

Machining Puzzles and Games

NAME:

CLASS:

Planning Document

Problem Statement:

Lesson Plans

Students, have you ever been bored? Studies show that we all become bored at times, how can this be solved? A toy and game company would like to create pocket-sized puzzles and games catered to the interest of students and young adults like you! Thanks to your knowledge in design and prototyping techniques, you have been hired by a toy and game company to solve this problem. As the designers for these future products, we must ensure that we work around the specifications and the constraints of the client to find success. In the space below, list the constraints for this challenge:



We will be working to solve this real-world problem through the steps of an engineering design process!

Brainstorm Ideas:

Before constructing a prototype to attemp to solve this problem, we must research and brainstorm possible ideas. Start by researching existing solutions that already work to solve this problem, and work to identify new ways you could improve or change these solutions under the constraints of the challenge. Collect your possible ideas using the thumbnail sketches planning table listed below.

| 1 | 2 | 3 | 4 | 5 | Thumbnail sketches do not need to be neat or detailed, they serve as a quick way to collect possible ideas for solving this problem! |
|---|---|---|---|----|---|
| 6 | 7 | 8 | 9 | 10 | |
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Final Design:

After brainstorming different ways to solve this problem, narrow your ideas down into a final design and compile them into a neat and labeled sketch to work from. This technical drawing should show your design from multiple views, such as the Top, Front, and Right Side, as a well as a 3D Isometric view. Your drawing should also label what materials you plan to use to construct your prototype, and also include key dimensions.

