



LED Light Collage

Middle Primary / Secondary

LESSON PLAN

TITLE: LED Light Collage
YEAR LEVELS: Middle Primary / Secondary
TIME FRAME: 3 X 1 Hour Lessons

LEARNING GOALS

Understand how to create a paper circuit

Develop skills in collage and creating an eye catching composition

SKILLS

In this lesson students will learn about paper circuits and electricity. Students will create a paper collage which incorporates an LED light powered by a paper circuit which they will create themselves.

MATERIALS

LED Light
Lithium Battery
Copper Tape
Watercolour Paper
A6 Frame
Watercolour Paint
Double Sided Tape

ACTIVITY BREAKDOWN

Lesson 1

Introduce paper circuits to students. Show them how they work and how to create them. Students will practice creating their own paper circuit in pairs to power an LED light.

Create the conductive path with copper tape, have the tape running from the negative side of the power source (battery) to the negative conductor of the LED light (short side). Connect the longer LED conductor to the copper tape by taping the conductor down on to the copper path with normal tape. The longer LED conductor is then taped down to another copper tape path that leads to a small paper flap. This paper flap should have copper tape running on both sides and when pressed makes contact with the positive side of the battery. Once students understand how their circuits work they begin designing their collage which will incorporate their LED.

Lesson 2

Students create the pieces for their collage using watercolour paints and markers.

Lesson 3

Students put their collage together in the A6 frames focussing on foreground and background. They will then create a small hole to place their LED light through and connect it to a paper circuit on the back of their work.

REFLECTION / EXTENSION

Reflection: How has the use of light impacted the work? Where and how is a focal point created in the collage? Does the use of light enhance the work?

Extension: Students who are comfortable with the circuits can try to create a collage using 2 or more LED lights, or other electrical components on a larger scale.