

Activity Title:	Engineer a Parachute
Timeframe:	~40 Minutes
Big Ideas and/or Essential Questions:	• How can I create a parachute to “catch air” when dropped? • Key Vocabulary-communication, collaboration, critical thinking, creativity, teamwork, Engineering and Design Process, constraints, predict, prototype, effective, troubleshoot, failure points and plan.
PA Standards:	Next Generation Science Standards Practices • -Asking questions and defining problems • -Planning and carrying out investigations
Learning Target(s):	- I can follow the steps of the Engineering & Design Process. - I can model 4Cs behaviors while working with my peers.
Materials:	<i>Rosie Revere Engineer</i> by Andrea Beaty Engineering & Design Poster Sandwich bags (2 per group) Yarn Tootsie roll Scissors Scotch Tape
Activity Procedures:	1. Read the book <i>Rosie Revere Engineer</i> 2. Review the Engineering and Design Process 3. Using only the materials provided, create a parachute that can “catch air” when dropped. (Students can stand on a chair and drop it from above their head). 4. Group students into groups of 3.

	5. Explain the directions for the challenge. Students may use the scissors to cut the string as well as the plastic bags. Students can tie knots, poke holes, and use these materials in whatever way they see fit. Making refinements using trial and error is an important part of STEM challenges and should be discussed as much (if not more) than the final products. 6. Once the parachutes are created students can drop their parachute from their chair in the classroom or the teacher can take the class outside and drop them from a sliding board or another appropriate spot.) 7. Take time to have the students observe how the other team's parachutes caught air.
Assessments:	Call students back into carpet spots and discuss what worked well and how they could improve their parachute. Review key vocabulary

