

# Week 5: Designing and Building

**LESSON 11:** BRAINSTORM AND PRELIMINARY DESIGN  
**GRADE LEVEL:** 6-8  
**LENGTH:** 2 DAYS

## TEKS/SES:

### Science

#### Grade 6

6.1.A 6.1.B 6.2.B 6.3.A 6.4.A 6.10.B 6.11.A 6.11.B 6.11.C

#### Grade 7

7.1.A 7.1.B 7.2.B 7.3.A 7.4.A 7.8.B 7.9.A 7.10.A 7.13.A

#### Grade 8

8.1.A 8.1.B 8.2.B 8.3.A 8.4.A 8.7.A 8.8.E 8.9.C 8.10.A 8.10.B

Full text versions of these TEKS are available at <http://ritter.tea.state.tx.us/rules/tac/chapter112/ch112b.html>

### Math

#### Grade 6

6.8.B 6.11.A 6.11.B 6.11.C 6.11.D

#### Grade 7

7.8.C 7.9.A 7.13.A 7.13.B 7.13.C 7.13.D 7.14.A

#### Grade 8

8.14.A 8.14.B 8.14.C 8.14.D 8.15.A 8.15.B

Full text versions of these TEKS are available at <http://ritter.tea.state.tx.us/rules/tac/chapter111/ch111b.html>

### Language Arts

#### Grade 6

6.2.A 6.22.A 6.22.B 6.25.C

#### Grade 7

7.2.A 7.22.A 7.25.A 7.25.C

#### Grade 8

8.2.A 8.22.A 8.25.A 8.25.C

Full text versions of these TEKS are available at <http://ritter.tea.state.tx.us/rules/tac/chapter110/ch110b.html>

## NATIONAL STANDARDS

## **Science**

### Science as Inquiry

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

### Science and Technology

- Abilities of technological design
- Understandings about science and technology

### Personal and Social Perspectives

- Science and technology in society

## **Math**

### Measurement

- Apply appropriate techniques, tools, and formulas to determine measurements.

### 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
- Analyze and evaluate the mathematical thinking and strategies of others;
- Use the language of mathematics to express mathematical ideas precisely

### Connections

- Recognize and apply mathematics in contexts outside of mathematics

## **Language Arts**

- 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