Innovation Project Pre-Season Guide

1

Released Video and Images

Take a look at the <u>Teaser Video</u> and <u>Images</u> (<u>Set 1</u>, <u>Set 2</u>) for the SUBMERGED season.

What do you think the theme is? What objects or places do you see in the video/images?

Identify what you think each mission model <u>might</u> represent in the real world and learn more about each of them.

Example: One model looks like it might be a shark. What do you know about sharks? What are interesting problems sharks face?









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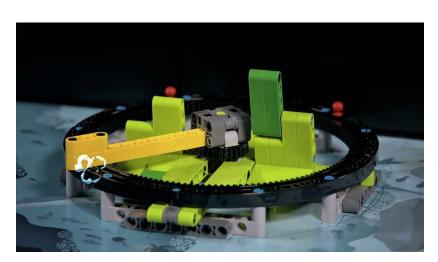








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2

Keywords in Released Text

What keywords do you see in the released text on the *FIRST* website or Facebook/Twitter posts? These words are a great place to start your research process. Even if you do not know the exact Innovation Project requirements, these keywords give you insight about the topics you should know about this season. There is no guarantee as to what will/will not be within scope for the new season. However, whenever you or your students read/see something interesting this summer that might be loosely connected to the theme they can explore it. Learning to spot interesting problems in the world and reviewing current solutions is what the Innovation Project is all about.

#SUBMERGED will get FIRST LEGO League teams using their creative and critical thinking skills as they explore the layers of the ocean and bring new ideas into the future.

During the 2024-2025 FIRST season, FIRST® DIVESM presented by Qualcomm, teams will use their STEM and collaboration skills to explore life beneath the surface of the ocean. Along the way, we'll uncover the potential in each of us to strengthen our community and innovate for a better world with healthy oceans. Join us as we explore the future.

In the SUBMERGED challenge, launching August 6, 2024, FIRST LEGO League teams will use creative thinking and LEGO® technology to explore the layers of the ocean and bring their learnings and ideas to the surface as they "sea" into the future.

"JOIN OUR OCEAN-INSPIRED ROBOTICS SEASON".

More than 80% of the ocean is still waiting to be explored. How will you use your STEM skills to discover the unknown and improve life on land and underwater? Explore the future with #FIRSTDIVE presented by @Qualcomm.

What keywords do you see?			



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3

How to do Research

Most students in *FIRST* LEGO League Challenge have not been taught how to do research. Discussing how to research is an important first step.

You can use the keywords from Step 2 to begin a search. Discuss what makes a source more reliable than another. Learn how to take notes and how to cite sources. In FLL, citations do not have to follow any particular format. Keeping track of the author and website/links is a great place for a young student to start. Your coach could also generate a list of safe and reliable sources ahead of time and have students select from that subset. Finally, discuss how to communicate your research to others (each other or judges). For example, some information is best presented in a comparison table. A pie chart might be useful for other information.

Develop keywords/search terms

Searching is Strategic

Select reliable sources

<u>Credibility is Contextual</u> <u>Format Matters</u>

Take Notes

<u>Taking Notes</u> <u>Quote/Paraphrase/Summarize</u>

Cite Your Sources

Basics of Citing

Share Information/Results





Popular Ocean-Related Topics in the News

Vessel Strikes

Ocean Trash

Death of Coral Reefs

Overfishing

Whales and Climate Change

Threats to the Ocean



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4

Look out for Problems to Solve

As you do research, did you find any interesting problems? What challenges exist that might be related to the ocean? Can you think of ways to make something cleaner, safer, easier, faster, stronger, or cheaper? You do not have to invent a brand new product necessarily. Improvements are innovations.

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Fieldtrip and/or Expert Interview

Now that you have done some basic research on the topic of oceans you probably have more questions or some ideas for problems. Think of where can you visit to learn more? If you cannot travel, there are many virtual field trips related to the ocean. Also think about what type of experts you can talk to.

Before you go on an interview, learn a bit about what your expert does and the company they work for. Make a list of questions.

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Design a Survey

It is common among Challenge teams to do a survey to help select a topic or refine a solution. Learning how to create surveys can be useful. How to Create Surveys
Google Form

6

Other Fun Ways to Learn

There are many fun, hands-on ways to make the topic of oceans interesting to learn and experience. For example, look for simple science experiments and games.

Games
More Games
Coloring Pages
Science Fun for Everyone
Science Buddies
NOAA

Research Notes	Name:		
Source (Author, Title, Page Number, Link)			
Cure was viza Davanh vasa ay Quata			
Summarize, Paraphrase or Quote			
Did you identify any interesting problems?			

Interview Notes	Name:			
Who are we meeting?		What is his/her expertise?		
Questions you want to ask the expert				