Name: _____   Class: _____

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GRADES 6-8

Brainstorming

Solutions if you have a million dollars

Solutions that involve motorization
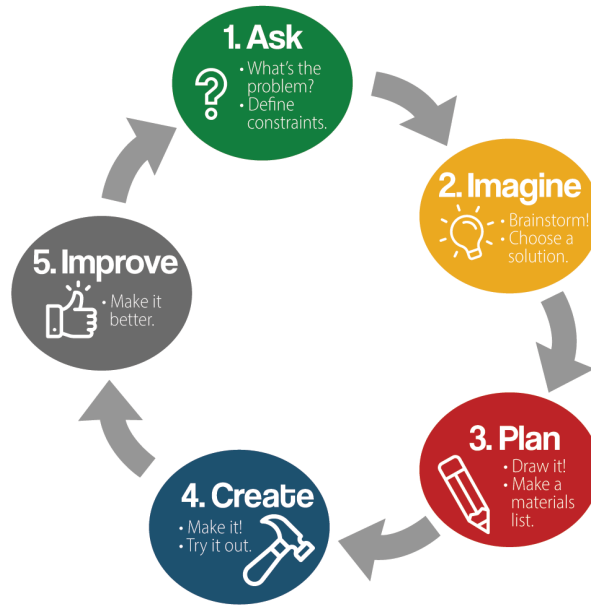
Solutions that start with the letter ____

Solutions you could build

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Engineering Design Process

1. Ask
• What's the problem?
• Define constraints.

2. Imagine
• Brainstorm!
• Choose a solution.

3. Plan
• Draw it!
• Make a materials list.

4. Create
• Make it!
• Try it out.

5. Improve
• Make it better.

Fill in the criteria and constraints for your design challenge. Consider impacts on people (accessibility) and the natural environment.

Criteria	Constraints

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Scaffold Sheet: Rubric for Evaluation Matrix

Criteria or Constraint	Above (3)	Meets (2)	Below (1)
Ex: Can be pushed or pulled	*Ex: Moves in all directions*	*Ex: Pushes and Pulls*	*Ex: Moves in one direction*
Total			

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Scaffold Sheet: Pros and Cons or Strengths, Weaknesses, Opportunities and Threats

Design One

Pros/Strengths	Cons/Weaknesses

Design Two

Pros/Strengths	Cons/Weaknesses

Design Three

Pros/Strengths	Cons/Weaknesses

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Scaffold Sheet: Decision Tree

Criteria 1:

Yes — No

Criteria 2:

No

Constraint 1:

No

Yes

Criteria 3:

No

Yes

Not an Effective Design

Constraint 2:

No

Yes

Does it meet the constraints?

Yes

Constraint 3:

Yes — No

Best Design

Good Design

OK Design