INNOVATION PROJECT

ACADIA ROBOTICS

FIRST LEGO LEAGUE CHALLENGE

Judging Session Flowchart

Teams should demonstrate Core Values in everything they do. The judges are excited to see how they show , **teamwork, discovery, inclusion, innovation, impact,** and **fun** as they present their Innovation Project and Robot Design work.

This is the team's time to shine, so try to settle their nerves and encourage them. Please make sure they don't leave anything in the judging room, including any documentation, when they leave.

FIRST® Core Values

Teamwork — We are stronger when we work together.

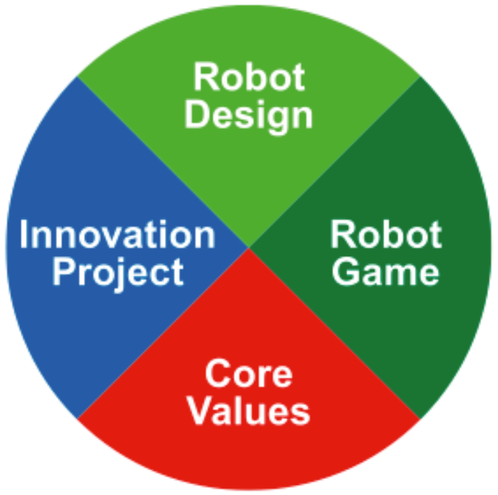
Inclusion — We respect each other and embrace our differences.

Impact — We apply what we learn to improve our world.

Fun — We enjoy and celebrate what we do!

Discovery — We explore new skills and ideas.

Innovation — We use creativity and persistence to solve problems.



Each of these four equally weighted parts of *FIRST*® LEGO® League Challenge accounts for 25% of your total performance at your event.

Core Values should be demonstrated at the event, where you will showcase your team's amazing work on robot design and the innovation project. These three parts will be evaluated during the judging session. Your robot's performance will be evaluated during the robot game.

OVERVIEW

Innovation Project

How we share our own hobbies and interests with others can be an expression of our creative selves. People who work in the arts can teach us a lot about how to communicate, how to engage, and how to entertain an audience of any size. What can you learn from museums, theaters, and films that can help you share what you love to do?

Innovation Project Resources

START

How can you use technology and the arts to help engage others or increase participation in what you love to do?

INNOVATION PROJECT

Your team will prepare a live, engaging presentation to explain the work you have done on your innovation project.

Your team will:

- **Identify** and research a problem to solve.
- **Design** a new solution or improve an existing one based on your selected idea, brainstorming, and plan.
- **Create** a model, drawing, or prototype.
- **Iterate** on your solution by sharing it with others and collecting feedback.
- **Communicate** your solution's impact.

FIRST LEGO LEAGUE CHALLENGE

Innovation Project

Team #	Team Name	Judging Room

Instructions
Teams should communicate to the judges their achievement in each of the following criteria.
This rubric should be filled out during the Innovation Project presentation.

Judges are required to tick one box on each separate line to indicate the level the team has achieved. If the team exceeds, please make a short comment in the Exceeds box.

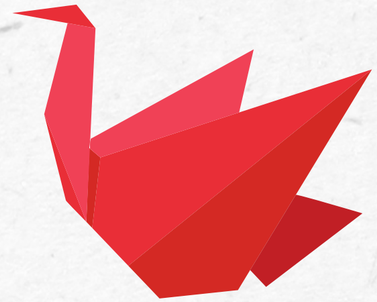
BEGINNING 1	DEVELOPING 2	ACCOMPLISHED 3	EXCEEDS 4 *How has the team exceeded?*
IDENTIFY – Team had a clearly defined problem that was well researched.			
☐ Problem not clearly defined	☐ Partially clear definition of the problem	☐ Clear definition of the problem	☐
☐ Minimal research	☐ Partial research 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	☐

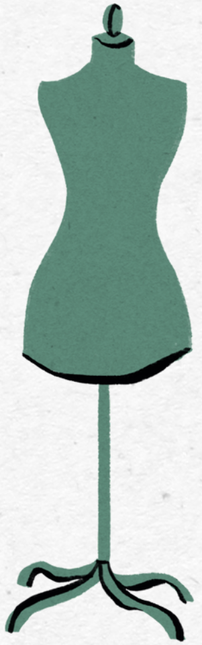
Feedback Comments

Great Job:

Think About:

IDENTIFY





Identify a specific problem related to sharing your hobbies or interests.

Performing. Reading. Collecting. Skateboarding. Your hobbies and interests might be different from your friends'. Can you teach people about your hobby in a way that makes it fun and engaging?

IDENTIFY

→ Research your problem and solution ideas.

Explore the many ways people share their interests with others. Using the arts as a guide, think about creative ways you could teach people about what you love to do. Can you find a fun way to get more people interested in your hobby? How can you use technology to make learning about your interests more immersive? Are there any experts you could interview?

IDENTIFY

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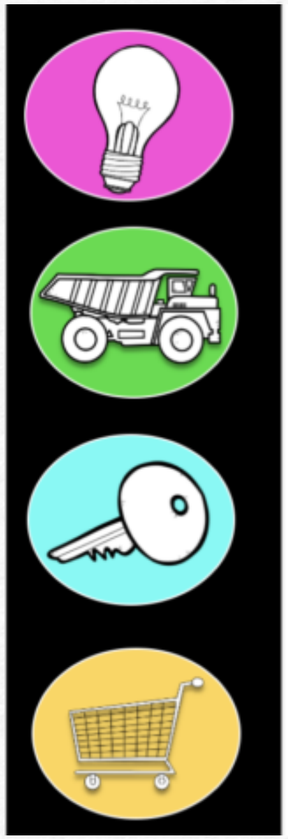
IDENTIFY
research tips

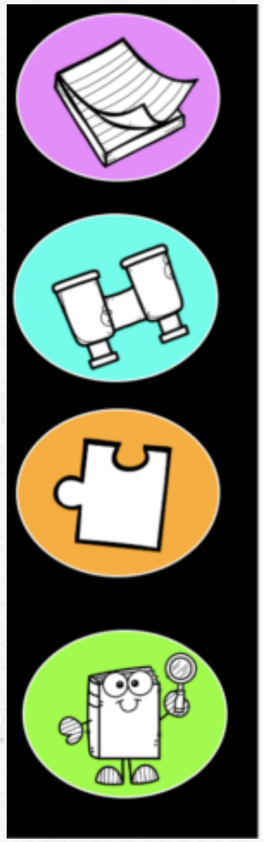


The Big Ideas
What ideas do you have about your topic and how will you present it?

Brain Dump
What do you THINK you know about your topic?

Keywords
What keywords will you need to use to find research on your topic?

Shopping Cart
What books, articles, websites, people and videos do you think you will need for your research?



Note-Taking
Take notes on what you are reading. Be sure to put quote around words you copy exactly.

Citations
Cite the resources you use before you start taking notes on that resource.

Organizing & Publishing
How will you organize the information you have gathered and put it in a way that others can read and understand?

Evaluation
Did your research meet your personal or required goals?

Learn More at jessicazannini.com

Primary vs. Secondary vs. Tertiary Sources

Primary Sources
Immediate, first-hand accounts of the topic

- Speeches
- Letters
- Original texts of documents
- Interviews

Secondary Sources
Sources created using primary sources

- Books
- Newspaper articles
- Documentaries

Tertiary Sources
Sources created off secondary sources

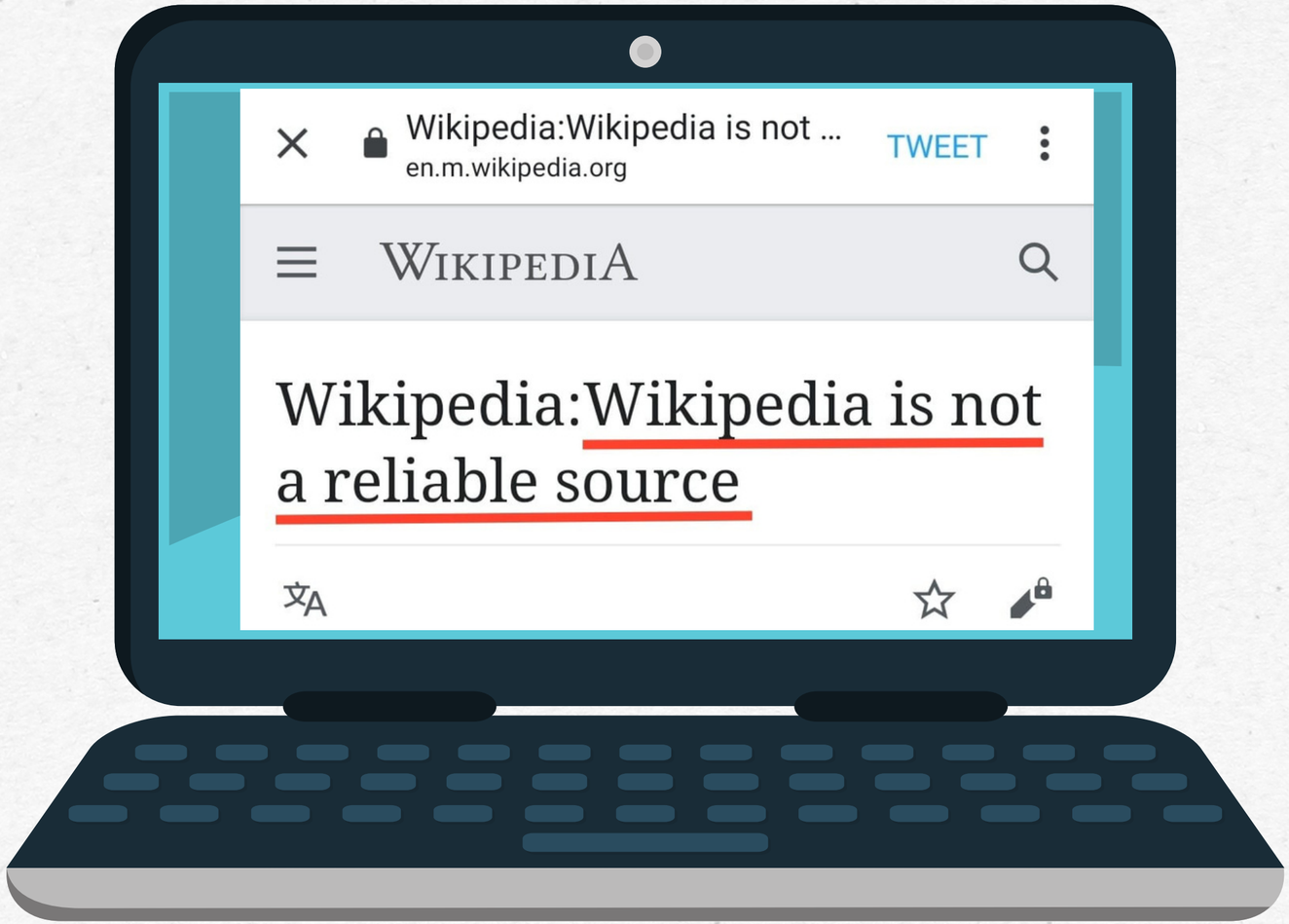
- Book review

IDENTIFY research tips

Credible Source checklist

To determine if a source is credible, use this checklist!

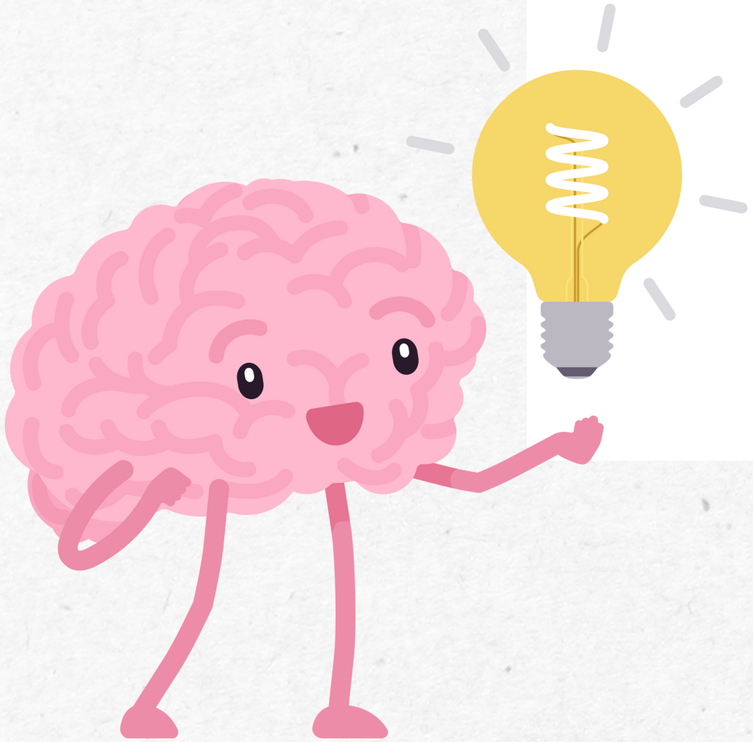
1) Is the author of the source an expert?
2) Is the information up to date?
3) Is the purpose of the source to inform and not to sell?
4) Are there many facts and details rather than opinions?
5) Does the domain end with one of the following:
   - .edu
   - .gov
   - .org



DESIGN & CREATE

Design and create a solution that helps people learn about your passions!

Use your research and explorations to either improve an existing way your hobby is shared or design a new innovative way to share! Can you think of any technology that could be used in a new or creative way? Make a drawing, model, or prototype of your solution.



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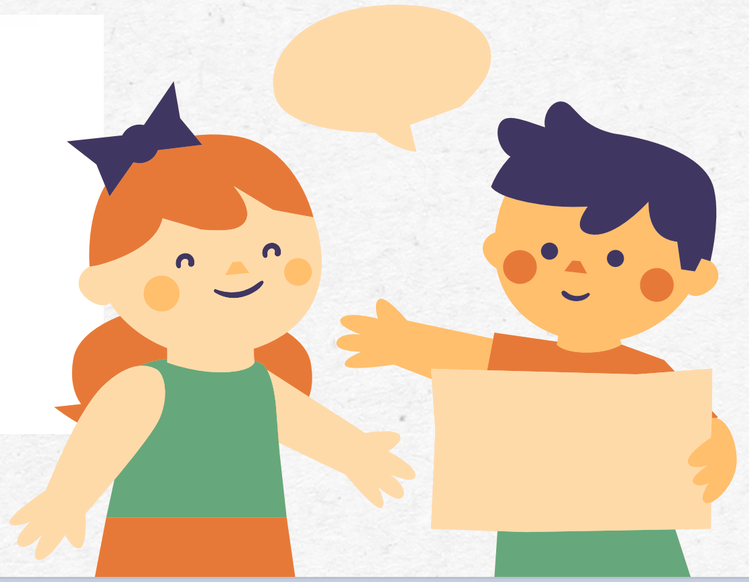
ITERATE

→ Share your ideas, collect feedback, and iterate on your solution.

The more you iterate and develop your ideas, the more you will learn. What impact will your solution have on your audience?



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COMMUNICATE

→ Communicate your solution with a live presentation at an event.

Prepare a creative and effective presentation that clearly explains your innovation project solution and its impact on others. Make sure your whole team is involved in sharing your progress.

COMMUNICATE

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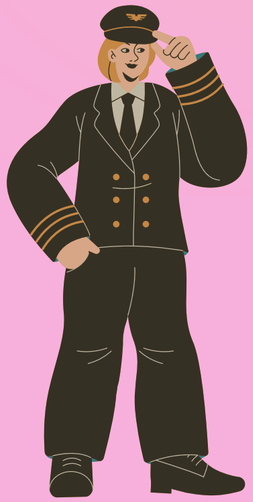
PROJECT RESOURCES

Team Blast Archives	*weekly newsletters for teams, provides challenge updates*
Innovation Project Update, FIRST Blog	*description of emphasis on process*
Innovation Resources	*past seasons' advise from professionals in innovation and businesss*
Kahoot!	*arts trivia*

IDENTIFY

Example:



Hobby: Reading

Share with: Veterans

Problem: Vision Impairments

Research: PBS.org

DESIGN

Example:

Existing sharing method: having sighted people read books aloud makes the content accessible to people who cannot see words on a page.

How technology can improve: Phonographs used for music could also be used to play recordings of people reading aloud! This makes the reading experience independent.

CREATE

Example:

ITERATE

Example:

ITERATE

Example:

Shared with User and Professional: Solution could be more portable, and could utilize other sharing methods.

Improvements to Solution: Audiobooks can be recorded on cassettes!

Braille is effective, but isn’t accessible to people who have are new to reading braille. Our solution can be used to follow along with braille books!

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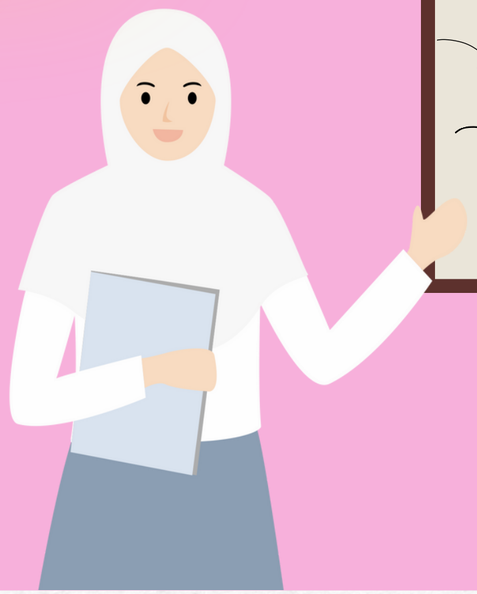
Example: