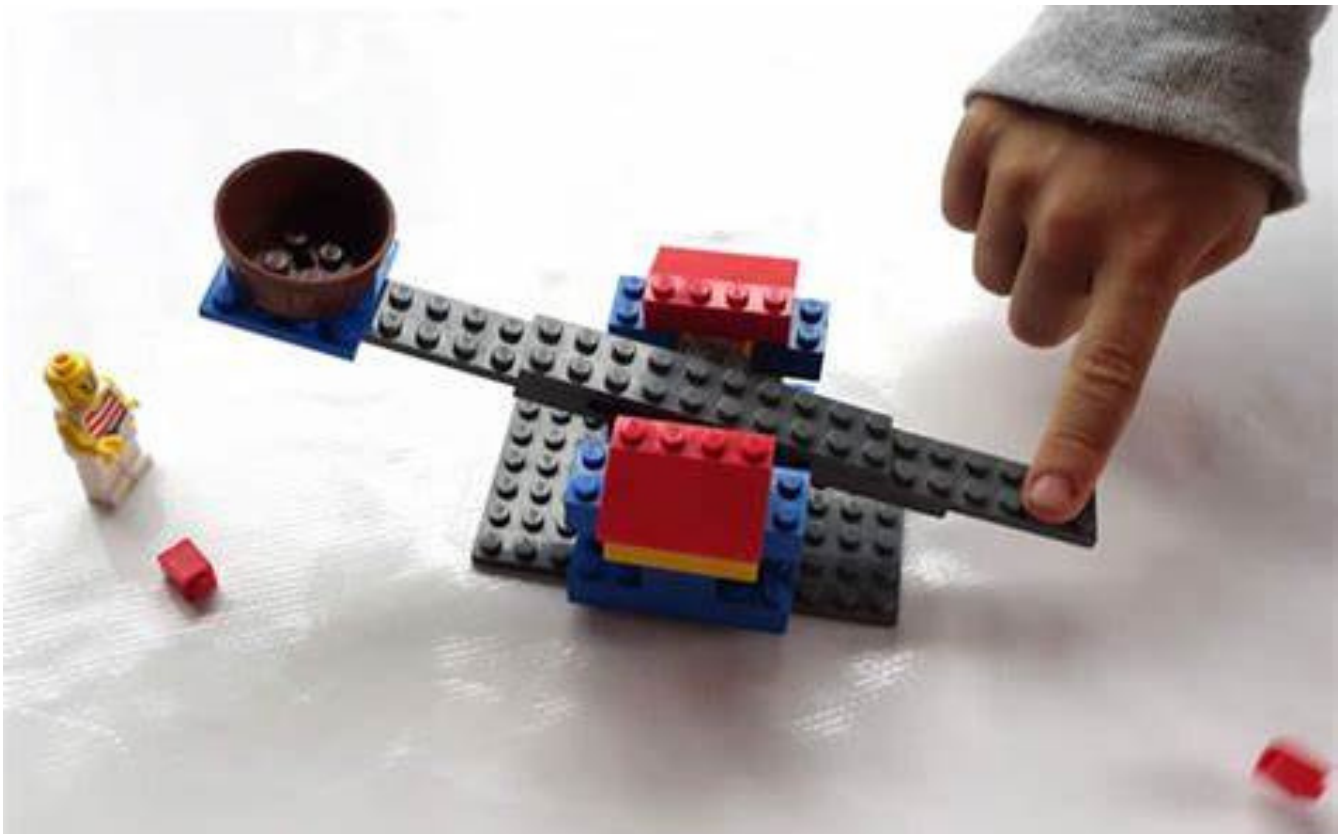
LEGO Team Challenge



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LEGO Team Challenge

The LEGO® Team Challenge STEAM Kit is a collaborative building experience designed to strengthen communication, teamwork, and task delegation through structured roles and step-by-step instruction. Each team of four students is assigned a role—Site Manager, Engineer, Assembler, and Parts Manager—and works together using a small LEGO brick set and instruction cards to complete a designated build. This kit fosters essential employability skills and introduces engineering concepts while building confidence through group problem-solving and hands-on learning.

Grade Level

6th - 12th

Group Size

4 students per group

Time Duration

20 - 40 minutes

Content of Kits

Components

- LEGO Team Challenge sets
  - Role description cards
  - Assorted LEGO
  - Instructional cards
  - Sorting tray

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Usage

Getting Started

1. **Introduce the Team Roles**
   a. **Site Manager** oversees teamwork and pacing
   b. **Engineer** reads and interprets the instruction cards
   c. **Parts Manager** finds and distributes pieces
   d. **Assembler** constructs the build according to the engineer's instructions

2. **Review the Instruction Cards -** Show an example of a step-by-step card so students understand the format and expectations before starting.

3. **Assign and Rotate Roles -** Assign students to roles before handing out materials. Encourage them to switch roles in future rounds to experience different challenges.

4. **Set Expectations for Collaboration -** Emphasize active listening, clear communication, and staying within assigned roles as keys to success.

5. **Start with a Short Challenge -** Choose a simple build for the first round to help teams get comfortable with the process before moving to more complex designs.

Storage

- Ensure LEGO pieces go back in the container they came in to maintain the completeness of each LEGO set.
- Have students break down the creations completely before storing the kit.

Troubleshooting

- **Students Confused About Roles -** Revisit role definitions or model a quick team interaction before the activity starts. Offer visual reference cards at each table.
- **Missing or Incorrect LEGO Pieces -** Keep a small bag of replacement bricks nearby. Encourage improvisation or role-based problem-solving when possible.
- **Team Disagreement or Stalled Progress -** Guide them back to their roles and ask prompting questions like, “What step are you on?” or “How is your Site Manager helping right now?”
- **Card Instructions Misread -** Coach the Engineer to slow down, point to each step, and confirm with the Assembler before building.

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Activity Guide

Core Activity: Team Build Relay

Objective:
Strengthen teamwork, communication, and structured problem-solving through collaborative building.

Activity:
Each team of four students is given a small container of LEGO bricks and a set of step-by-step instruction cards to complete a predetermined structure (e.g., a vehicle, tower, or tool). Every student has a defined role: the Engineer reads and describes the steps without showing the cards, the Parts Manager locates and hands over the correct pieces, the Assembler follows verbal instructions to build the model, and the Site Manager keeps the team organized and on task. Students must rely on clear communication and coordination to succeed—no one can do another's job. Once the build is complete, the team reflects on how well they worked together and rotates roles for a new challenge.

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Learning Extensions

STEAM Connections: Engineering

Learning Objectives:

- Understand and apply teamwork principles through structured collaboration.
- Follow multi-step instructions with precision and attention to detail.
- Communicate ideas clearly using role-specific language and cues.
- Develop spatial reasoning and visual interpretation through hands-on building.
- Reflect on group dynamics and identify strategies for effective teamwork.

Career Connections:

- **Construction Manager –** Oversees team roles, timelines, and project success through communication and coordination.
- **Mechanical Engineer –** Interprets technical drawings and guides physical assembly based on design specifications.
- **Production Team Leader –** Delegates tasks and ensures workflow among technicians and assemblers.
- **Product Designer –** Translates visual concepts into tangible builds with the support of collaborative teams.
- **STEM Educator –** Facilitates structured hands-on learning experiences that build technical and interpersonal skills.

Essential Employability Skills:

- Teamwork
- Communication
- Organization
- Adaptability
- Leadership

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Resources and Accessibility

Safety Guidelines

- **Watch for Tripping Hazards –** Promptly clean up any fallen bricks to prevent slips or trips.
- **Monitor Role Switching –** Allow time for transitions between roles to avoid confusion or frustration.
- **Use Calm Communication –** Encourage respectful tones and discourage yelling or interrupting during team interaction.

Accessibility

- **Offer Role Flexibility –** Allow students to choose or swap roles that suit their physical, visual, or communication strengths.
- **Use Enlarged Instruction Cards –** Provide large-print or high-contrast step cards for students with visual impairments.

Library Catalog

Library Resources

Feedback

QR to feedback survey