The EiE curricular materials and lesson plans follow a similar structure that consists of a Preparatory Lesson and four Unit Lessons.

Preparatory Lessons (20-30 min): The preparatory lesson is designed to prompt students to think about engineering, technology, and the engineering design process. If teachers have done little with engineering and technology in their classrooms, we suggest that they start an EiE unit with this short introductory activity.

Lesson 1, Engineering Story (60-90 min): The first lesson sets the context for the unit through an illustrated storybook. A series of questions to promote student reflection before, during, and after the story encourage students to reflect upon the story and its engineering components and reinforce literacy skills.

Lesson 2, A Broader View of an Engineering Field (30-40 min): The second lesson focuses on helping students develop a broader perspective on the unit's engineering field of focus. Through hands-on activities, students learn more about the types of work done by engineers in these fields, and the kinds of technology they produce.

Lesson 3, Scientific Data to Inform Engineering Design (40-50 min): The third lesson is designed to help students understand the linkages between science, mathematics, and engineering. In this lesson, children collect and analyze scientific data that they can refer to in Lesson 4 to inform their designs.

Lesson 4, Engineering Design Challenge (1-3 sessions of 40 min): The unit culminates with an engineering design challenge. Following the steps of the engineering design process, students design, create, and improve solutions to an engineering problem. Design challenges are used as the final project because they allow students with varying academic abilities to succeed; they are easily scaled to meet the needs of all students.