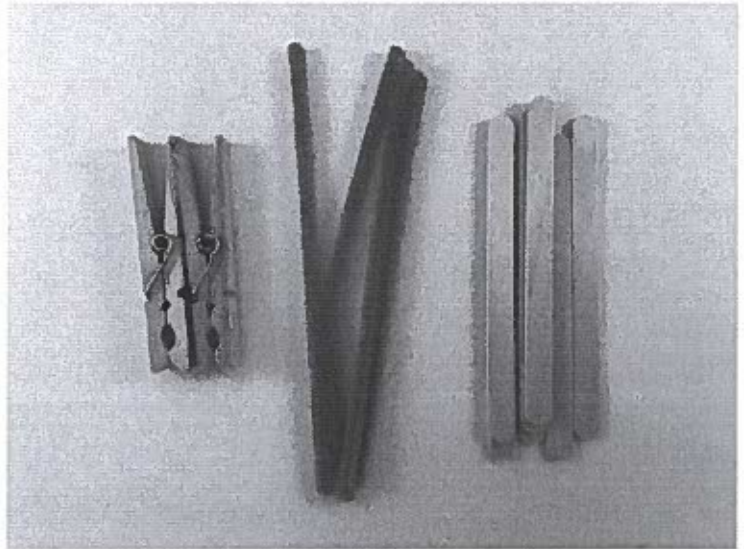


# Design Challenge: Improve the School

In this activity, students will be presented with an open-ended design challenge. Your student will be given a small quantity of three types of materials and asked to design a prototype for an item that will improve their school. The limited number of materials, paired with the open-ended prompt, will challenge students to be creative, spontaneous and imaginative. Children will be encouraged to take risks and make mistakes in this safe and low-key learning activity.

## What You Need

- Three types of inexpensive materials that can be used in a variety of ways to build a small structure, such as craft sticks, index cards, tape, binder clips, clothes pins, paper clips, wire



## What You Do

1. First, give your student a small quantity of three types of building materials.
2. Explain to them that they are going to respond to a design challenge. Their job is to imagine and build a prototype of something that will improve their school.
3. Explain that a prototype is a model that represents an idea. It does not have to be built to scale or actually work. The purpose of the activity is to dream and imagine new solutions.
4. Your student will now begin working with the materials. They are not required to draw a sketch or make a written plan before they start.
5. Encourage them to experiment and make mistakes. They will not be graded on the project.
6. Also, encourage your student to work rapidly and freely. Allow no more than 10-15 minutes for work time.
7. Afterwards, have them officially present their prototype and describe what they chose to build and why it will help their school.

*Ann Gadzikowski is an author and educator with a passion for challenging children to think creatively and critically. Her recent book *Robotics for Young Children* won the 2018 Midwest Book Award for best educational book. Ann developed her expertise in robotics, computer science, and engineering through her work as early childhood coordinator for Northwestern University's Center for Talent Development. She has over 25 years of experience as a teacher and director of early childhood programs, and currently serves as the Executive Director of *Preschool of the Arts*, a Reggio-Emilia inspired school in Madison, Wisconsin.*

Author: Ann Gadzikowski  
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