Science Literacy Week

What to expect during the 2021-2022 FLL Season

Timeline

September
-Sept 22nd Science Literacy Week
-Sept 30th Deadline for FLL team registration

October
-End of Oct (DBT) Acadia Robotics FLL Game workshop

November
-Mid/end Nov NSCC qualifiers

December
- Dec 31st Team release forms

Febuary
-Robotics Programming Competition (Maritime Championships held at Acadia)
-Feb 19th FLL championship
-Feb 21st Storm day

Science Literacy Week

Cargo Connect

First Lego League - Components


CARGO CONNECT

Cargo-Connect

- In the 2021-2022 season, teams will explore the future of transportation.
  - From the shipment of packages in rural and urban areas
  - Disasters relief delivery
  - high-tech air transit

- Teams should re-imagine faster, more reliable, inclusive, and sustainable transport innovations that better connect the grow communities and economies around the world

- *Related to United Nations Sustainable Development Goal #9*

BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

https://www.un.org/sustainabledevelopment/infrastructure-industrialization/

https://www.infrastructure.gc.ca/index-eng.html

https://infrastructurereportcard.org/

Each of these links have further links you can use; In addition, *FIRST* is moderating two panels which I encourage coaches to register for:

1.) Amazon Transportation 101 – September 29, 2021, 3 pm ET
2.) Transportation for Good – October 13, 2021, 6pm ET

My method on how to create a project

- What is an issue, and is the issue related with FLL theme
- What are the current statistics, the solutions should aim to improve these stats.
- What is our solution? Can use already recommended solutions. Does not have to be brand new!
- Issue with proposed solution?
- How does your team solve the issue?
- Benefits and practical?

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EXAMPLE 1

- How to make Cargo-ship transport more environmentally friendly and sustainable?
  - Currently, cargo ships use heavy fuel oil and contribute to 3% of global greenhouse gasses (projected to be 20% by 2050). They can also cause oil leaks which lead to environmental damages.
  - Instead of diesel as fuel, what about wind power?
    - Issue with wind power?
    - How would your team tackle these issues?
    - Why would this be of benefit?
    - Is it practical?

EXAMPLE 2

- How can we transport and deliver packages to rural communities that are difficult to reach by traditional methods?
  - About 300 million rural dwellers lack good access to roads in 25 countries
  - Drones can be used to transport goods to rural communities with poor access to roads
    - What are issue with drones?
    - How would your team solve these issues?
    - What is the benefit?
    - Is it practical?

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EXAMPLE 3

- COVID-19 pandemic showed us how easy disease can spread via air-travel. As a result, governments put restrictions on air-travel. How do we make air-travel less susceptible to the spread of disease?
  - There was a 60% decline in air-travel in 2020 (4.5 billion in 2019 to 1.8 billion in 2020)
  - Cleaning robots can be used to make planes and airports cleaner; thus, helps stop the spread of disease.
    - What are some issue with cleaning robots?
    - How would your team solve this issue?
    - What are the benefits?
    - Is it practical?

Remember

- Getting feedback on your solution is important!
  - Ask the community (survey)
  - Ask friends and family
  - Ask teachers
  - Ask an expert in the field * Important*
    - Family member
    - Professor in university – Civil Engineer
    - Friend ….
  - Etc
- Getting feedback from the community helps improve your solution and creates a stronger, more robust innovation project.