



ONLINE CHALLENGES

LEARNING BEYOND THE COMPETITION FIELD



2026-2027 Build Instructions

From Complex to Crystal Clear

How many times have you built a kit or perhaps a piece of furniture and flipped and turned the build instructions to understand how to put it together? Jobs that create build or assembly instructions are primarily known as Assembly Instructions Writers or Technical Writers. These professionals translate complex engineering data into clear step-by-step guides. In this challenge, we ask you to take on technical writing to create build instructions for a mechanism that will be your team's contribution to the learning of our RECF robotics community.

Grade Levels	Programs	Submission Type
Middle School/15U High School/19U College	RECF Engage RECF Achieve RECF Inspire	1. Build Instructions Guide .pdf 2. Feedback & Revisions .pdf 3. Video Submission (public platform)

Prizes: Five finalists will be featured on the RECF.org website, and a winner will be chosen from among those teams. The 1st place winner at each grade level will receive an invitation to the 2027 RECF World Championship in St. Louis. The invitation is specific for the winning team and the winning team's program. The registration fee is the responsibility of the winning team.

2025-26 Build Instruction Guide - Judging Rubric

This rubric will be used by RECF Online Challenge judges to assess all eligible submissions after the submission deadline. Each criterion will be scored from 0 to 5 points. Finalists and winners will be recommended by volunteer judges based on their scores. *RECF staff will make the final determination of awardees at their sole discretion, with consideration given to volunteer judge recommendations and the minimum entry requirements.*

Criteria	Expert 4-5 Points	Proficient 2-3 Points	Emerging 0-1 Points
Build Instruction Guide	Instructions are exceptionally clear, comprehensive, and easy to follow. Every step is detailed and the guide is logically organized. Includes advanced techniques and insights that demonstrate a deep understanding of the mechanism.	Instructions are clear and mostly comprehensive, with minor areas needing more detail. The guide is logically organized, but some steps may lack precision. Includes practical tips, but they may be basic or common knowledge.	Instructions are basic and may be unclear or incomplete in several areas. The guide is somewhat organized but lacks coherence in some steps. Tips are minimal or absent, offering little additional value.
Diagrams and Visual Aids Bonus Points: (2) Link to an interactive or downloadable CAD file that shows the build process	Diagrams, CAD models, and photos are high quality, well-labeled, and effectively illustrate the assembly process. Visual aids are integrated seamlessly with the instructions, enhancing understanding.	Diagrams and photos are clear and helpful, but may lack some detail or labeling. Visual aids support the instructions but are not fully integrated.	Diagrams and photos are basic, unclear, or lacking detail. Visual aids may be poorly integrated, causing confusion or gaps in understanding.
Tips and Tricks	The build instruction guide includes innovative and highly useful tips that enhance the building process.	Provides useful tips that help with the building process, but they may be standard or well-known.	Tips are minimal, basic, or absent, offering little help beyond the instructions.
Feedback and Revisions Report	Report is clear and comprehensive. Includes the feedback from testing, and describes brainstorming & implemented solutions. Report is within the requirements.	Report covers feedback from testing, describes brainstorming & implemented solutions but lacks depth and details.	Report does not cover the process of testing, brainstorming, and implementing solutions.
Video Submission Bonus Points: (2) Video has subtitles	Video is highly engaging and includes all required components.	Video is engaging, but only includes some of the required components.	Video is basic, with limited explanations.