FIRST® LEGO® League Explore Remote Professional Development

Remote Course Description

The *FIRST*® LEGO® League Explore professional development course is designed for new and inexperienced teachers, facilitators, coaches, and mentors to enhance their overall *FIRST*® program knowledge, giving participants a strong understanding of how to implement all aspects of the program and how to achieve STEM learning objectives. In Explore, teams of students in grades 2-4 focus on the fundamentals of engineering as they investigate real-world problems, learn to design and code, and create innovative solutions made with LEGO® bricks and powered by LEGO® Education SPIKE™ Essential set. Participants in this course will walk in the footsteps of the students as they engage in the Explore program, gaining technical, engineering, and coding skills through hands-on experience. The course is customized to meet the unique needs of participants in a remote setting while modeling how to inspire their students to become confident and creative innovators and collaborate.

Remote Course Requirements

- Computer with Internet Access (Required second screen or device to allow programming and video communication at the same time)
- *FIRST* LEGO League Explore Set
- *Team Meeting Guide* – can be accessed digitally
- *Engineering Notebook* – can be accessed digitally
- Unbuilt LEGO Education SPIKE Essential Set
- LEGO® Education software downloaded prior to the first session.
  - https://education.lego.com/en-us/downloads - *Be sure to download, install, and restart your computer.*
  - **OR** web-based SPIKE Essential app: https://spike.legoeducation.com *(use a Chrome browser)*

*You can use a current or prior season Explore Set, Team Meeting Guide, and Engineering Notebooks.

**Explore materials are included with a Class Pack or Individual Team Registration and can be purchased through the FIRST Dashboard, as well as the LEGO SPIKE Essential.

Remote Course Objectives

By the end of this course, you will:

- Participate in the *FIRST* experience from a student's point of view.
- Identify the essential components of the *FIRST* LEGO League Explore program and be familiar with how to use the Explore kit, LEGO Education SPIKE Essential materials, and software.
- Build a robot and learn introductory icon-based programming concepts using the LEGO Education SPIKE App.
- Be able to foster computational thinking, collaboration, coding, and problem-solving skills in students.
- Know how to engage students in explore, build, and challenge activities.
- Collaborate with other participants and share best practices while building a team model.
- Create unique solutions made with LEGO bricks and powered by a LEGO Education robot.
- Create and present a team project.
- Utilize, model, and reinforce the *FIRST* Core Values!