

# Engineering Storybooks

Storybook Title	Engineering field	Science Strand	Country	Summary
<b>Tehya's Pollution Solution*</b>	Environmental Engineering	Life	US (Washington)	Try designing a process for cleaning up a model oil spill, just like Tehya did. Your goal is to design an oil spill cleanup process that removes as much oil from your model as possible.
<b>Mariana Becomes a Butterfly*</b>	Agricultural Engineering	Life	Dominican Republic	You can design a hand pollinator, just like Mariana. There are many ways for plants to be pollinated: wind, birds, and insects are just a few. Have you ever seen insects visit a flower? What makes insects good pollinators? Your goal is to design a hand pollinator for a specific flower shape.
<b>Javier Builds a Bridge</b>	Civil Engineering	Physical	US (Texas)	Have you ever made bridges out of blocks? Have you ever had to make a bridge over a real stream like Javier did? Your goal is to design the strongest bridge that you can using paper and cardboard.
<b>Hikaru's Toy Troubles</b>	Transportation Engineering	Physical	Japan	Can you design a maglev transportation system like Hikaru and his friends? Your goal is to create a track and vehicle that can move pennies, crayons, or pencils from one place to another.
<b>Leif Catches the Wind*</b>	Mechanical Engineering	Earth and Space	Denmark	Windmills can use energy to do all sorts of things, such as grinding grain, pumping water, and lifting a weight. Using what you learned from Leif and Dana, your goal is to design a windmill that can lift a weight.
<b>Michelle's MVP Award*</b>	Chemical Engineering	Physical	Canada	Have you ever made play dough? In the story, Michelle lists the ingredients you need: flour, salt, and water. Using those ingredients, your goal is to improve a play dough process so you can make play dough that feels like the kind you buy in the store. Once you've finished, you can make sculptures, just like Michelle and her team did!
<b>Saving Salila's Turtle</b>	Environmental Engineering	Earth and Space	India	You can design a water filter, just like Salila. Imagine that there is a pond by your house and you would like to filter some of its water. Your goal is to make the water clearer and cleaner than it was before it was filtered!
<b>Suman Crosses the Karnali River</b>	Geotechnical Engineering	Earth and Space	Nepal	If you lived in Suman's village, where would you suggest building the TarPul? The map to the right shows the Karnali River, Suman's village, and the medical clinic. Use the engineering design process to make predictions, test, and improve, just like Suman did!
<b>A Reminder for Emily*</b>	Electrical Engineering	Physical	Australia	Try making an alarm just like the one Emily and Pete made! Your goal will be to build a switch, find a conductor, and then design an alarm circuit.

\* Engineering is Elementary Try It! Kits are available and feature mini-design challenges based on an EiE storybook. Individual material kits include all materials for one student to complete the design challenge and support at-home or socially distanced use. Instructions in English and Spanish.

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<b>Paolo's Parachute Mission*</b>	Aerospace Engineering	Earth and Space	Brazil	Can you design a parachute to help an object travel safely from the top of a stairway to the ground? Your goal is to create a parachute that slows the falling speed of your object to five feet per second.
<b>Lerato Cooks up a Plan</b>	Green Engineering	Physical	Botswana	Can you design insulation for a solar oven so you can melt s'mores? Your goal will be to build a solar oven, and test different insulators to find out which works best.
<b>Kwame's Sound</b>	Acoustical Engineering	Physical	Ghana	Have you ever tried to hum a tune, roar like a lion, or growl like a motor? Maybe you've tried to describe a sound with words or write down a song with musical notes. There are sounds all around us and many ways that they can be communicated and described. Your goal is to create a visual representation of a sound, just like Kwame.
<b>A Gift from Fadil*</b>	Package Engineering	Life	Jordan	The next time you give someone a present, don't just wrap it or decorate it with a bow—design the package so it's a perfect match for the present inside!
<b>Omar's Time to Shine</b>	Optical Engineering	Physical	Egypt	In the story, Mira tells Omar how people used mirrors to light the tombs so they could create drawings of the hieroglyphs inside. Can you help light a pharaoh's tomb so that the hieroglyphs can be copied and shown to people all over the world?
<b>Yi Min's Great Wall</b>	Materials Engineering	Earth and Space	China	Have you ever made a wall from blocks? Different kinds of materials make very different kinds of walls. Using what you learned from Yi Min, your goal is to design a mortar mixture from earth materials that will hold a stone wall together.
<b>Aisha Makes Work Easier*</b>	Industrial Engineering	Physical	US (Boston)	Take a simple machines scavenger hunt of your own. Look around your house and neighborhood. What simple machines can you find? Your goal is to design a simple machine system that makes work easier.
<b>Despina Makes a Splash*</b>	Ocean Engineering	Physical	Greece	Use what you learned from Despina and Chrisanthy to design your own submersible. Your goal is to design a submersible that floats and is able to pick up treasure from the ocean floor.
<b>Erik's Unexpected Twist</b>	Biomedical Engineering	Life	Germany	Erik, Dr. Werden, and the other campers had to design a brace unexpectedly when Matthias hurt his knee. Do you have ideas for how you would create a brace to solve a similar problem? Try designing a knee brace for a doll or an action figure. Your goal is to design a brace that does not allow the doll's knee to move.
<b>Juan Daniel's Futbol Frog*</b>	Bioengineering	Life	El Salvador	You can design a model membrane, just like Juan Daniel! Frogs need to absorb water through their skin, which is a kind of membrane. Imagine that you have a pet frog and you need to find a way to make sure it gets enough water. Your goal is to design a model membrane that slowly drips water into your frog's habitat.
<b>Galya and Natasha's Rocky Adventure</b>	Materials Engineering	Earth and Space	Russia	Use what you learned from Galya and Natasha about investigating materials to choose the best material to make your own petroglyph.

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