

1

Released Video and Images

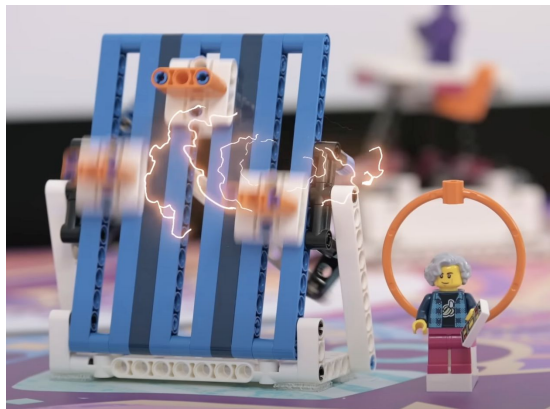
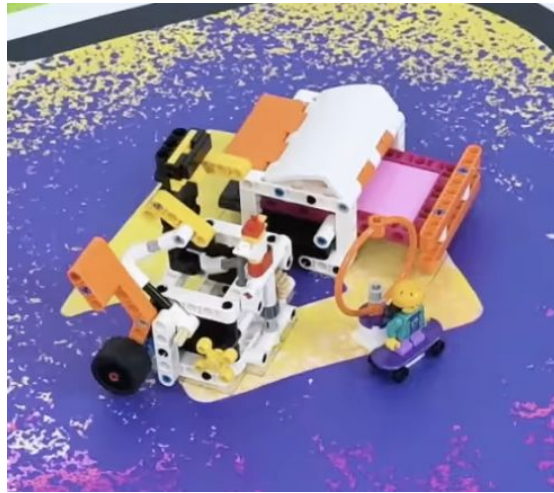
Take a look at the [Teaser Video](#) and Images ([Set 1](#), [Set 2](#)) for the MASTERPIECE season.

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 might represent in the real world and learn more about each of them. e.g. What objects would be essential on a concert stage?



___e.g. Concert Stage___



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.

“...the new season will focus on imagining and innovating **new ways to create and communicate art** across the globe through”

“...join our **arts-inspired robotics** season”

“Lights, camera, STEAM! Science, technology, engineering, arts, and math (STEAM) inspire big ideas, bold action – and creativity. Our skills make it **possible to create art and experiences that bring us together, entertain us, and move us.**”

“...we’re shining a spotlight on the **role STEM plays in the arts**”

Questions to consider:

What is Art?

How can STEM play a role in arts?

3

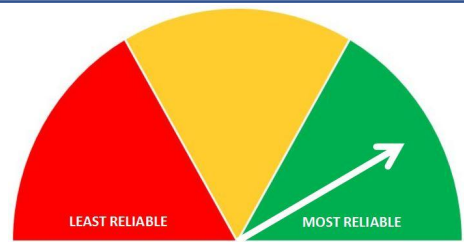
How to do Research

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

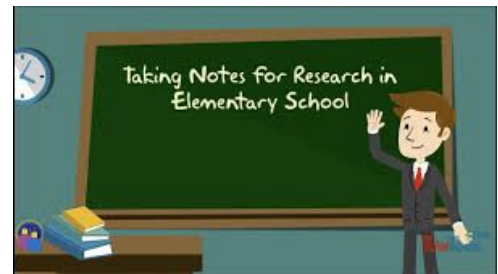
[Searching is Strategic](#)



Select reliable sources

[Credibility is Contextual](#)

[Format Matters](#)



Take Notes

[Taking Notes](#)

[Quote/Paraphrase/Summarize](#)

Cite Your Sources

[Basics of Citing](#)

Sample Arts + STEM Topics

[Identifying artwork](#)

[Preserving/restoring art](#)

[Automating stage lights](#)

[Motion capture](#)

[Virtual Reality/Augmented Reality](#)

[Computer-generated animation](#)

[Science in Music](#)

Share Information/Results

4

Look out for Problems to Solve

As you do research, did you find any interesting problems? What are challenges that artists, producers, directors, actors, musicians, etc. face? Can you make some part of the process easier, faster, stronger, or cheaper? You do not have to invent a brand new product necessarily. Improvements are innovations.

5

Fieldtrip and/or Expert Interview

Now that you have done some basic research on the topic of the Arts, 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 Arts. 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.

[Virtual Art Field trips](#)

6

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 Art interesting to learn and experience. For example, look for simple science experiments and games.

[Art Selfie](#)
[Interactive Game](#)

Research Notes

Name:

Source (Author, Title, Page Number, Link)

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