**Brainstorming and Planning KWL Chart**

**Problem**: How can we design and build a motor-powered brush that cleans the surface of a tooth without damaging the surface?

**Instructions**: Use the KWL chart below to work independently or with your team to clarify what you already know about the problem and what you might need to know to solve the problem. After you complete the project, you can return to the chart and record what you learned.

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| --- | --- | --- |
| **Know** | **Need to Know** | **Learned** |
|  |  |  |

**Optional**: Examine classroom materials or use internet resources to research and gather information that you might “need to know” to solve the problem. Use the space below to record your notes:

**Brainstorming: My Design Sketch**

In the space below, draw or describe what you think a brush that cleans the tooth without damaging the tooth would look like. Be sure to explain your design.

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**Test and Improve: Our Team Design Sketch**

After each member of your group has built and tested a prototype, it is time to **iterate,** or make a new, improved, design. Work as a team to design a new prototype that combines the best features of each design. Brainstorm and sketch your team design ideas below. Be sure to explain your reasoning.

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