

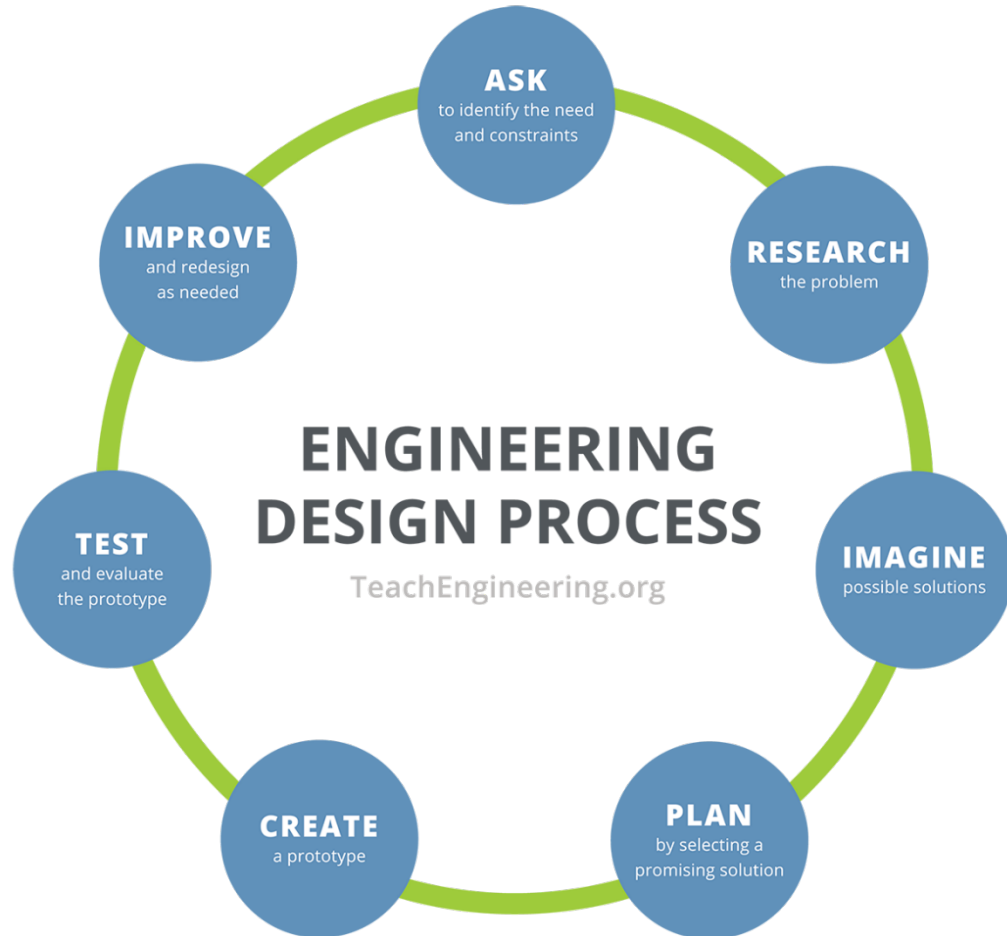
Name:

Date:

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Engineering Mechanized Farm Tools Handout

Instructions: Using the Engineering Design Process, you and your team will design, create, test, and improve one of the following farm tools: deweeder, seeder, or sprayer.



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

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2. **Research** – Research and learn about your chosen farm tool.

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

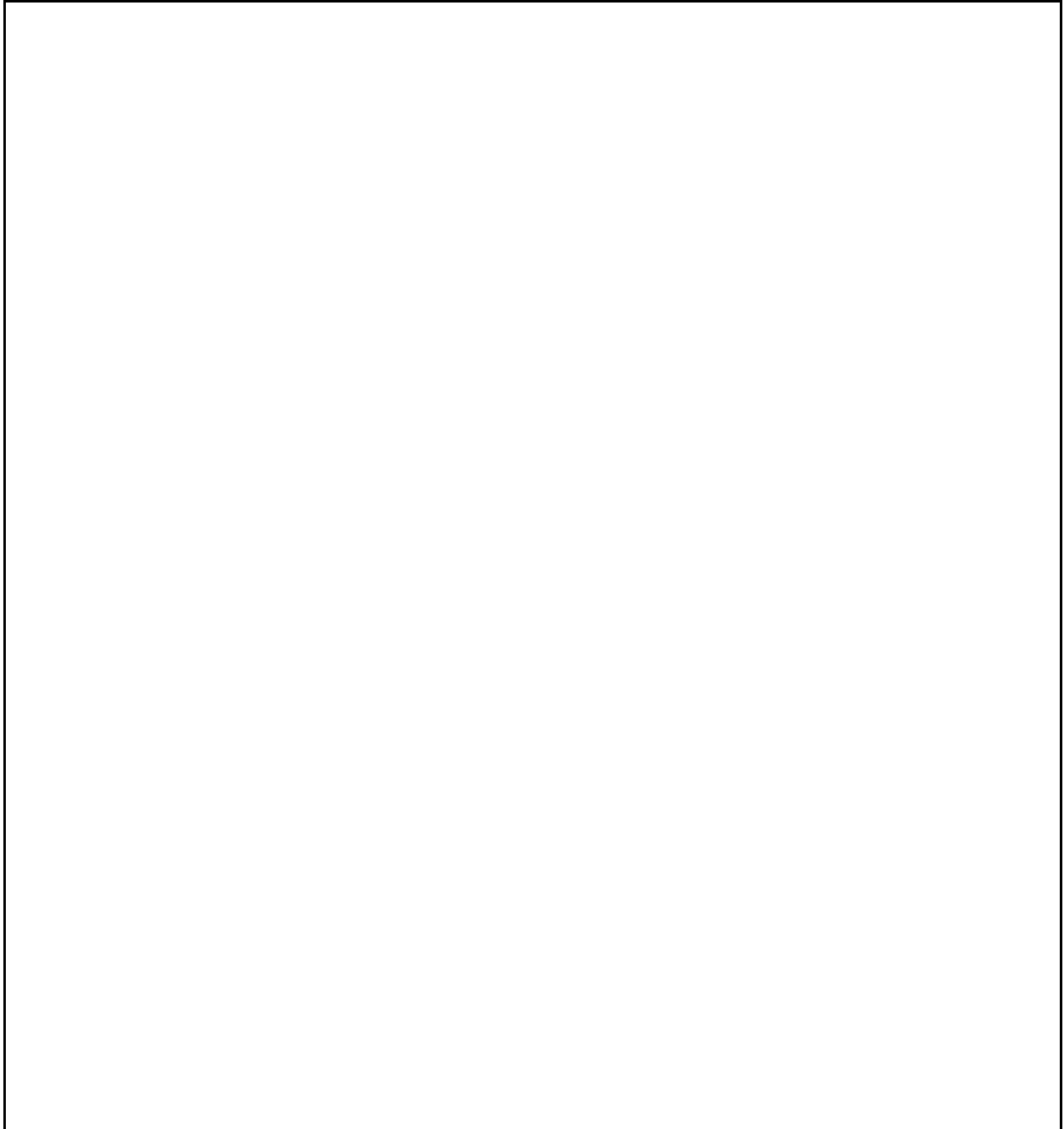
a.	b.
c.	d.

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- 4. Plan** – Have each team member share their sketches. 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. Make sure to identify which materials you will be using. After everyone in the group has drawn the group’s chosen design, get the teacher’s approval.



- 5. Create** – Build your project exactly as shown in your group’s drawings.

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6. **Test** – Using the testing area, test your design and then answer the following questions.

a. What worked in your design, and why?

b. What did not work in your design, and why?

c. How would you improve your design?

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7. **Improve** – Make changes and retest your updated prototype.

a. Did your changes improve your prototype? How?

b. What worked in your updated design, and why?

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

d. How would you improve your redesign?

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Reflection – Answer the following questions.

a. What worked during this activity?

b. What did not work during this activity?

c. What would you change if you could do this activity over again?

d. What other applications could you see your product being used for?
