FIRST LEGO LEAGUE CHALLENGE

Innovation Project Worksheets

TEAM NAME:

TEAM NUMBER:

Updated: August 2022

Instructions: Read the challenge text carefully. What are the key words? What are the requirements? See next page for tips/solution

Will be updated on August 2

Instructions: Read the challenge text carefully. What are the key words? What are the requirements?

Specific problem related to

_____

Create/Improve _____

Requirements: _____

_____

_____

_____

_____

Will be updated on August 2

Creating a Plan	Name:

Instructions:
1. The next step is to come up with a plan. Start with the rubrics and think about how you will address each of the areas
2. How will you split the work? What deadlines do you want to give yourself?

IDENTIFY	DESIGN	CREATE	ITERATE	COMMUNICATE

BEGINNING 1	DEVELOPING 2	ACCOMPLISHED 3	EXCEEDS 4 How has the team exceeded?

IDENTIFY – Team had a clearly defined problem that was well researched.

☐ Problem not clearly defined	☐ Partially clear definition of the problem	☐ Clear definition of the problem	☐
☐ Minimal research	☐ Partial research from more than one source	☐ Clear, detailed research from a variety of sources	☐

DESIGN – Team generated innovative ideas independently before selecting and planning which one to develop.

☐ Minimal evidence of an inclusive selection process	☐ Partial evidence of an inclusive selection process	☐ Clear evidence of an inclusive selection process	☐
☐ Minimal evidence of an effective plan	☐ Partial evidence of an effective plan	☐ Clear evidence of an effective plan	☐

CREATE – Team developed an original idea or built on an existing one with a prototype model/drawing to represent their solution.

☐ Minimal development of innovative solution	☐ Partial development of innovative solution	☐ Clear development of innovative solution	☐
☐ Unclear model/drawing of solution	☐ Simple model/drawing that helps to share the solution	☐ Detailed model/drawing that helps to share the solution	☐

ITERATE – Team shared their ideas, collected feedback, and included improvements in their solution.

☐ Minimal sharing of their solution	☐ Shared their solution with user OR professional	☐ Shared their solution with user AND professional	☐
☐ Minimal evidence of improvements in their solution	☐ Partial evidence of improvements in their solution	☐ Clear evidence of improvements in their solution	☐

COMMUNICATE – Team shared a creative and effective presentation of their current solution and its impact on their users.

☐ Presentation minimally engaging	☐ Presentation partially engaging	☐ Presentation engaging	☐
☐ Solution and its potential impact on others unclear	☐ Solution and its potential impact on others partially clear	☐ Solution and its potential impact on others clear	☐

Creating a Plan	**Name:**

Instructions:
1. Create a plan
2. Below is a high-level example to give you ideas. Customize a plan for your team/project.

IDENTIFY	DESIGN	CREATE	ITERATE	COMMUNICATE

Weeks 1-5

Name(s):
Everyone

Tasks:
Everyone to
Research
Problems and
Existing Solutions

Due Date:

Weeks 5-7

Name(s):
Everyone

Tasks:
Select team
problem
Everyone to come
up with solutions
Select team
solution

Due Date:

Weeks 8-10

Name(s): Student 3, 4, 5

Tasks:
Develop solution
Create model/prototype
Share with a user/expert
Use feedback to improve solution

Due Date:

Weeks 11-12

Name(s): Student
1 and 2

Tasks:
Select
skit/method of
communication as
a team
Write Script
Practice as a team

Due Date:

IDENTIFY

Mission Model Inspiration	Name:

Instructions: Use this template to assist in better understanding the mission models and how they might provide inspiration for a project topic. For each model, complete the table. The goal is to understand what the model represents, what it represents in the real world, if there are weaknesses in the design and how your team might improve the process.

Model	What does it represent	What are problems associated with it?	How could you improve this process?
Example:	Turbine - energy generated via wind	Need to have wind. Turbines kill animals (article)	Can we create models to accurately predict where and when wind will be present? Article

Problem Identification	**Name:**

Instructions:
1. Read the challenge and project description carefully
2. What problems do you know about related to the topic?
3. What experts can you talk to? What field trips can you go on?
4. Share your ideas with the rest of your team members

Project Ideas/Problems

Field Trips (Virtual or In Person)

Experts

Research Notes

Name:

Source (Author, Title, Link)

List the facts you discovered from this source

Did you identify any problems related to our team's research topic?

Did you discover any solutions related to the team's research topic?

Interview Notes

Name:

Who are we meeting?

What is his/her expertise?

Questions you want to ask the expert?

Existing Solutions	Name:

Instructions:

1. As a team, find as many similar products/solutions and compare them to your team's solution
2. The goal is to gather enough information to be able to explain how the team's solution is innovative (different or an improvement on something that exists). You should be able to fill in the bottom-most row after you have come up with a solution.

Product	Costs	How can it be implemented	Pros	Cons	Other
Our Solution					

DESIGN/CREATE

Solution Identification	Name:

Instructions:

1. Once your team has picked a problem, think about how to solve this problem
2. You have looked at what solutions exist already. How will your solution be different?
3. How will you test out your idea?
4. Share your ideas with the rest of the team and then work together to pick a solution.

What is the problem we are solving?

Can we solve the problem in a new or better way?

How can we test the idea or demonstrate its impact? What kind of "model or prototype" can we make to show the solution?

Model/Prototype	**Name:**

Instructions:

1. What kind of model or prototype can you make to share or test the solution your team has designed?
2. Brainstorm below

SHARE

Sharing	**Name:**

Shared with (expert)

Feedback	**Improvements Made**

Sharing	**Name:**

Shared with (user)

Feedback	**Improvements Made**

COMMUNICATE

Presentation	Name:

Instructions:
1. As you start to think about how you will present your project to judges, begin with the Innovation Project Rubrics
2. In your 5 min presentation, you need to give the judges information requested in the rubric.
3. Think about how you demonstrate to the judges that you have reached the "accomplished" level.

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Presentation	**Name:**

STEP 1: Pick a Style of Presentation: What type of presentation should we give?

Shark Tank? Talk Show?

STEP 2: Write the script:

Student 1:

Student 2:

Student 3:

Impact	**Name:**

How can we demonstrate the impact that our solution will have?

Survey results? Tests? Expert

| **Judging Preparation** | **Name:** |

Judges will ask you questions to help them fill the rubric. Here are some practice questions. Can you think of others?

Why did you decide on this topic?

Whom did you share your solution with?

Did you consult any experts?

Did you get any feedback and improve your solution?

How did you split the work and plan your season?