**Engineering Design Process Worksheet**

**Instructions:** Using the engineering design process, you and your team will act as biomedical engineers who are tasked with creating a micro:bit experiment that shows how different body parts require different levels of neural recruitment.

A diagram of engineering design process

AI-generated content may be incorrect.

1. **Ask** **–** Identify the need and constraints of the problem.

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1. **Research –** What do you know about basic neuroscience? (Hint: What did you learn from Handouts 1, 2, and 3?)

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1. **Imagine** **–** Individually sketch out four possible solutions.

|  |  |
| --- | --- |
| a | b |

|  |  |
| --- | --- |
| c | d |

1. **Plan –** Have each team member share their ideas. As a team, select ONE solution. This can be one specific solution or a mixture of ideas. Draw your team’s solution in the box below.

|  |
| --- |
|  |

1. **Create** – Build your prototype as shown in your group’s drawings.
2. **Test** – Test your design and then answer the following questions.

What worked in your design, and why?

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What did not work in your design, and why?

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1. **Improve –** Based on your testing and results, how would you improve your design? Why?

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1. **(optional) Iterate** – Make changes and retest your updated prototype.

Did your changes improve your prototype? How?

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What worked in your updated design, and why?

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What did not work in your updated design, and why?

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