



OUT-OF-SCHOOL SETTINGS | GRADES 3-5

To the Rescue: Engineering Aid Drop Packages

Unit Overview

In this unit, India and Jacob; a fictional, world-traveling brother and sister duo; visit Thailand, and learn that monsoon rains can cause severe flooding that cuts people off from important supplies. Kids will help Jacob and India engineer “aid drop packages” that can be dropped from an aircraft, protect what’s inside, and are easy to find once they reach the ground.

Engineering Application/Unit Goals

Kids will use each step of the Engineering Design Process as they become packaging engineers and design an aid drop package. Packaging engineers use their knowledge of the seven main functions of packages to create commonly used technologies, such as envelopes and medicine bottles. In this unit, kids will focus on three functions of a package—protect, display, and communicate—as they design aid drop packages that protect the supplies, are easy to see, and communicate what’s inside.

Engineering Adventures engages learners in grades 3-5 in fun, creative problem solving. Eleven hands-on units are low-cost and flexible to meet the time and budget constraints of out-of-school settings, including afterschool and summer camp. Each unit centers on meaningful, open-ended problems with a global context. Learners find out more about the role engineering plays in their lives and the world around them as they’re introduced to real engineering challenges and asked to design solutions with an engineering design process. Throughout each unit, kids learn to collaborate, communicate, solve problems, and share their solutions with their peers.



Unit Map

Prep Adventure 1: What is Engineering?

Kids engineer a tower and are introduced to the Engineering Design Process as a problem-solving tool.

Prep Adventure 2: What is Technology?

Kids explore the idea that they, as engineers, can design and improve technology.

Adventure 1: Aid Drops

Kids are introduced to the problem they will try to solve: designing an aid drop package that can protect its contents. Kids test hard casings and soft paddings.

Adventure 2: Incoming!

Kids test ways to slow down the aid drop package as it falls by exploring parachutes, wings, and canopies.

Adventure 2a: Packing an Aid Package

Kids consider what items should be packed in their aid drop packages to help people in a flood zone.

Adventure 3: Making it Clear

Kids investigate how to ensure their package is easy to spot after it is dropped and how to communicate what is inside their package.

Adventure 4: Creating an Aid Drop Package

Kids use the steps of the Engineering Design Process to engineer their own aid drop packages that can protect, display, and communicate what's inside.

Adventure 5: Improving an Aid Drop Package

Kids continue to use the steps of the Engineering Design Process as they improve their aid drop package designs.

Adventure 6: Engineering Showcase

Kids present their aid drop designs and explain how they used the Engineering Design Process.

Ready to create a generation of problem solvers? Contact sales@mos.org