

Name: \_\_\_\_\_

Date: \_\_\_\_\_



## Fabrication Guide Activity Worksheet SOFT GRIPPER

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### Before you Build

1. Circle the category of robotics that the Soft Gripper falls under.

Sensors

Actuators

Controls

2. Why does the gripper fall under this category?
3. When the air fills the inside of the gripper, what is your hypothesis on how this device may inflate? Sketch the gripper when no air is applied.
4. Sketch another drawing of the gripper showing how you think it may move when the air is applied.

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### **While Curing – Part 1**

1. What could this device be used for? Name an application for the gripper or discuss someone who may use it.
2. Based on your chosen application or user, what are some features you could add to this gripper to make it more useful or more effective?
3. When making your molds, what prevents the cardboard from absorbing the silicone? How can this be applied to other materials to create barriers for other substances?

### **While Curing – Part 2**

1. Was your mold successful in holding in all of the silicone? If no, how can you improve the construction for next time?
2. Why was the mold poured in two parts? What did this two-step process allow you to do?

Date: \_\_\_\_\_

1. How might changing the geometry of the gripper affect its ability to hold various objects?

3. Was your original hypothesis correct for how this device would move? Explain why or why not.

4. Were there any issues with your final result? What part of the fabrication process would you do differently next time to correct this?