

The Project



In the FLL WORLD CLASSSM Project, your team will:

- Choose a topic that you are passionate about or always wanted to learn.
- Create an innovative solution that improves the learning experience.
- Share your solution with others.

Think About It

You have probably learned so many things in your life that it is hard to count them. You started learning as soon as you were born. You learned to walk, tie your shoes, and how to read this Challenge. You might have learned to dance, paint, or play an instrument. You might even have learned how to kick a soccer ball at the perfect angle to score a goal.

To have fun in many core subjects — like history, science, art, and math — you need to develop specific skills. In fact, skills are your tools to learn at any age. They might include:

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|---------------------|---|
| ■ Critical thinking | ■ Communication |
| ■ Teamwork | ■ Information literacy (knowing how to find and use the information you need) |
| ■ Creativity | ■ Understanding technology |
| ■ Problem solving | |

There is so much to learn, but people do not all learn the same way. Just like there is more than one way to build your robot, there is more than one way to learn most things. We call these different ways of learning “learning styles.” Most people learn through some combination of watching, listening, reading, writing, moving, and even playing. Do you have a favorite way to learn new knowledge or skills?

No matter what learning style you use most, there are many surprising tricks that might help a person learn. For example:

- Some video games help you understand how the three-dimensional world fits together. This skill is called “spatial reasoning.” It could help you engineer and innovate.
- Singing the rules of a new game might help you remember them more easily than reading them.
- Building with LEGO bricks could help you learn math and engineering concepts. (You probably knew that already – you’re in FLL!)

Some learning tools or techniques might make learning more exciting, while others help you remember the information for a longer time. **Your Project mission this season is to find a better or more innovative way to help someone learn.**

Looking for a fun way to start thinking about the FLL WORLD CLASSSM Project?
Check out the [Communicate It! activity](#) on www.firstlegoleague.org.

Identify your FLL WORLD CLASS Question

First, choose a topic and find out how people learn about it today. Researchers, teachers, psychologists, and others are always making new discoveries about how we learn. Like a professional researcher, you will write a “research question” and find your own answer. We will call this your FLL WORLD CLASSSM Question

To get started, think about all the topics you have learned about in the last day, week, or month. Make a list. You might have learned something in one of these places, but include topics you learned in other places too:

- Classroom
- Library
- Playground or park
- Internet
- Home
- Activity center like a band room, art studio, or karate school
- Museum
- Natural area like a forest, prairie, or desert

Look at each team member’s list. What did you learn and how did you learn it? Did you have any difficulties learning any particular topic? Did you use any tools or objects to help you learn each one?

AS A TEAM – Select one topic you are passionate about and use it to write down your FLL WORLD CLASS Question. You could choose a topic from your own list or something else that interests your team. For the FLL WORLD CLASS Project, a topic may be very broad (ex: science) or very specific (ex: the different parts of a cell).

Write your FLL WORLD CLASS Question using this format: “How could we improve the way that someone learns [your team’s topic]?”

Then research all the ways people learn about this topic today. You might use books, interviews, the internet, radio, TV or lots of other resources to answer questions like:

- How do people usually find out about your topic for the first time?
- What tools or technology do students usually use to learn about it?
- Why is this topic important and who is it important to?
- Does the location or method matter when learning about this topic?

This might be a great time to interview a professional. The professional could be someone who teaches the topic you selected or works with it every day. How did they learn about your topic? Why are they passionate about it? Did they like the topic when they first learned about it? What are the drawbacks to the way people learn about this topic today?

AS A TEAM – After your brainstorming and research, you should have a good idea of the current answers to your team’s FLL WORLD CLASS Question. Discuss whether you need any further information before you begin designing your own solution.


Create an Innovative Solution

Now your challenge is to design an innovative solution to your FLL WORLD CLASS Question – a solution that adds value to society by improving something that already exists, using something that exists in a new way, or inventing something totally new. Your solution might improve the learning experience for someone on your team or for someone else.

Think about:

- How can your solution make learning easier or more fun?
- Can it help you learn something yourself? Or help you teach what you know to someone else?
- What could be done better? What could be done in a new way?
- What new tools or processes would help someone remember the information for a longer time?

Optional: You can find a chart on www.firstlegoleague.org to help you organize your list.



AS A TEAM – Think about it! Brainstorm! Use your problem-solving skills to think about all the possible solutions. Discuss all your ideas. One team member's “silly idea” just might inspire the perfect innovative solution.

A great solution might take all the imagination and ingenuity your team can muster. Or, it might seem so obvious that you wonder why we don't learn that way today.

Using your research, think about how someone could make your solution a reality.

- Is your idea different in some way from all the other solutions to learn about this topic?
- What would your solution cost?
- Do you need any special technology to make your solution?
- Can anyone use your solution or only some people?

Remember, your solution could improve something that already exists, use something that exists in a new way, or invent something totally new.

Share with Others

Once you have a design or plan for your solution, share it!

AS A TEAM – Think about who your solution might help. How can you let them know? Can you present your research and solution to people who learn or teach? Can you share with a professional or someone who helped you learn about your topic? Or other students in your school? Can you think of any other groups of people who might be interested in your idea?

Consider sharing with someone who could provide feedback about your idea. Getting input and improving are part of the design process for any engineer. Don't be afraid to revise your idea if you receive some helpful feedback.

When you present, use the talents of your team members. Find a creative way to explain your **FLL WORLD CLASS Question** and solution. Could you perform a skit? Create a website? Make a comic book? Rap? Write a poem, song, or story? Your sharing can be simple or elaborate, serious or designed to make people laugh while they learn.

And remember, the most important thing is to have fun!

Present Your Solution at a Tournament

Finally, prepare a presentation to share your work with the judges at a tournament. Your presentation can include posters, slideshows, models, multimedia clips, your research materials, and more. Be creative, but also make sure you cover all the essential information.

To be eligible for Project Awards and advancement, your team must:

1. Identify your team's **FLL WORLD CLASS Question**.
2. Explain your team's innovative solution.
3. Describe how your team shared your findings with others.
4. Meet the presentation requirements:
 - Give your presentation live; you may use media equipment (if available) but only to enhance the live presentation.
 - Include all team members; each team member must participate in the Project judging session in some way.
 - Set up and complete your presentation in 5 minutes or less with no adult help.

You can learn more about how your team's presentation will be judged by reviewing the Rubrics located at <http://www.firstlegoleague.org/event/judging>.

More Project Resources (Optional)

- Check the Project Updates often: <http://www.firstlegoleague.org/challenge/projectupdates>. Here FLL staff will clarify common Project questions. Postings contain official information that will be in effect at tournaments.
- View the 2014 Challenge page: <http://www.firstlegoleague.org/challenge/2014fllworldclass>. Download the Topic Guide for a glossary of education words, a list of websites and books to start your research, and tips on how to approach professionals.
- The *FIRST*® LEGO® League Coaches' Handbook contains more information about the Challenge, tournaments, and judging: <http://www.firstlegoleague.org/challenge/teamresources>.

Still have questions about the FLL Project? Send an email to fllprojects@usfirst.org for Project support.



Learning is part of life. You do it every day.

**Now YOU have the power to say
how you think people should learn something new.**

Whether your solution helps you, someone you know, or someone you have never met,
helping someone learn can have an impact for the rest of that person's life.

Help FLL make learning a true WORLD CLASS experience!

