

Global Connections Exchange

Global Storybook Engineers 1

OVERVIEW

Topic	Design Thinking
Age range	4-8
Subject	Arts & Sciences
Duration	8 weeks

DESCRIPTION

The Global Storybook Engineers 1 course teaches students about the engineering design cycle, how to make connections between stories and design challenges, and explore how design thinking can be used to solve problems through hands-on investigations and experiments, design builds, and communicating with global partners.

TASK TOPICS	LEARNING OBJECTIVES Students will:
Task 1: Getting to Know Our Partners	<ul style="list-style-type: none"> be able to share their culture with their global partners by creating a video to describe favorite activities, sports, holidays and celebrations. interact with their global partners about their videos.
Task 2: Build a Tower	<ul style="list-style-type: none"> learn about the engineering design cycle. read <i>Strega Nona</i> by Tomie dePaola and connect the story to a design challenge. design, build, test and improve a tower.
Task 3: Build a Boat	<ul style="list-style-type: none"> read <i>Monkey: A Trickster Tale from India</i> by Gerald McDermott and connect the story to a design challenge. apply their learning about the engineering design cycle design, build, test and improve a boat.
Task 4: Build a Rabbit Robot or a Maze	<ul style="list-style-type: none"> read <i>Zomo, the Rabbit: A Trickster Tale from West Africa</i> by Gerald McDermott and connect the story to a design challenge. apply their learning about the engineering design cycle. design, build, test and improve a rabbit robot/maze.
Task 5: Reflection	<ul style="list-style-type: none"> reflect on the engineering design cycle. reflect on how to make connections between stories and design challenges. reflect on how design thinking can be used to solve problems.

United Nations Sustainable Development Goals (UN SDGs)

- Goal 5** Achieve gender equality and empower all women and girls
- Goal 12** Ensure sustainable consumption and production patterns

ISTE Student Standards

- 1.1** Empowered Learner
- 1.2** Digital Citizen
- 1.3** Knowledge Constructor
- 1.4** Innovative Designer
- 1.5** Computational Thinker
- 1.6** Creative Communicator
- 1.7** Global Collaborator

New Jersey Student Learning Standards

8.2.2.ED.1: Communicate the function of a product or device.

8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.

8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process.

8.2.2.ED.4: Identify constraints and their role in the engineering design process.

9.4.2.CT.2: Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).

9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).