

Project Reports

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Infinity Wars

Planning Report:

Week of June 11

- Demonstrate that you understand the project
- Demonstrate that you have a strategy
 - Problem Definition
 - Physical Instantiation of functions
 - Function Tree
 - Specification Sheet
 - Other Planning Tools

Infinity Wars

Evaluation Report:

Week of June 25

- Demonstrate that you have possible solutions
 - Problem definition
 - System description
 - Concept alternatives
 - Concept evaluation
 - Concept selection
 - Preliminary results

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Final Report:

Week of July 16

Infinity Wars

Final Report:

Written Reports:

8 pages of text Maximum

Appendices as needed

(Summary and Appendices not counted against 8 pages)

Video and Elevator talk:

Brief video

Brief oral summary of the video

Reminder

Please upload copies of your studio reports to
Canvas!

Submission links will be available

These uploads are for our records, not for
your grade

Information for Final Video / Talk

1. Identify your group, goals and competition score.
2. Describe your strategy for winning
3. Present your overall system
4. Present subsystems
5. Describe your competition performance
6. Analyze your performance: What worked, didn't work, what changes would really improve your performance?
7. Closing Summary

Things you don't report

- How many meetings you held
- Who was in charge of what subsystem
- Anything about brainstorming
- Design disputes within the group
- The long process of tweaking

Things you DO report

- The objective of the system developed by [your] team
- What was constructed
- How the design was selected
- How it performed
 - Did it meet expectations?
- Evaluation / analysis of performance and of design

Sections of the Final Report

- Title sheet
- Abstract
- Introduction
- Design Objectives
- Design Overview
- Alternative Designs
- Discussion
- Conclusion

Introduction

Define Needs, Functions and Challenges

Discuss Planning Tools **ONLY** to clarify the task.

Design Introduction:

An overview of a complex system

- What does the assembled system look like?
 - Cite an overview drawing here
- What objective is it designed to meet?
- What are its main components / features?
- In what order will those components be described?

Component Description:

The details of a complex system

- Which subsystem / component is this?
 - Insert illustration
- What function or goal does it address?
- What are its features?
- How does it work?
(as needed)
- What problems does it raise?

Repeat until done!

Discussion

- Justify your design
 - What made this the best design?
- Analyze your system's performance
 - How many points did it score?
 - How far did it advance?
- What would you change?
 - Review the design strategy
 - What lessons were learned?

Conclusion

Summarize your points:

- What design was selected?
- Why was this design selected?
- What was its performance
- What would you change?

An Example Presentation

- Display an overview of the complete system first
- Provide Slide Titles or descriptive captions for all figures
- Label all system elements
 - Labels reflect a consistent level of detail in each drawing
 - Color is used lightly to distinguish components

effective presentations distinguish and describe system elements

The Carnival Project

Carnival Goals were:

- Win at Horseshoes
- Knock down the milk bottles
- Collect treats

The Carnival Arena

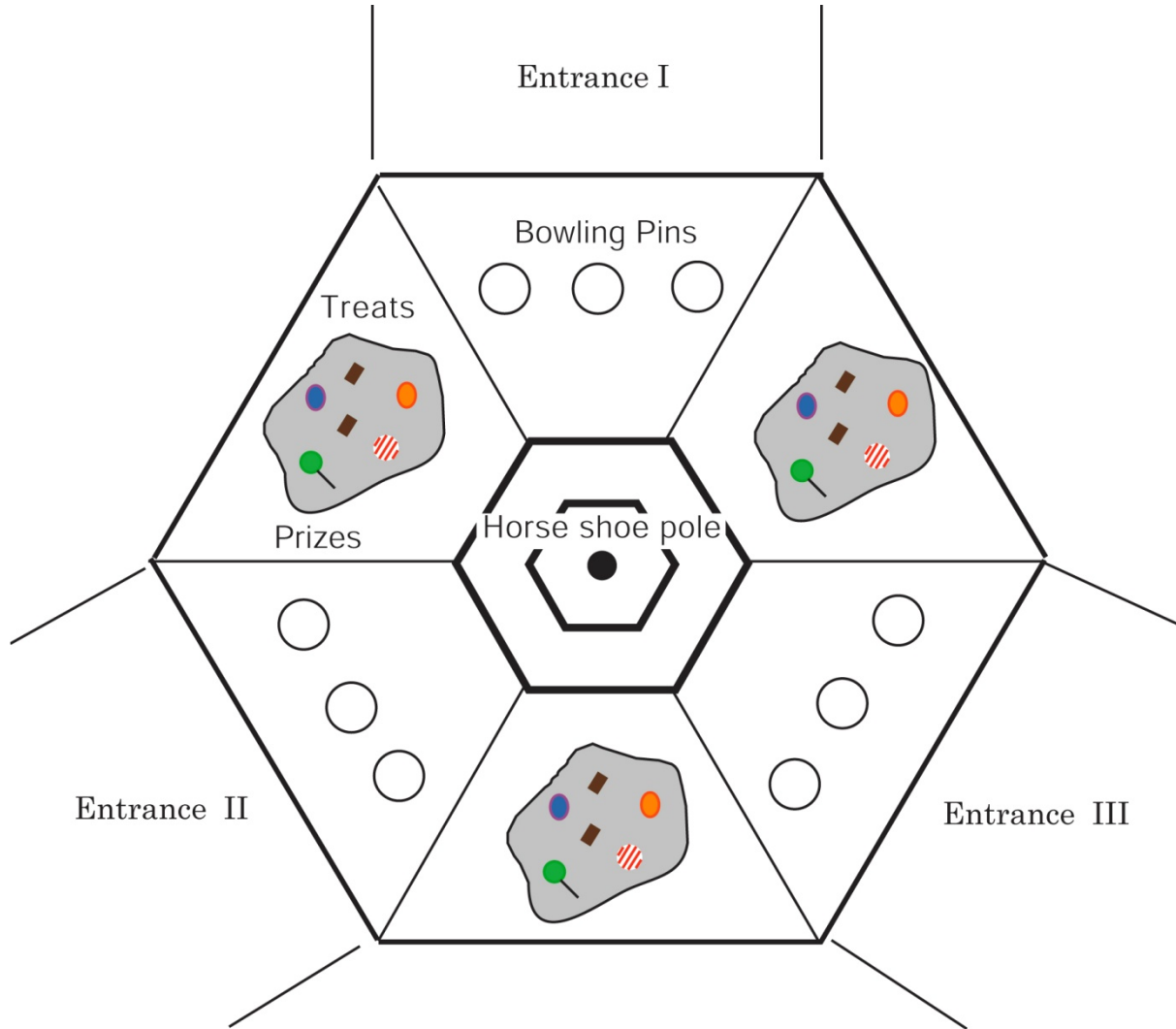


Figure 1: Carnival.

Carnival Presentation 1

in line drawings

- Assembled, integrated system is shown before subsystems are presented
- Complete subsystem is shown before its components are presented
- Labels call attention to structures that are described.

Please Note:

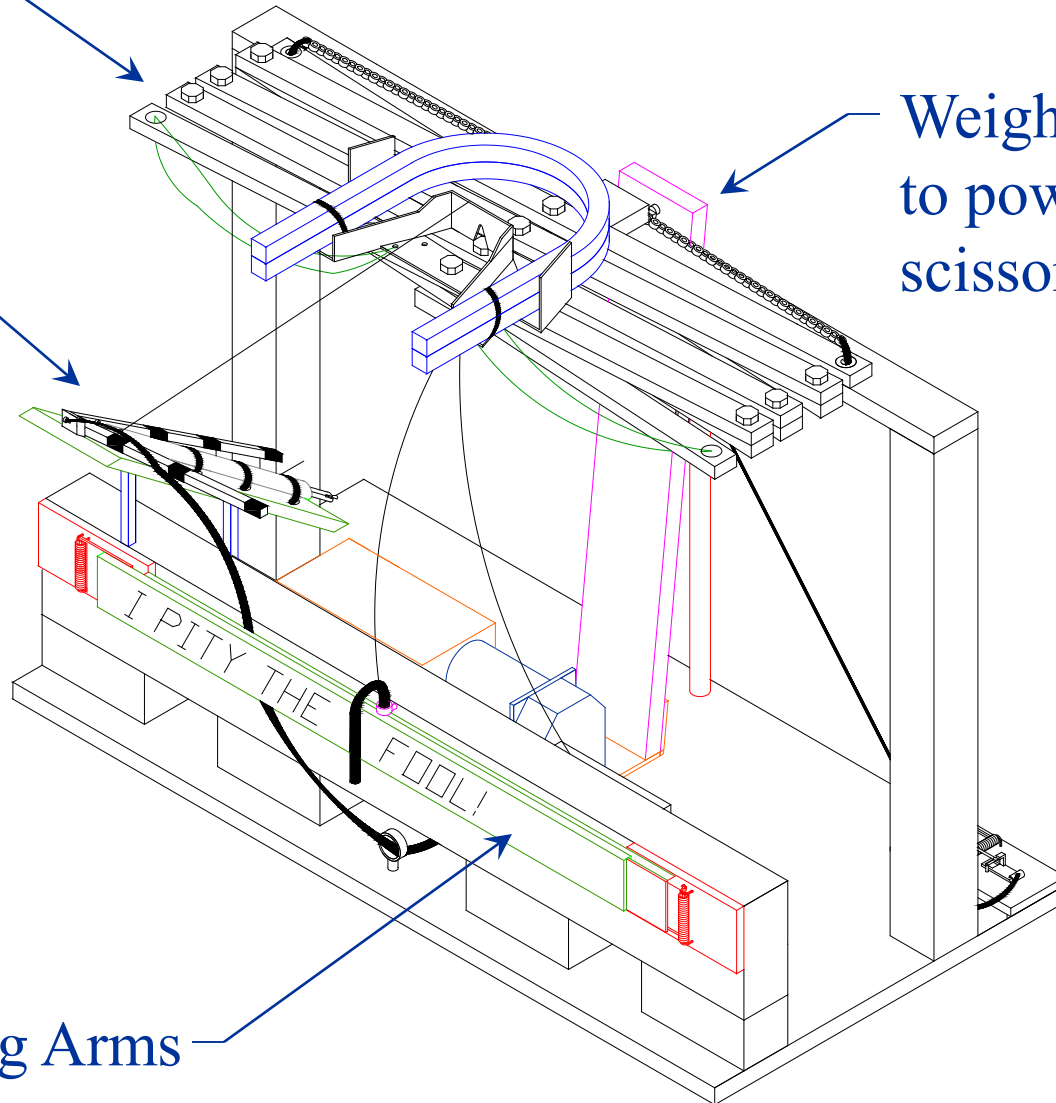
1. Scores and analysis have been removed from this student presentation.
2. Dimensions were not required for Carnival drawings

Final Design: A Stationary System

Scissor Arm
for
Horseshoes

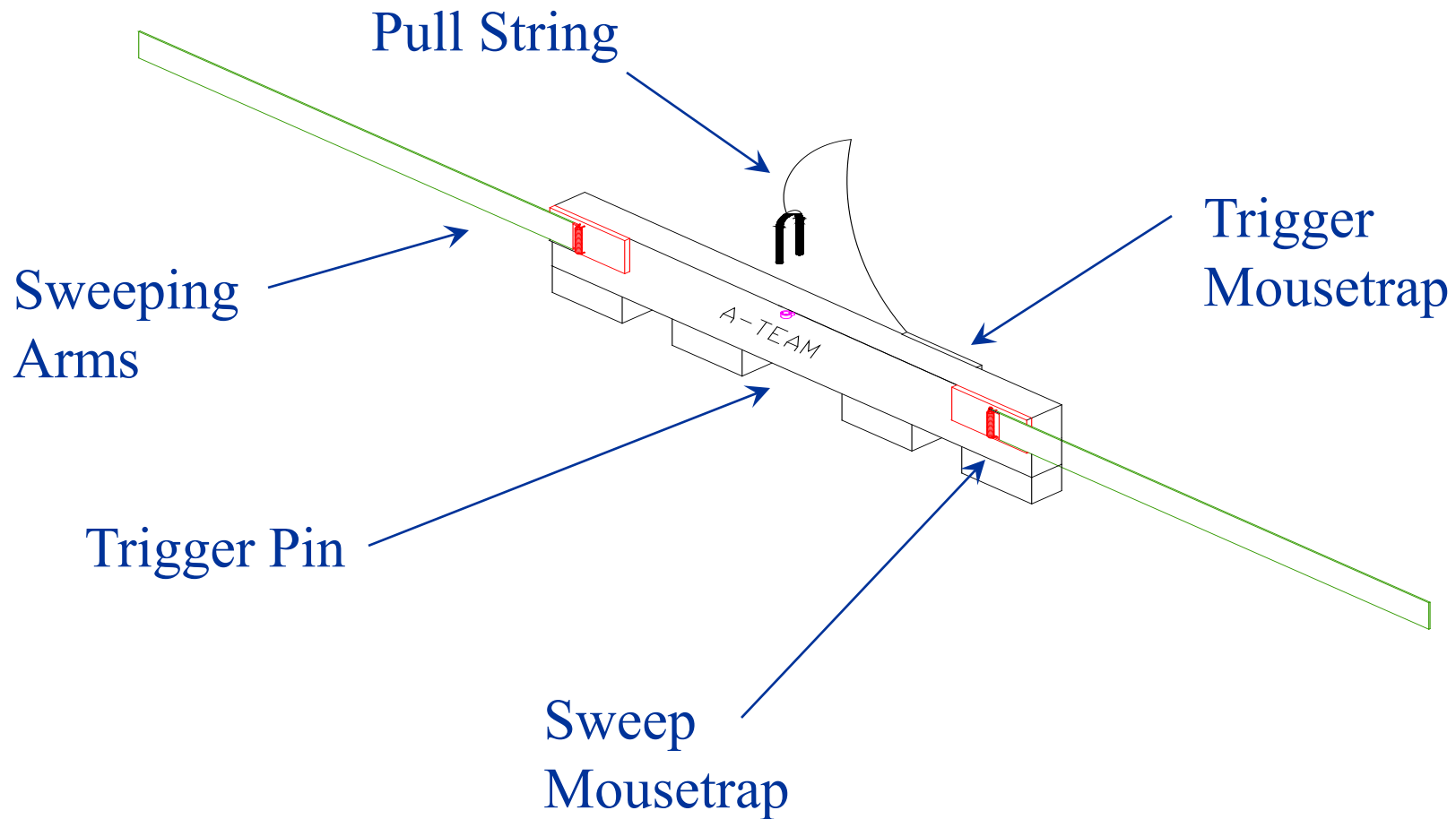
Weight Arm
to power
scissor arm

Treat Retriever

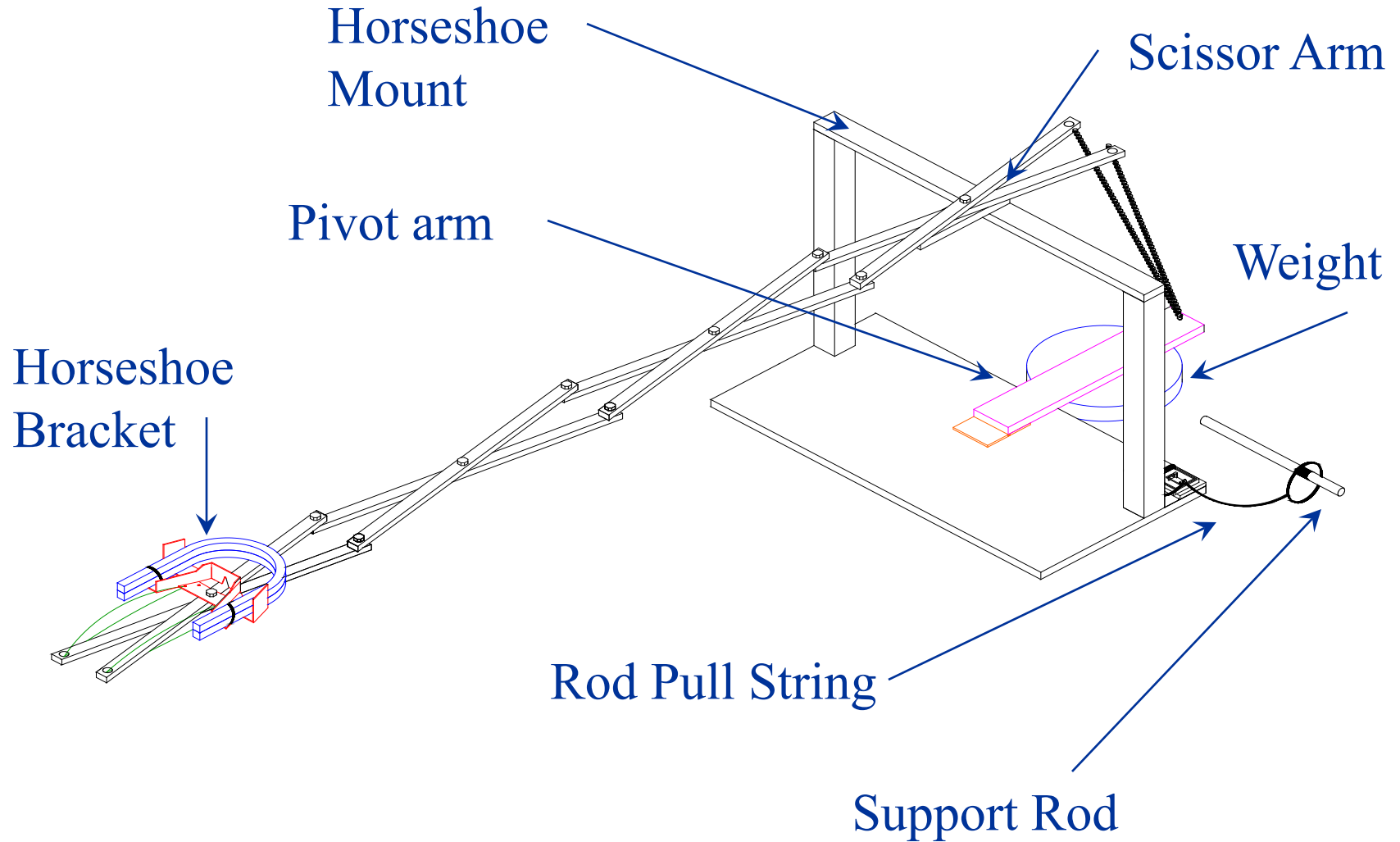


Double Sweeping Arms
for Milk Bottles

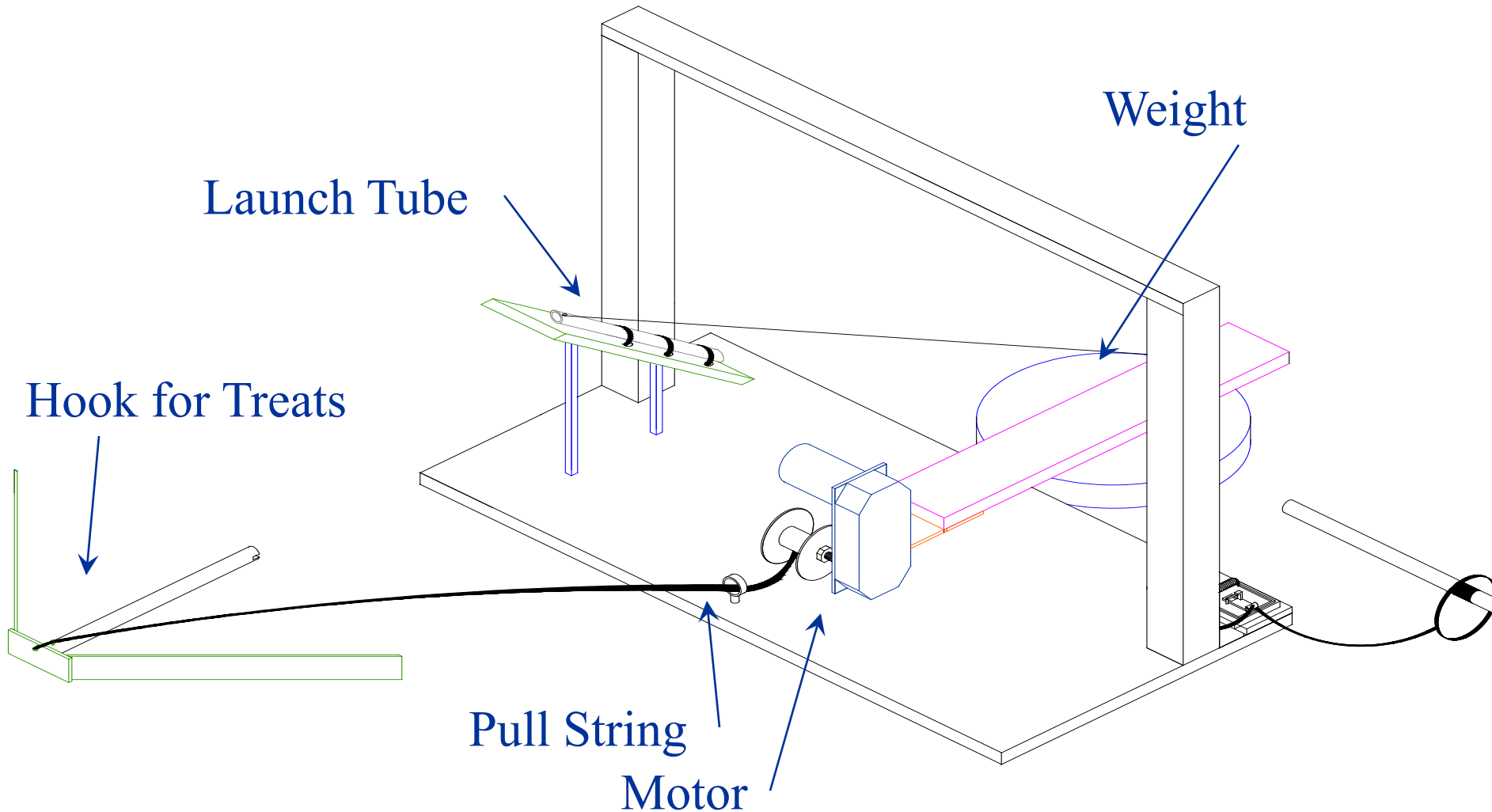
Sweeping Arms Subsystem Deployed



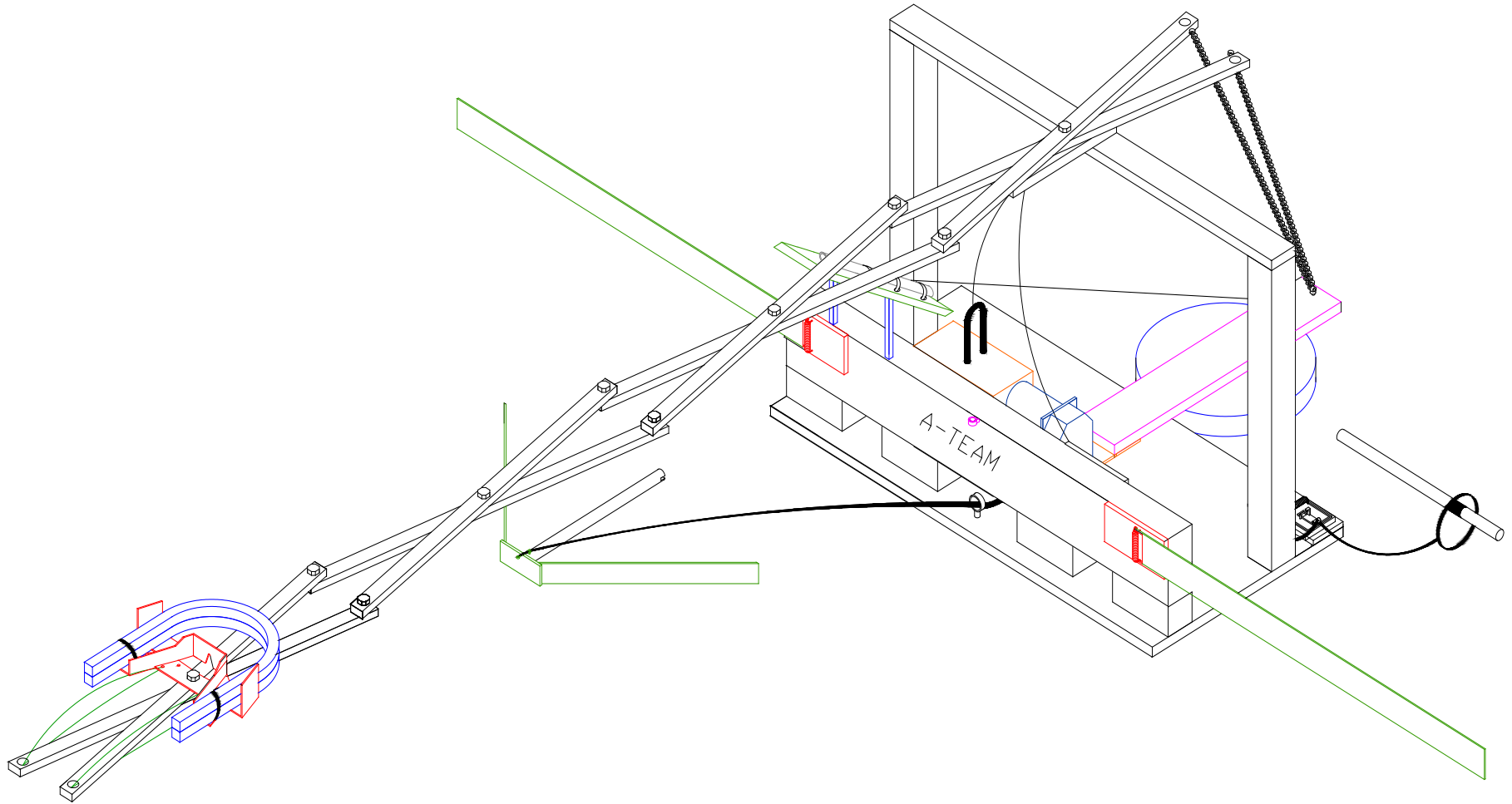
Scissor Arm Subsystem Deployed



Catapult Subsystem Deployed



System Fully Deployed



Judging

- Look like a team
- Demonstrate your system
- Prepare a display board
- Convey enthusiasm

Design Review Presentations (How to Prepare)

- Give descriptive titles to your systems and subsystems
- Demonstrate functions without breaking the device
- Review the strong points—and weaknesses—of your system
- Know your team's strategy for winning

Design Review Tips (During the Judging)

- State which points your system is designed to collect
- State what design / performance qualities will make your system advance to the final round
- Show judges what your system does:
 - Extend drawer slides, Deploy arms, show video, etc.

Sample Judge Questions (General)

- How many points does a team need in order to advance?
- What are the characteristics of a winning system?
- Which other team is most likely to win? Why?

Sample Judge Questions (Specific)

- What makes your system a winner?
- What does your system do?
- What is unusual about your system?
- What could go wrong for your system?