model.

EVALUATING THE SOLUTION

In the space below, list everything your team likes about your solution.

In the space below, answer the following question. If you had to do it over again, what would you do differently and why?