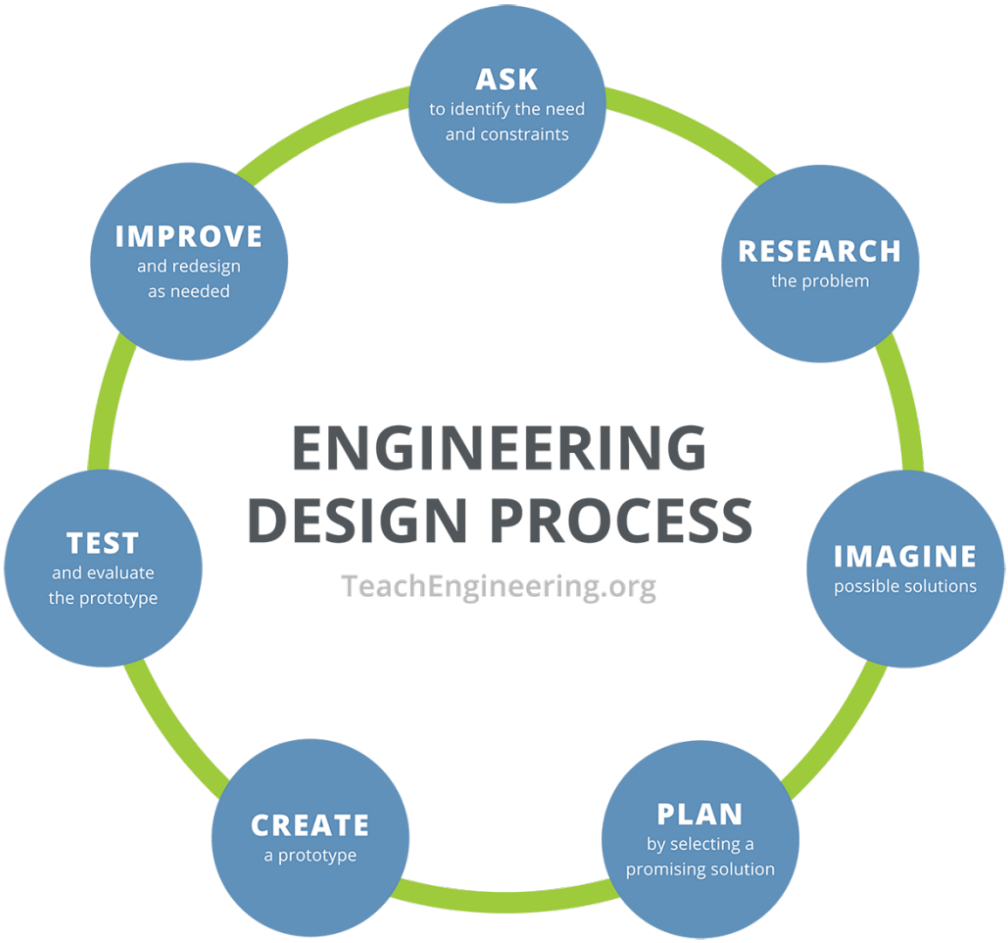
Name: Date: Class:

Engineering Design Process Packet

Instructions: Using the engineering design process, you and your team will act as robotic engineers tasked with programming a robotic arm to pick up objects and sort them into designated bins based on their color or size.



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

Name: Date: Class:

2. **Research**

3. **Imagine** – Sketch three to four possible layouts or flow diagrams and consider potential challenges for each approach.

a	b
c	d

Name: **Date:** **Class:**

4. **Plan** – 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.

5. **Create** – Code and teleoperate the SO-101 leader arm.

Name: **Date:** **Class:**

6. **Test** – Test your design (algorithm) and then answer the following questions.

What worked in your design, and why?

What did not work in your design, and why?

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

Name: **Date:** **Class:**

8. **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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