# STEM Skills

### **Problem Solving**



Work to make sense of problems as they are presented, and work to propose real and appropriate solutions to those problems.

Creativity



Consider solutions to a problem through multiple approaches, including ones that are highly creative or "out-of-the-box." In STEM, mistakes and failed attempts are positive experiences that help us learn.

## Inquiry Skills



Use hands-on, active participation to solve problems by asking questions, proposing ideas, generating and testing solutions, and making decisions based on data to understand how to revise ideas.

### Math & Science Skills



Apply mathematics and science skills that I am learning in school to solve problems in other subject areas. This will help you see connections between ideas.

# Engineering-Design Thinking



Use the engineering-design thinking process: identify the problem at hand, research potential solutions, build prototypes, test, redesign, test again, and continue revising as needed. Each step in the process moves you closer to creating a solution that works.

#### **Critical Thinking**



Analyze information, evaluate designs, reflect on your thinking, synthesize new ideas, and propose creative solutions. All of these skills are vital to becoming an independent, critical thinker.

#### Collaboration



Learn to work as part of a team - practice listening, sharing ideas, compromising, and helping each other. Big challenges are rarely solved by individuals.

\*adapted from stem.getintoenergy.com