

MILESTONE 1 (STAGE 1) – PRE-PROJECT ASSIGNMENT

Team Number: Tues-10

Complete this worksheet individually before coming to Design Studio 7.

1. List out objectives, constraints, and functions in the space below
 - Be sure include your Name and MacID
 - Each objective/constraint/function should be typed out as a separate bullet

Name: Riley Kay	MacID: kayr2
<p><i>Objectives</i></p> <ul style="list-style-type: none">• <i>Should have a simple design (i.e. contain no overhangs)</i>• <i>Should be lightweight</i>• <i>Should be easily portable</i>• <i>Should be designed in a way to maximize friction between it and the robot's grip</i> <p><i>Constraints</i></p> <ul style="list-style-type: none">• <i>Should not be greater than 350g in mass</i>• <i>Smallest dimension of X or Y should not be greater than ~78mm in length (for security reasons when being transferred by the robot)</i>• <i>Should not exceed X, Y, and Z dimensions of autoclave (keep within dimensions of 150.4 x 38.64 x 49.8, or 114.84 x 74.2 x 49.8, preferably less)</i>• <i>Material should not have a melting point of more than ~160°C (exposure to hot steam when sterilizing may cause less heat-resistant materials to warp or soften)</i> <p><i>Functions</i></p> <ul style="list-style-type: none">• <i>Should be able to hold a surgical tool tightly and securely</i>• <i>Should be capable of allowing in steam for sterilization</i>• <i>Should be capable of carrying a surgical tool</i>• <i>Should withstand heat</i>	

At the beginning of Design Studio, we will be asking that you copy-and-paste the above list into **Milestone One Team Worksheets**. It does seem redundant, but there are valid reasons for this:

- Each team member needs to submit their list of objectives, constraints and functions with the **Milestone One Individual Worksheets** document so that it can be *graded*
- Compiling your individual work into this **Milestone One Team Worksheets** document allows you to readily access your team member's work
 - This will be especially helpful when completing **Stage 2** of the milestone

MILESTONE 1 (STAGE 2) – LIST OF OBJECTIVES, CONSTRAINTS, AND FUNCTIONS

Please complete this worksheet in your corresponding team document.

MILESTONE 1 (STAGE 3) – MORPHOLOGICAL ANALYSIS

Please complete this worksheet in your corresponding team document.

MILESTONE 1 (STAGE 4) – CONCEPT SKETCHES

Team Number:

Tues-10

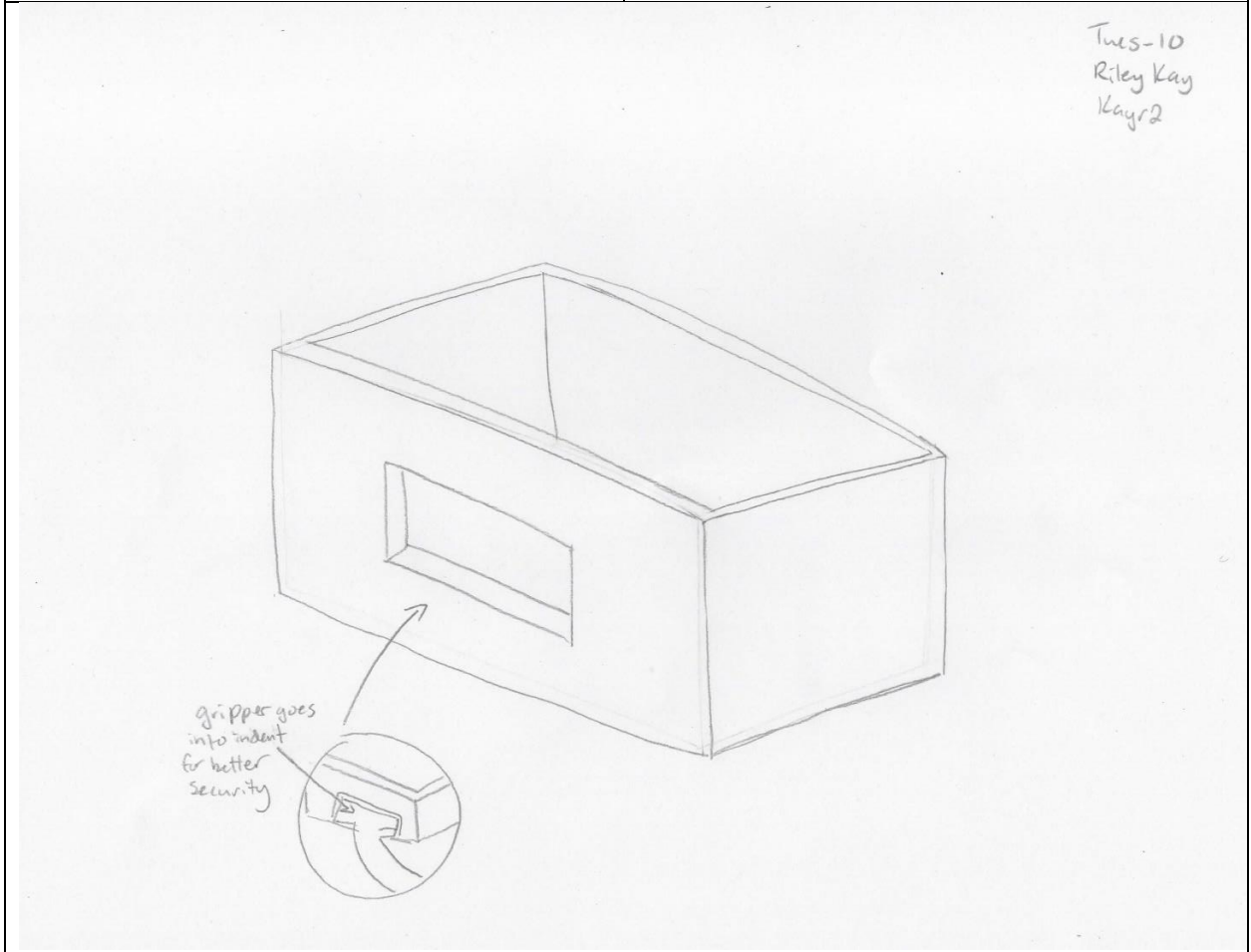
Complete this worksheet after having done stage 3 as a team.

1. Complete your sketches on a separate sheet of paper
 - Be sure to clearly write your Team Number, Name and MacID on each sketch
 - Do **not** include concepts for the stabilization and sterilization of the tools
 - You can sketch only the container, and do not need to sketch the Q-arm itself unless it adds to the communication of your design
2. Take a photo of your sketch
3. Insert your photo as a Picture (Insert > Picture > This Device)
4. **Do not include more than one sketch per page**

Team Number: Tues-10

Name: Riley Kay

MacID: kayr2



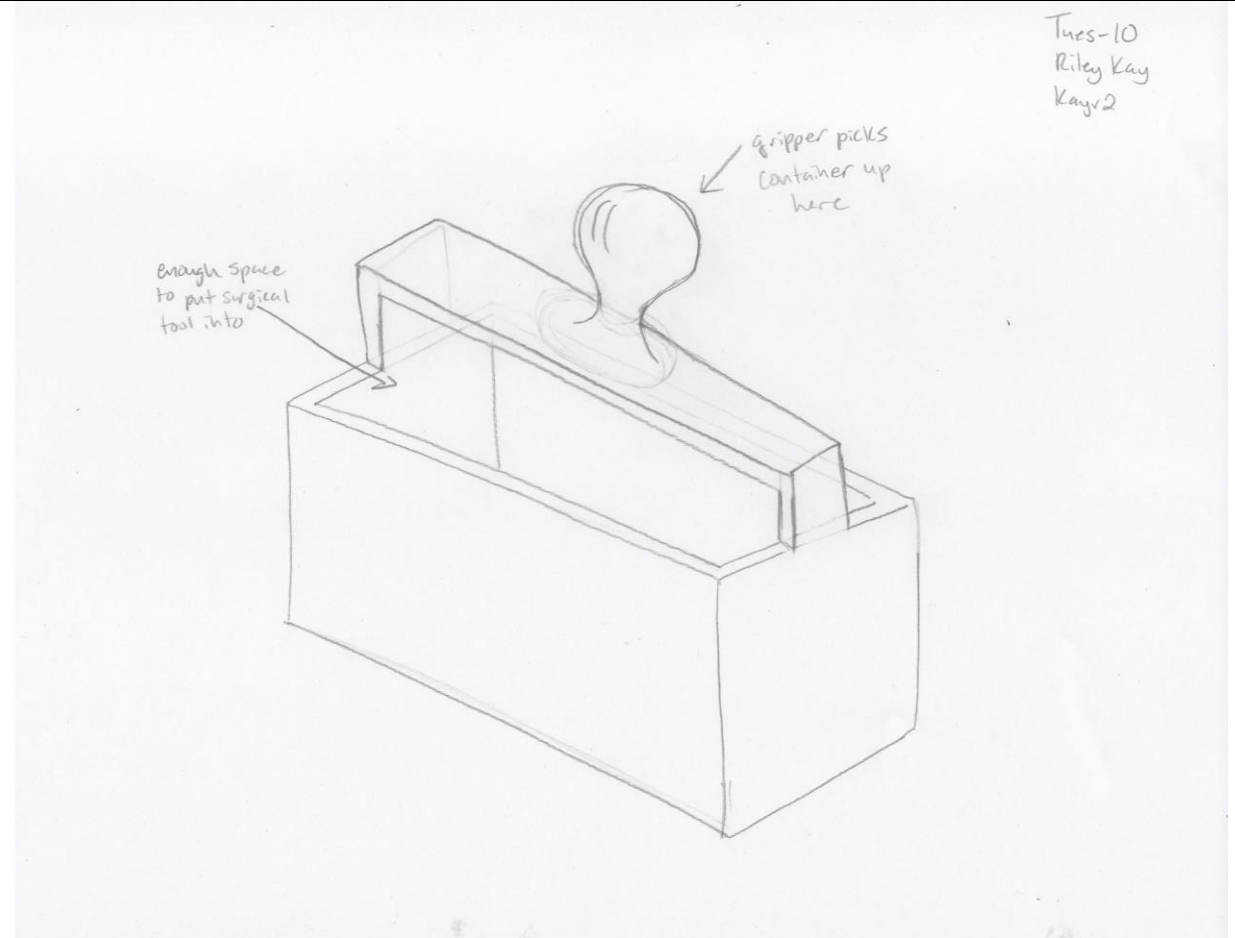
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*For multiple sketches, please copy and paste the above on a new page

Team Number: **Tues-10**

Name: Riley Kay

MacID: kayr2



KNOB

*For multiple sketches, please copy and paste the above on a new page