

StellarXplorers V Practice Round 1 (PR1) Preparation Checklist

The primary method to contact the StellarXplorers staff is using the email stellarxplorers@afa.org. Please include your Team Number on the Subject Line of all emails.

This checklist will help you get prepared for the PR1 Round and especially for new teams, this checklist will provide a good starting point.

- **Reviewed the STLX V Starting Checklist** and complete the following tasks:
 - Download STK 11.4
 - Obtain Educational License
 - Read Rules Book
 - Register student competitors (max of 6 per team): Changes can be made prior to November 7

- **Train and Practice on STK 11:** Practice Round 1 is about selecting the best orbit. You need to know how to change the Classical Orbital Elements and then use Access Analysis to determine the time the satellite (or sensor) can view a location(s) on the ground.
 - **Basic Skills You Tube Video on StellarXplorers Website:** View it at <https://www.youtube.com/watch?v=uY07sQwgAMo&t=1s>. Details provided in Starting Checklist.
 - **Understanding Orbits using STK:** In the STK Training folder is a .pdf file called Understanding Orbits Using STK. The .pdf defines the COEs and includes a step-by-step exercise for students to change individual COEs and discover how ground tracks change. For new teams, I would recommend starting by just using circular orbits and only changing Orbit Altitude and Inclination.

- **PR1 Practice Academic Quiz:** Under the Competition Tab of the Website is a folder called Textbook Info and Quizzes. In that folder is a .pdf file called Preparing for StellarXplorers Quizzes. It explains how students can prepare for the Quiz.
 - **Understanding Space textbook access**
 - Team Directors should already have access. If not, go to Starting Checklist and find out how to get a free copy
 - Every Team can receive one additional access, but the team needs to register their students (they can be changed before November 7) **AND** request this access at stellarxplorers@afa.org.
 - **PR1 Quiz Study Guide:** Students should find the answers to the PR1 Quiz Study Guide questions in the Understanding Space textbook before the competition period begins, or at least before taking the Quiz.
 - **ClassMarker Procedures:** Teams (not individuals) will take the Quiz using ClassMarker, a web-based testing service. Each team will receive a unique Log In and Password. When the team is ready to take the Quiz, go to <https://www.classmarker.com/> and sign in. Teams will have access to the Quiz through ClassMarker anytime during the Competition Period. Teams will have 30 minutes to complete the Quiz once it is opened.