

Simple Machines Set

A Louisiana Elementary teacher uses LEGO® Education Simple Machines Sets to teach physical science concepts in her classroom.

About the School:

Zachary Elementary School

- Zachary, Louisiana
- Grades: 2nd and 3rd
- Title I School
- Number of students: 800
- School vision

Zachary Elementary School commits to fostering each child's full academic potential, building each child's self-esteem and empowering each child to be a responsible, respectful, and contributing citizen.

- **LEGO® Education classroom solution:**
Simple Machines Set



The Need

In a traditional learning environment, students are often asked to master concepts using a pencil-and-paper approach. All too often this methodology fails to really capture students' attention and engage them in a learning process resulting in a deeper comprehension of core content. Years of elementary teaching experience brought this subject to light for Breigh Rhodes, a third-grade teacher at Zachary Elementary in Zachary, Louisiana. Over time, Breigh has come to believe that students must be actively involved when they are learning. "I find that generally all elementary students learn more effectively when they are able to use manipulatives and hands-on applications to construct and shape their learning," shares Breigh. This is why when it was time to introduce the concept of simple machines to her classroom, Breigh looked to LEGO® Education.

The Solution

LEGO Education solutions provide Breigh with the manipulatives she needs to teach her students relevant subject matters, including physical science concepts such as simple machines. Using the LEGO Education Simple Machines Sets and Activity Pack, she is able to act as a facilitator, guiding the students to their own discoveries and understanding of

the concepts while enabling them to be in charge of their own learning. "The sets take LEGO elements, which children know and love, and capture their attention, keeping them engaged as they explore, investigate, and do student-centered activities using their models." The Activity Pack enhances the student learning through hands-on activities that are built around NSTA and NCTM standards.

Maximizing student learning time is the most important objective of the school day, and using hands-on manipulatives cannot take time away from that goal. Breigh feels the LEGO Education Simple Machines solution really hits the mark and explains, "I can't say enough about how valuable it is, from an educator's point of view, to have in one self-contained set such an array of materials that can be used for teaching so many different concepts related to simple machines." The set makes management, lesson planning, and acquiring resources very easy, giving Breigh more time to focus on the simple machines lesson itself. Because the activities are adaptable and flexible, she can pull straight from the Activity Pack or personalize the lessons to meet the unique needs of the students in her classroom.

Quotes:

“The LEGO sets help you know what kinds of things are simple machines, how simple machines work, and what simple machines do.”
Student

“The sets take LEGO elements, which children know and love, and capture their attention, keeping them engaged as they explore, investigate, and do student-centered activities using their models.”

**Breigh Rhodes, Teacher,
Zachary Elementary,
Zachary, LA**

The Outcome

For Breigh and her students, using the Simple Machines Set and Activity Pack has led to cross-curricular learning, particularly in the areas of science and math. While completing a lesson on gears, the students investigated ratios and proportions and “applied and refined their measurement skills as they tested models and collected data.” One student said, “The LEGO sets help you know what kinds of things are simple machines, how simple machines work, and what simple machines do.” The set’s alignment with core content is important because while it challenges diverse learners through hands-on exploration, it’s also an excellent tool for meeting standards.

The solution is also enhancing learning by enabling students to refine and assess their thinking as they communicate with each other, compare models, and explore real-world connections. This hands-on approach to teaching physical science concepts has also proven to be very valuable for students who have reading and writing difficulties, as it enables success without heavy reliance on text-based materials. Another student said, “Using the LEGO sets helps me learn because I learn at my own pace. And it’s fun and I learn better when it’s fun.”

According to Breigh, “It is absolutely critical that today’s learners view science as an endeavor and an ongoing exploration of the world around us rather than just a collection of facts.” For her, using the Simple Machines Set is a way to involve students in exploration and ongoing discussion of scientific models, which according to the national standards is an overarching topic to be explored across grade levels from elementary through high school. The bottom line is that Breigh’s students are excelling, mastering content, applying scientific principles, and most importantly, communicating with each other as they do so. She and the third graders at Zachary Elementary would not have it any other way.



For more information visit
LEGOeducation.us/SimpleMachinesSet

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