#NUMBER
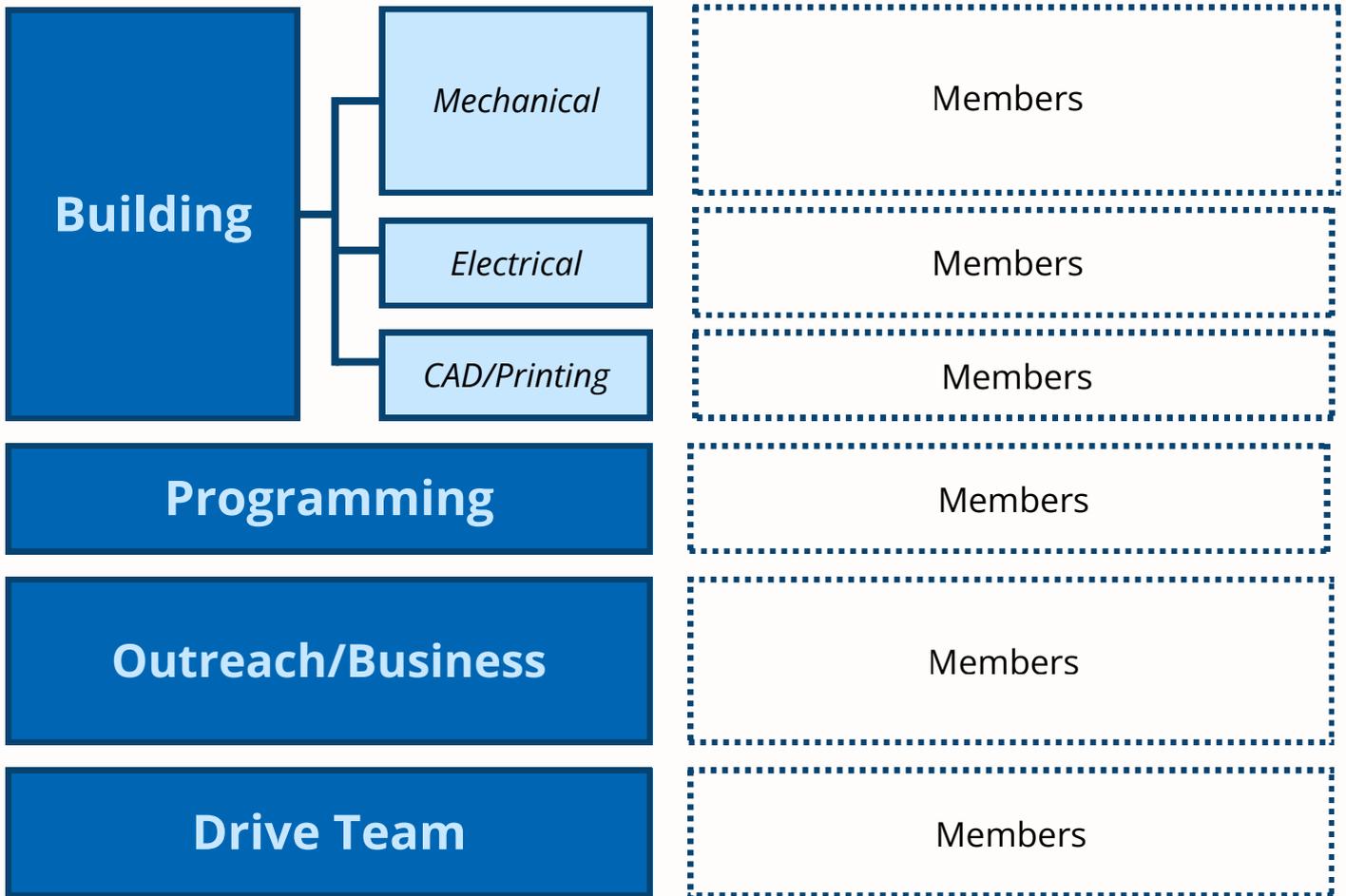
NAME

ENGINEERING PORTFOLIO

Table of Contents

Team Overview

We are **Team** _____, from _____! Now entering our **##** year in the FIRST Tech Challenge (FTC) competition, our team is _____. Throughout this FTC season and the ones before, we _____. We aim to _____.
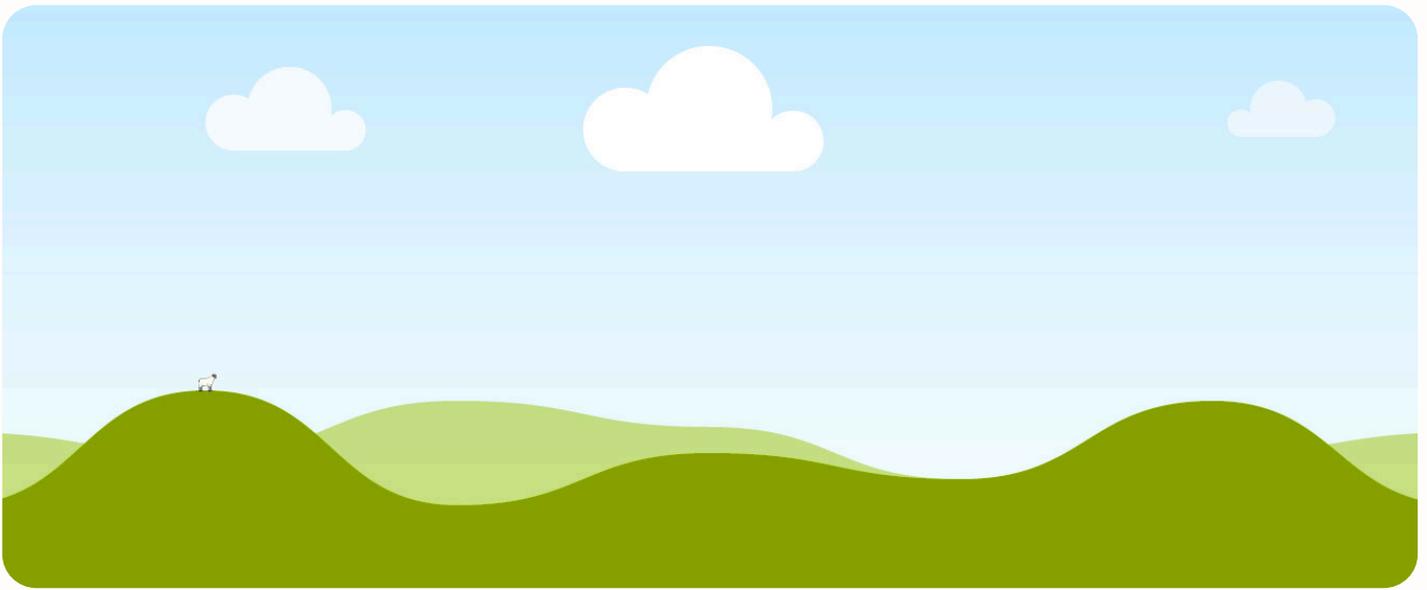
Members

Team Captains: Names

Building	Mechanical	Members
	Electrical	Members
	CAD/Printing	Members
Programming		Members
Outreach/Business		Members
Drive Team		Members

Team Mentor: Names

Mentors don't build the robot but, rather, motivate the team and guide us in the right direction to keep working towards innovating impactful solutions!

Team | Season

Skill Development

This season, we aimed to:

- **Goal 1**
  - **Achieved by:**
    - Explanation
    -
- **Goal 2**
  - **Achieved by:**
    - Explanation
    -
- **Goal 3**
  - **Achieved by:**
    - Explanation
    -

Season Overview

This season, _____ submerged ourselves in the goals of:
- **Goal 1**
- **Goal 2**

Season Timeline

Offseason *!*

- Events
- Season Plan

Dates

Early Season *!*

- Events
- Season Plan

Dates

Meets *!*
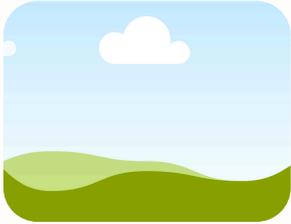
- Events
- Season Plan

Dates

League Champs *!*

- Events
- Season Plan

Dates

Engineering Process

1. Brainstorming

- Elements of Brainstorming
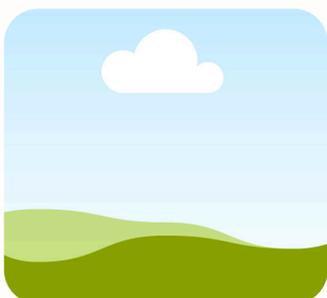
2. Design/Plan

- Elements of design/plan

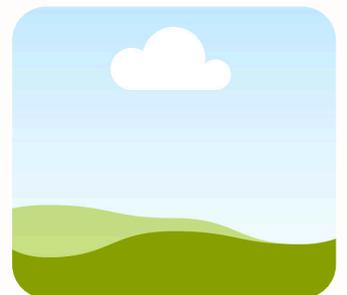## 3. Prototype & Analyze

- Elements of prototype and analyze
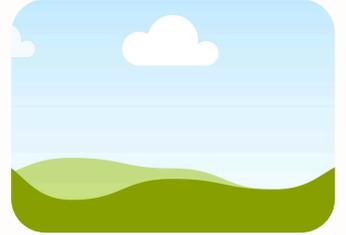
4. CAD

- Elements of CAD

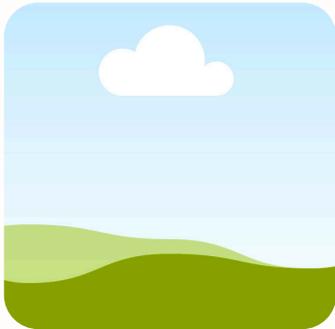## 5. Build

- Elements of building

Engineering Process

6. Test
- Elements of testing

7. Evaluate & Iterate
- Elements of evaluating and iterating

8. Repeat!

2

4

1

3

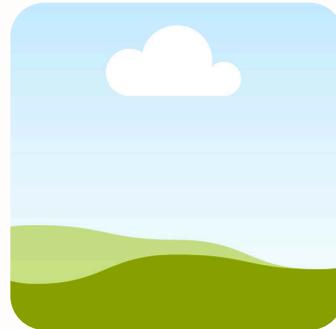## Important Requirements of the Robot and its Mechanisms:

- Feasibility - *Is it possible?*
- Reliability - *How consistent are the mechanisms' performances?*
- Durability - *How robust and durable is it?*
- Simplicity - *Is it too complicated? Is it so complex that it becomes difficult to use?*
- Reality - *Is it too expensive to produce or replace if broken?*
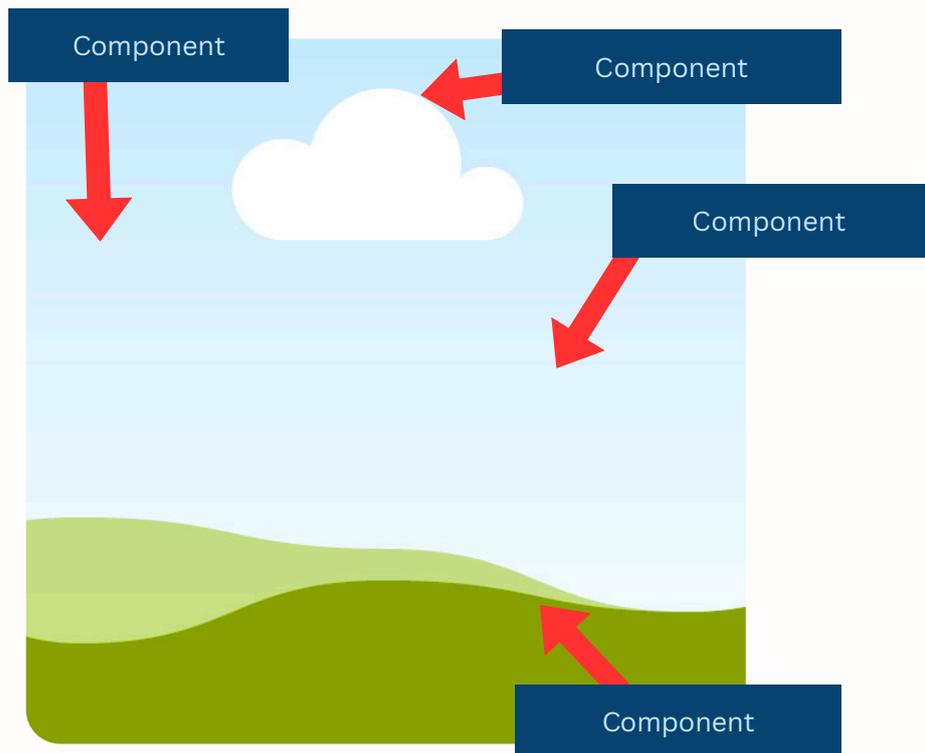
Iterations

Name
Our first iteration

Component

Component

Component

Component

Component
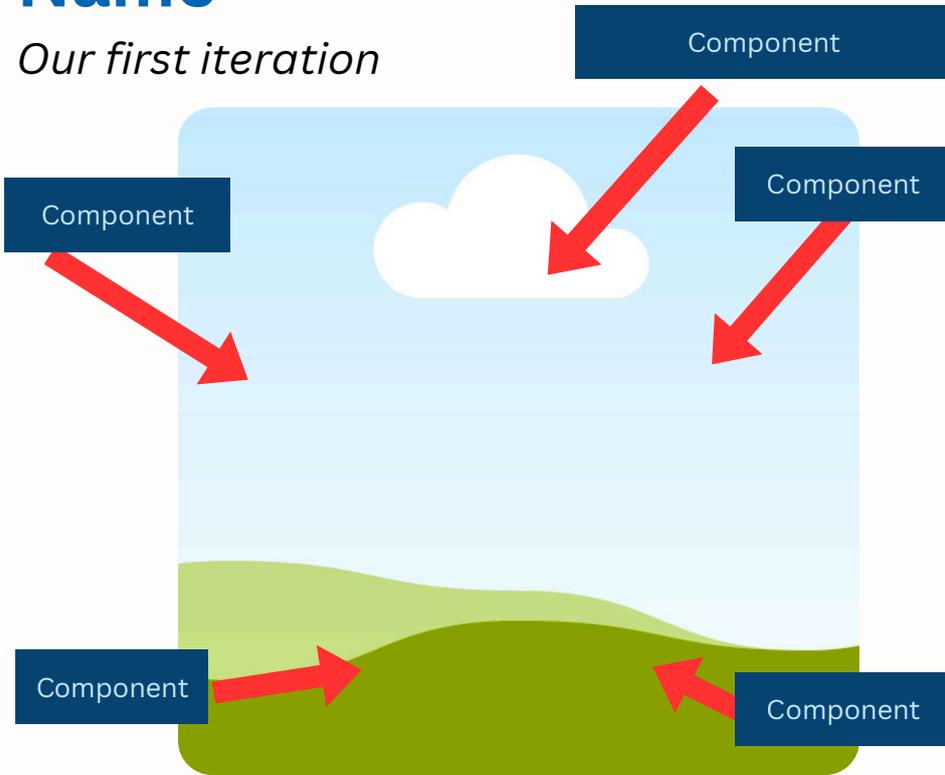
Pros and Cons of overall iteration

Pros and Cons of overall iteration

Name
Our second iteration

Component

Component

Component

Component

Iterations

Name
Our third iteration

Component

Component

Component

Component

Component
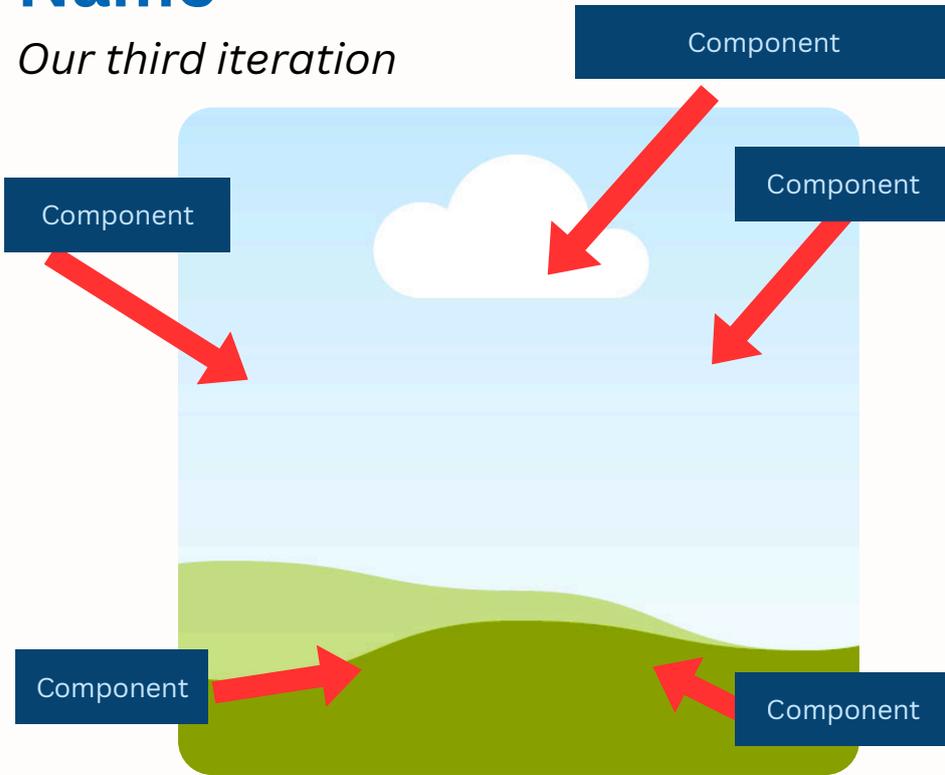
Pros and Cons of overall iteration

Pros and Cons of overall iteration

Name
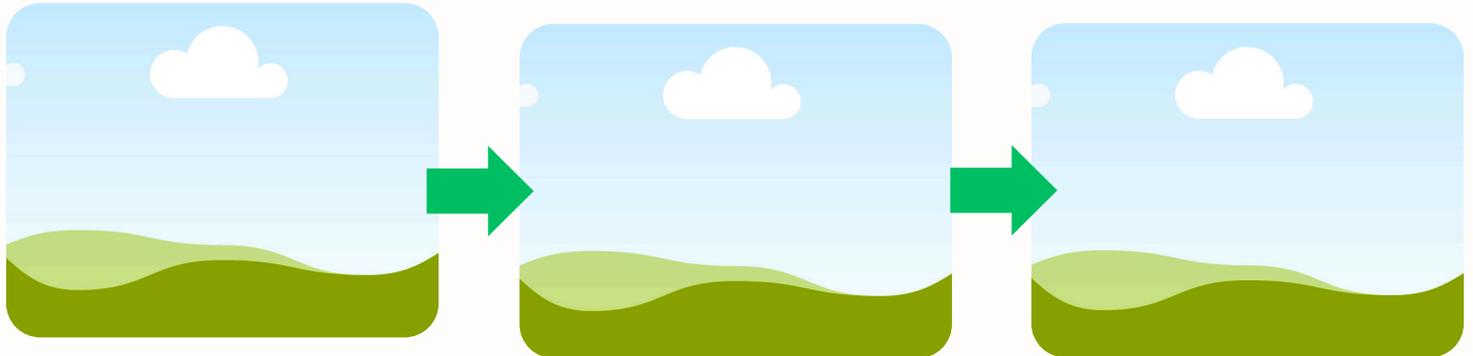*Our fourth iteration*

Component

Component

Component

Component
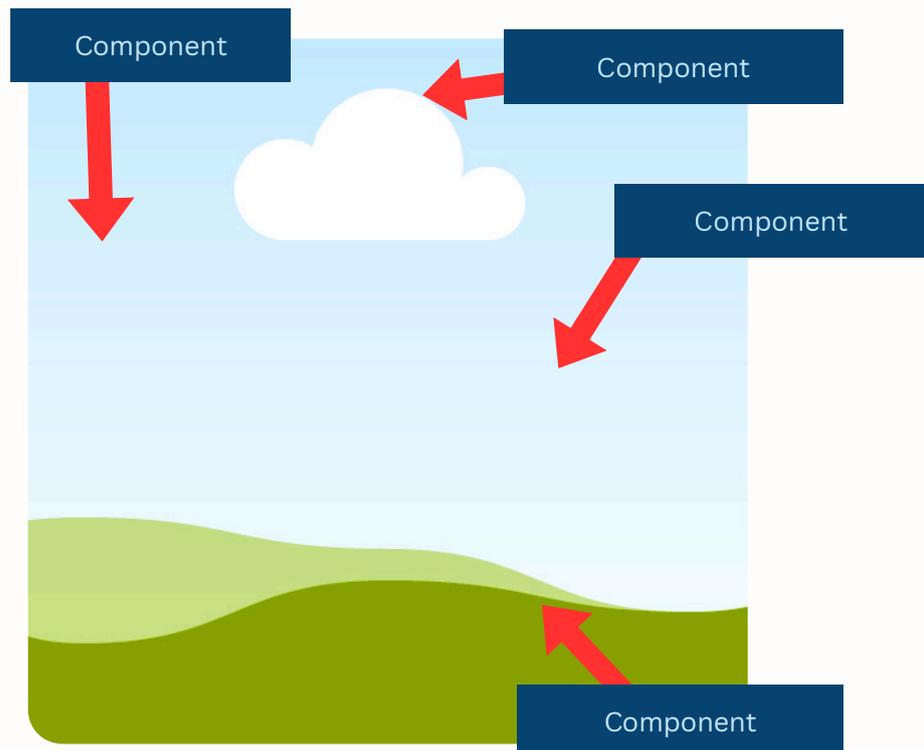
Subsystems

Drivetrain

- Parts of drivetrain
- Changes?

- Parts of drivetrain
- Changes?

- Parts of drivetrain
- Changes?

Subsystem Name
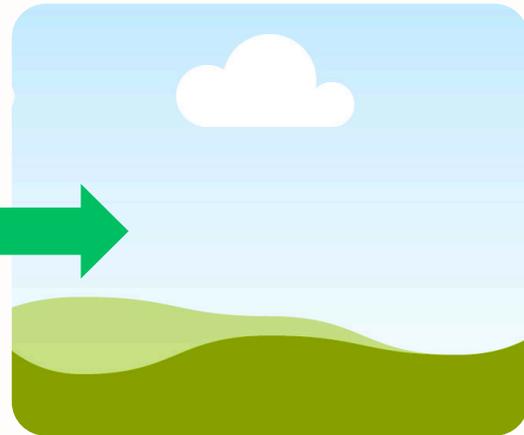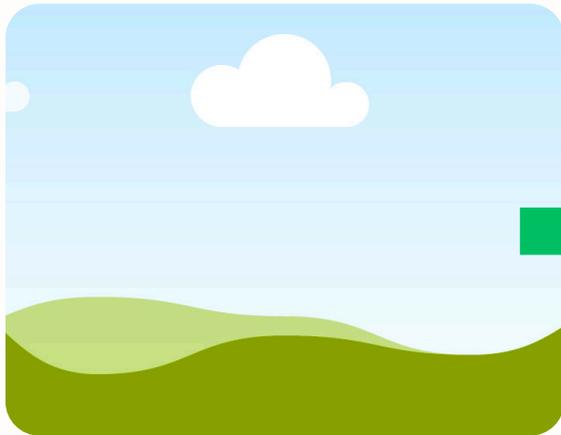
- Parts of subsystem
- Changes?

- Parts of subsystem
- Changes?

- Parts of subsystem
- Changes?

Problem	Explanation
Solution	Explanation

Problem	Explanation
Solution	Explanation

Subsystem Name

- Parts of subsystem
- Changes?

- Parts of subsystem
- Changes?

Important!
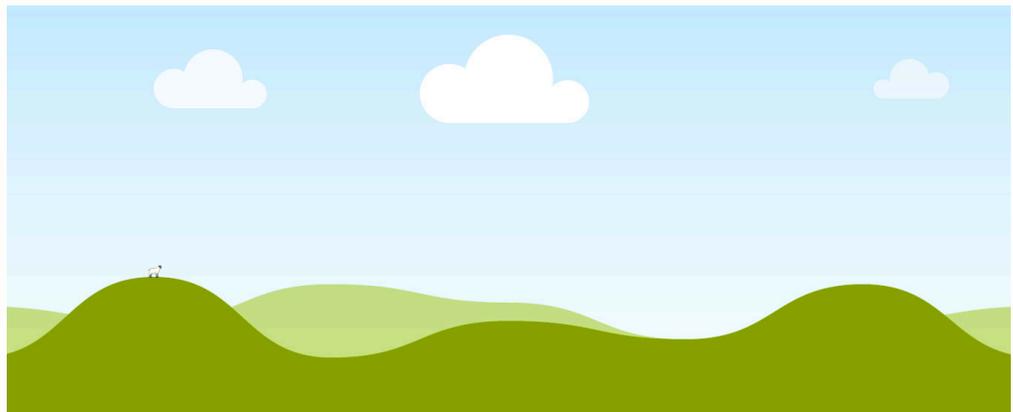Any notes?

Problem	Explanation
Solution	Explanation

Programming

Autonomous

Our autonomous period focused on ____. Pros and Cons of Auto. What the auto allows the team to do

Math!
Explain any math used including FORMULAS

Tele-Op

Our tele-op period focused on _____. Pros and Cons of Tele-Op. What the tele-op allows the team to do
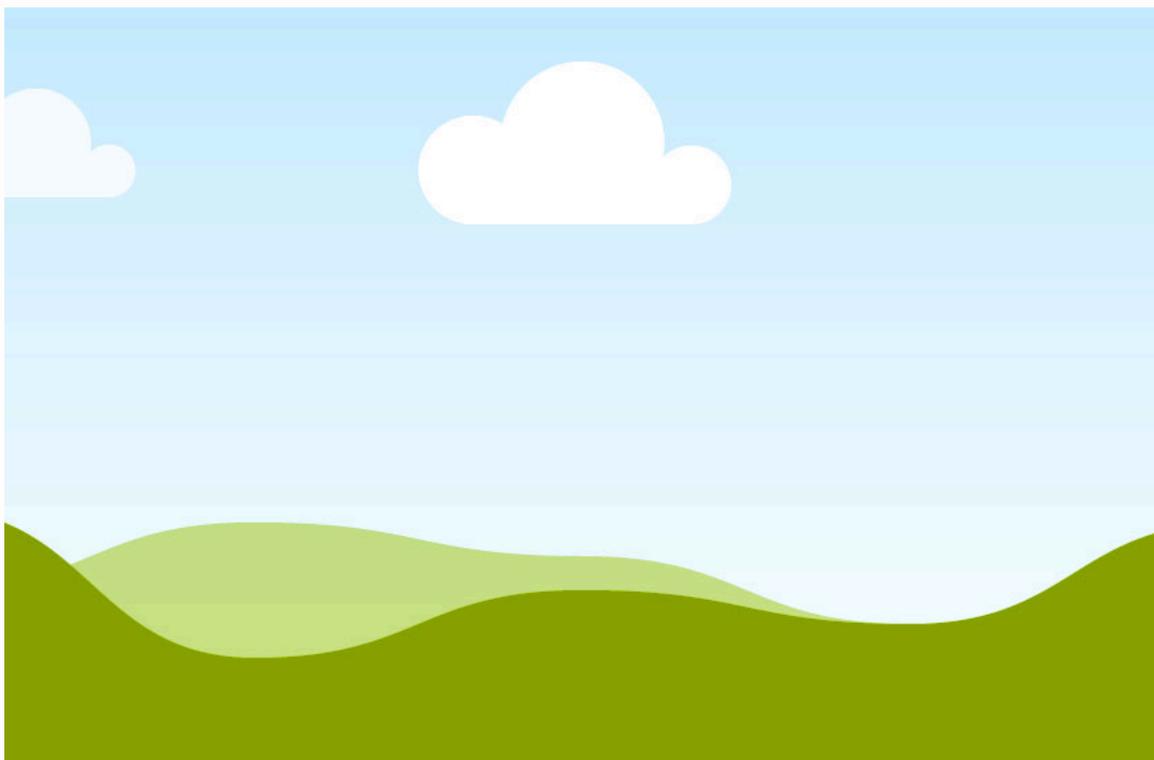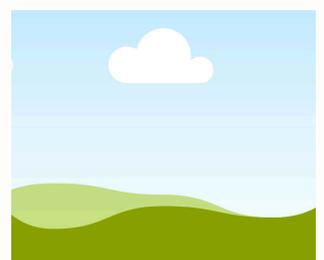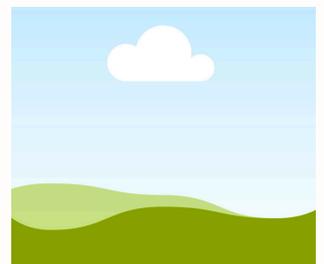
Finances

Cost-Benefit Analysis
Explanation

Pros: list out pros

Cons: list out cons

Considering its benefits in competition, we decided it was worth it!

Sponsors

Outreach

> *"FIRST Core Values...emphasize **friendly sportsmanship, respect for the contributions of others, teamwork, learning, and community involvement** and are part of our commitment to fostering, cultivating, and preserving a culture of equity, diversity, and inclusion"*

Community Outreach

As we are paving the pathway for innovation in the present, we strongly believe in educating the engineers of tomorrow. Through robot demonstrations and activities in many events, we have cultivated a growing passion for STEM among the youth, also interesting parents in FTC and FLL teams.
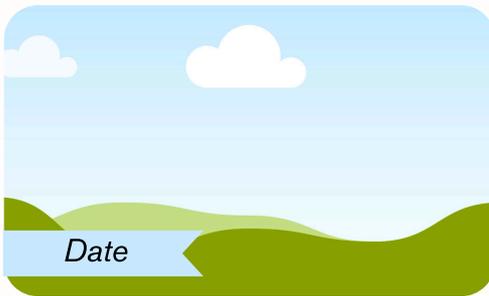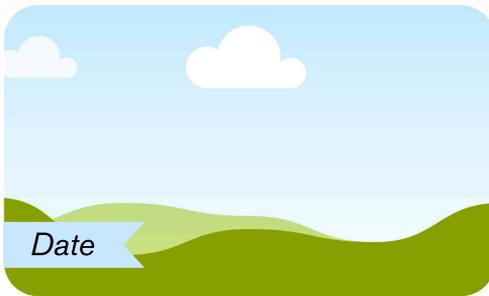
Event Name
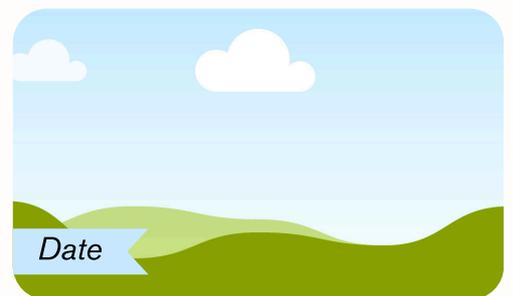Information regarding event + attendees/people reached
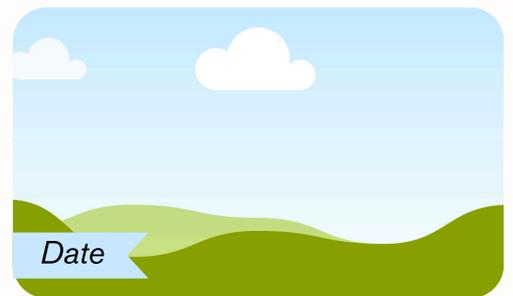
Date

Event Name
Information regarding event + attendees/people reached.

Date

Event Name
Information regarding event + attendees/people reached
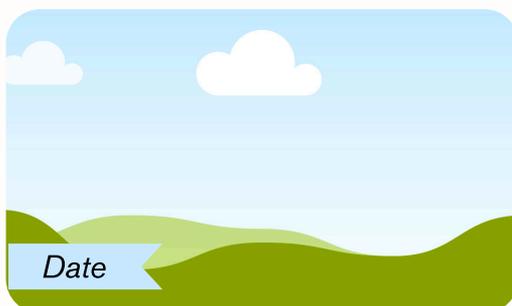
Date

Event Name
Information regarding event + attendees/people reached.
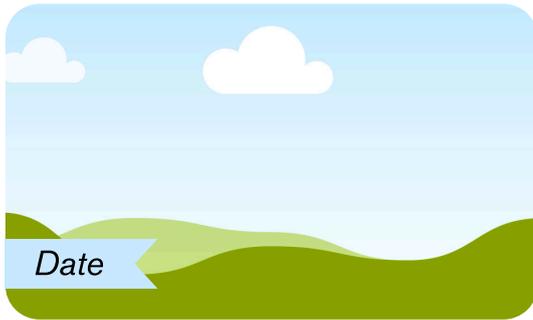
Date

Event Name
Information regarding event + attendees/people reached

Date

Outreach

Professional Outreach

As we toil on our robots, we find it important to understand the technological advances and innovations of professional companies to solve real-world issues! This inspires us in the world of STEM, while also showcasing the youth of innovation.
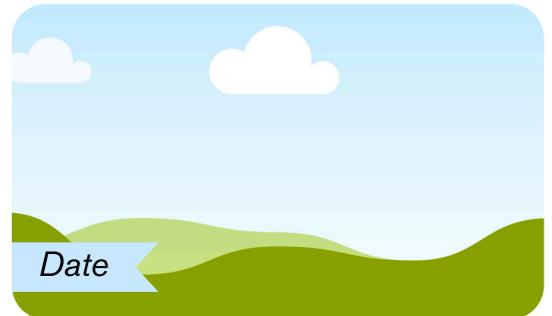
Event Name
Information regarding event + attendees/people reached

Date

Event Name
Information regarding event + attendees/people reached.

Date

Mentoring

FIRST is a place of collaboration, _____!

- Mentoring experience and assistance/guidance
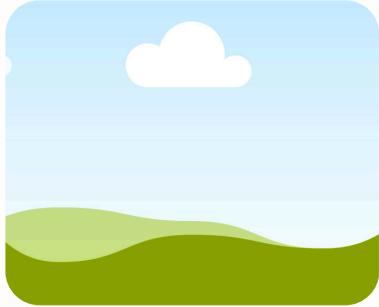-

Brief statement regarding lessons learned!
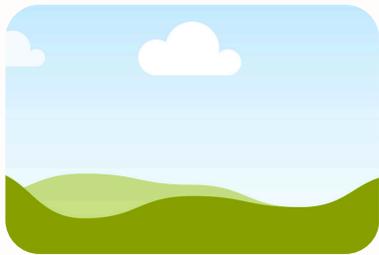
Outreach

Community Connections
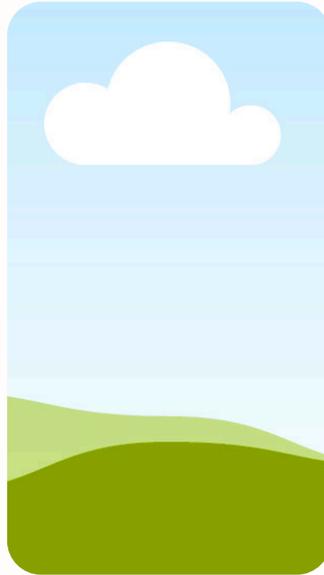
Other FTC Teams Around the Globe

Teams meet with through the season and lessons learned

STEM Professionals

STEM professional description

STEM professional description

Include any outreach materials that makes your team unique

Team Sustainability Plan

Our Team	Member sustainability Developing member skills
Mentors	Gaining mentors Sustaining mentors Current mentors
Our Community	How FIRST is spread throughout our community

Risk Management

Include multiple forms of risk management

Season Summation

Lessons Learned

- **First Lesson**
  - Explanation

- **Second Lesson**
  - Explanation

- **Third Lesson**
  - Explanation

- **Fourth Lesson**
  - Explanation

Future Plans

Robotic Plan	*Outreach/Business Plan*
Explanation	Explanation
	Explanation
Explanation	Explanation