

Global Connections Exchange

Global Storybook Engineers 2

OVERVIEW

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

DESCRIPTION

The Global Storybook Engineers 2 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 Bridge | <ul style="list-style-type: none"> learn about the engineering design cycle. read <i>The Rainbow Bridge</i> by Audrey Wood and connect the story to a design challenge. design, build, test and improve a bridge. |
| Task 3: Build a Castle | <ul style="list-style-type: none"> read <i>The Sandcastle That Lola Built</i> by Megan Maynor and connect the story to a design challenge. apply their learning about the engineering design cycle. design, build, test and improve a castle. |
| Task 4: Build a Zipline | <ul style="list-style-type: none"> read <i>The Race of Toad and Deer</i> by Pat Mora and Domi and connect the story to a design challenge. apply their learning about the engineering design cycle. design, build, test and improve a zipline. |
| 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 9** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- 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).