

# Week 5: Designing and Building

**LESSON 13:** CONSTRUCT MOCK-UP  
**GRADE LEVEL:** 6-8  
**LENGTH:** 3 DAYS

## TEKS/SES:

### Science

#### Grade 6

6.1.A 6.2.A 6.2.E 6.3.A 6.3.D 6.4.B

#### Grade 7

7.1.A 7.2.A 7.2.E 7.3.A 7.3.D 7.4.B

#### Grade 8

8.1.A 8.2.A 8.2.E 8.3.A 8.3.D 8.4.B

Full text versions of these TEKS are available at <http://ritter.tea.state.tx.us/rules/tac/chapter112/ch112a.html>

### Math

#### Grade 6

6.10.D 6.11.A 6.11.B 6.12.A

#### Grade 7

7.13.A 7.13.B 7.14.A

#### Grade 8

8.14.A 8.14.B 8.15.A

Full text versions of these TEKS are available at <http://ritter.tea.state.tx.us/rules/tac/chapter111/ch111a.html>

### Language Arts

#### Grade 6

6.2.A 6.2.B 6.12.A 6.12.B 6.26.A 6.26.B 6.26.C 6.27 6.28

#### Grade 7

7.2.A 7.2.B 7.12.A 7.12.B 7.26.A 7.26.B 7.26.C 7.27 7.28

#### Grade 8

8.2.A 8.2.B 8.12.A 8.12.B 8.26.A 8.26.B 8.26.C 8.27 8.28

Full text versions of these TEKS are available at <http://ritter.tea.state.tx.us/rules/tac/chapter110/ch110a.html>

## NATIONAL STANDARDS

## Science

### Science as Inquiry

- Abilities necessary to do scientific inquiry
- Understanding about scientific inquiry

### Physical Science

- Motions and forces
- Transfer of energy

### Science and Technology

- Abilities of technological design
- Understanding about science and technology

### History and Nature of Science

- Science as human endeavor

## Math

### Geometry

- **Use visualization, spatial reasoning, and geometric modeling to solve problems**

### Measurement

- **Understand measurable attributes of objects and the units, systems, and processes of measurement**
- **Apply appropriate techniques, tools, and formulas to determine measurements.**

### Data Analysis and Probability

- **Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them**

### Problem Solving

- Build new mathematical knowledge through problem solving
- Solve problems that arise in mathematics and in other contexts
- Apply and adapt a variety of appropriate strategies to solve problems
- Monitor and reflect on the process of mathematical problem solving

### Communication

- Organize and consolidate their mathematical thinking through communication
- Communicate their mathematical thinking coherently and clearly to peers, teachers, and others

### Connections

- Recognize and use connections among mathematical ideas
- Recognize and apply mathematics in contexts outside of mathematics

### Representation

- Create and use representations to organize, record, and communicate mathematical ideas
- Select, apply, and translate among mathematical representations to solve problems

## Language Arts

- NL-ENG.K-12.4 COMMUNICATION SKILLS Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.
- NL-ENG.K-12.7 EVALUATING DATA Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.
- NL-ENG.K-12.11 PARTICIPATING IN SOCIETY Students participate as knowledgeable, reflective, creative and critical members of society in a variety of literacy communities.

- NL-ENG.K-12.12 APPLYING LANGUAGE SKILLS Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).