

# The Scorched Coyote

**Background:** You have just read the story, The Three Javelinas. In this story, the coyote destroys a tumbleweed house and a saguaro rib house by blowing them down. At the final javelina's house, he discovers it is made of adobe bricks, so he is unable to blow it down. He decides to climb down the stovepipe and fell into the fire. He flies back up with a "yahooooo"!!!

**Design Challenge:** You must design and build an adobe house with a stovepipe. Using pneumatics, make the scorched coyote pop up out of the stovepipe as he did at the end of the story. The house must be no smaller than 8" by 4" but no larger than 12" by 11". The stovepipe must be a cylinder shape and stick out no more than 6" and no shorter than 4". You must use two syringes, a length of tubing no longer than 24" and no shorter than 18". There must be at least one linkage moving the coyote. The coyote must go up and down 5 times in row.

**Criteria:** Your javelina's house must:

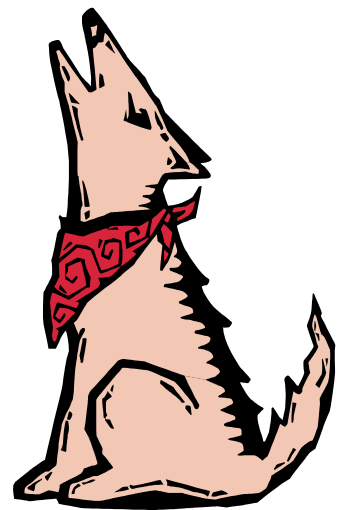
- ✓ be in the shape of a rectangular prism
- ✓ be no smaller than 8" x 4" but no larger than 12" x 11"
- ✓ have a stovepipe sticking out no more than 6" but no less than 4"
- ✓ must use only 2 syringes
- ✓ tubing must be at least 18" long, but no longer than 24"
- ✓ must be one linkage moving the coyote
- ✓ coyote must go up and down 5 times in a row

**Materials:** You may use any of the following:

- \* cardboard
- \* boxes
- \* cardboard tubes
- \* craft sticks
- \* syringes
- \* plastic tubing
- \* cardstock or poster board
- \* glue
- \* markers, crayons, colored pencils
- \* construction paper
- \* tape

**Tools:**

- scissors
- glue stick
- ruler
- tool kit
- safety goggles



### **Virginia Standards of Learning Targeted**

Focus:

- English 3.4 read fiction fluently
- English 3.5 understand components of fiction and folklore

Supporting:

- Math 3.14 The student will estimate and then use actual measuring devices with metric and U.S. Customary units to measure
- Math 3.18 The student will analyze three-dimensional geometric figures and identify relevant properties
- Science 3.2 The student will understand forces as a push or a pull
- English 3.2 The student will present brief oral reports