PCS edventures!™ EXPERTS IN HANDS-ON STEM EDUCATION

Girls Can Build

Grades: K-5

Students: Up to 30

Contact Hours: 12+

Recommended Settings:
- Classrooms looking for hands-on science and engineering lessons
- After-school programs and clubs
- Homeschool environments

Logistics and Storage:
Bricks come in stackable, roll-able Gratnell storage containers.

Assessment: Formative assessment for each lesson.

Curriculum Topics:
Grades K-2
- Blind Building Communication Challenge
- Flash Flipping Simple Machines
- Butterfly Symmetry
- Bridge Loading Constraint Challenge
- Butterfly Life Cycle
- Urban Planning

Grades 3-5
- Chain Mail Building Communication Challenge
- Logic Puzzles
- Architecture and Famous Structures
- Storytelling with Bricks
- Balancing Banji
- Dream Home

Training Available
- Purchases of $500 or more come with 30 minutes of free webinar training.
- Purchases of $1000 or more come with 1 hour of free webinar training.

Additional training time can be purchased as well.

Materials:
- Nearly 10,000 durable and brightly colored building pieces for engineering activities
- Brightly colored and long-lasting Gratnell storage containers for easy clean up and storage
- K-2 Instructor and Student Materials - 6 activities designed to fill one hour segments
- 3-5 Instructor and Student Materials - 6 activities designed to fill one hour segments
- Set of Charade Cards that girls will love

21st Century Skills
- Communication and Collaboration
- Creativity and Innovation
- Critical Thinking and Problem Solving
- Information, Media, and Technology Literacy
- Initiative and Self-Direction
- Productivity and Accountability
- Social and Cross-Cultural Skills

Habits of Mind
- Applying Past Knowledge to New Situations
- Creating, Imagining, Innovating
- Listening With Understanding and Empathy
- Persisting
- Remaining Open to Continuous Learning
- Striving for Accuracy
- Taking Responsible Risks
- Thinking and Communicating with Clarity and Precision
- Thinking Flexibly
- Thinking Interdependently

Pricing Options:
- $1495 for complete set

Shipping Availability: Immediately

Standards & Alignment

Common Core State Standards for English Language Arts

- CCSS.ELA-Literacy.SL.2.3 Gather additional information or clarify something that is not understood by asking and answering questions about what a speaker says.
- CCSS.ELA-Literacy.SL.2.1 Participate in collaborative conversations with diverse partners about Grade 2 topics and texts with peers and adults in small and large groups.
- CCSS.ELA-LITERACY.SL.2.1.A Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
- CCSS.ELA-LITERACY.SL.2.1.B Build on others' talk in conversations by linking their comments to the remarks of others.
- CCSS.ELA-LITERACY.SL.2.1.C Ask for clarification and further explanation as needed about the topics and texts under discussion.
- CCSS.ELA-LITERACY.W.4.3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
- CCSS.ELA-LITERACY.W.4.3.A Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.
- CCSS.ELA-LITERACY.W.4.3.B Use dialogue and description to develop experiences and events or show the responses of characters to situations.
- CCSS.ELA-LITERACY.W.4.3.C Use a variety of transitional words and phrases to manage the sequence of events.
- CCSS.ELA-LITERACY.W.4.3.D Use concrete words and phrases and sensory details to convey experiences and events precisely.
- CCSS.ELA-LITERACY.W.4.3.E Provide a conclusion that follows from the narrated experiences or events.
- CCSS.ELA-LITERACY.SL.4.4 Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Next Generation Science Standards

- NGSS K-PS2-1 Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.
- NGSS K-PS2-2 Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.
- NGSS K-ESS3-1 Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.
- NGSS 2-PS1-3 Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.
- NGSS K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
- NGSS K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
- NGSS K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.
- NGSS 3-PS2-1 Plan an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.
- NGSS 3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- NGSS 3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- NGSS 3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

Common Core Math and English Language Arts Standards

- CCSS.MATH.CONTENT.2.MD.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- CCSS.MATH.CONTENT.3.MD.C.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.
- CCSS.MATH.CONTENT.3.MD.C.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
- CCSS.MATH.CONTENT.3.MD.D.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

FOR MORE INFORMATION
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