

Objective

By the end of this lesson, the student will understand the principles of Faraday's chemistry related to candle flames and alcohol lamps, explore watercolor painting techniques, and learn how to capture the dynamism of a dog on a leash through photography, including long exposure and multiple exposure techniques.

Materials and Prep

- Candle
- Alcohol lamp
- Watercolor paints and brushes
- Camera capable of long exposure and multiple exposure settings
- Paper for watercolor painting
- Notebook for observations and notes

Before the lesson, ensure the student understands the basic safety measures when working with fire and photography equipment. Familiarize them with the functionalities of the camera they will be using.

Activities

• Exploring Candle Flame Chemistry

Begin by lighting a candle and an alcohol lamp. Discuss the chemical reactions taking place, focusing on combustion and the production of light and heat. Encourage the student to observe and note the differences in the flames.

• Watercolor Painting Inspired by Flames

Using the colors observed in the candle and alcohol lamp flames, the student will create a watercolor painting. Encourage them to experiment with blending colors to mimic the dynamic movement of flames.

• Photography Practice with Long Exposure

Set up the camera to capture long exposure shots of the candle flame and the student's watercolor painting. Discuss how the exposure affects the final image, and encourage them to take multiple shots to see the differences.

• Capturing Dynamism with Multiple Exposures

Using a dog on a leash, take multiple exposure photographs to capture the motion. Discuss how the technique can show movement and energy, similar to Balla's painting "Dynamism of a Dog on a Leash".

Talking Points

- "The candle flame is a fascinating example of combustion, where the wax vapor reacts with oxygen to produce light and heat."
- "In watercolor painting, blending colors can create beautiful effects, just like the colors we see in a flame."
- "Long exposure photography allows us to capture the movement of light over time, creating unique and artistic images."

faraday chemistry candle flame alcohol lamp watercolor paint photography long exposure multiple exposure
Dynamism of a Dog on a Leash sometimes called Dog on a Leash or Leash in Motion, is a 1912 oil painting by Italian Futurist painter Giacomo Balla / Lesson Planner / LearningCorner.co

- "Multiple exposure photography can convey a sense of motion, similar to how Balla captured the energy of a dog in motion in his artwork."