

# LEMON CLOCKS

## MATERIALS

- “KidzLabs Lemon Clock” kit
- Lemon
- Tape

## DIRECTIONS

- 1.** Connect the red wire on the LCD watch to a copper plate and the black wire to a zinc plate. Make sure the wires are secured with tape.
- 2.** Get another copper and zinc plate. Attach a white wire to both of them and secure with tape.
- 3.** Insert one set of copper and zinc plates into one lemon, and the other set into the other lemon. The LCD watch should start to blink.
- 4.** By pressing “A” twice on the clocks, you can begin setting up the clock. Pressing “B” will change the display options while “A” will confirm the selections. Cycle through the options until you have the correct time and date.

# STEM ACTIVITY CARDS



**KANSAS  
ENRICHMENT  
NETWORK**

*Making Connections for  
Out-of-School Time*

ACTIVITY FOUND AT:  
KidzLabs - Lemon Clock

## WHY?

The copper plates act like the positive electrodes of a battery. They are plated with metal, which is less reactive than zinc. When the plates are inserted into the lemon, a chemical reaction occurs.

Electrons move from the zinc plates to the copper plates to form a current, thus activating the LCD watch. The lemon juice helps conduct electricity. You can replace the lemon with a potato, a grapefruit or a soft drink and see what effect they have.

# STEM

## ACTIVITY CARDS

### SCIENCE TERMS FOR FURTHER DISCUSSION:

- Electrons
- Current
- Chemical Reaction

### CAREER CONNECTION:

- Chemical Engineering
- Electrician
- Forensic Scientist
- Electrical Engineering