



## From Pigment to Paint – Making Oil Paints

**Grade Level:** Middle School, High School

**Subjects:** Visual Arts, Science

**Media:** Painting

### Selected Artworks:



Joshua Reynolds (English, 1725-1792)  
*Portrait of Lady Arundell*, 1764-67  
Oil on Canvas  
Purchased with funds provided by the  
Sarah Campbell Blaffer Foundation  
81.74.236



Martin Johnson Heade (American, 1819-1904)  
*Passion Flowers with Three Hummingbirds*, 1875  
Oil on Canvas  
San Antonio Museum of Art  
Purchased with funds from the Robert J. and Helen C. Kleberg Foundation  
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### Objectives:

- Learners will explore the history of oil paints and the invention of the paint tube.
- Learners will create their own oil paints by mixing dried pigments with linseed oil, emulating the centuries-old process.

### About the Artwork:

During the Renaissance, artists began to use pigments mixed with linseed oil to create their own oil paints. The majority of these pigments came from the earth – minerals such as iron, copper, lead and cadmium. The process of making oil paints was slow and laborious; apprentices usually worked for days to prepare the palette of oil paints for a master painter. An established artist, such as Sir Joshua Reynolds, likely had apprentices preparing his oil paints for his *Portrait of Lady Arundell*, completed in the late 18th century. The finished oil



paints were typically stored in pig bladders.

The invention of the paint tube in 1841 revolutionized the art world, allowing artists to simply purchase readymade oil paints. In 1856 William Henry Perkin, an 18-year old British chemist, attempted to synthesize quinine, an anti-malaria drug. He oxidized aniline using potassium dichromate and created the first synthetic pigment, known as Perkin's mauve.

Martin Johnson Heade's painting, *Passion Flowers with Three Hummingbirds*, is an excellent example of the vibrant hue of purple, only attainable with synthetic pigment. Following that discovery, other synthetic pigments were created.

### **Discussion:**

Discuss the history and process of making oil paints with the class. The production of oil paints began during the Renaissance and involved a tedious and laborious process of mixing pigments found in nature with linseed oil. The process of creating oil paints led to the discovery and creation of many new hues that are widely used today.

### **Vocabulary:**

- Oil paint- A paint in which pigment is suspended in oil, which dries on exposure to air.
- Pigment- A substance, usually finely powdered, that produces the color of any medium. When mixed with oil, water, or another fluid, it becomes paint.

### **Materials:**

- Dried pigment set
- Linseed oil
- Palette knife
- Clean, flat surface for mixing such as glass plate
- Primed canvas
- Paint brushes

### **Process:**

1. Demonstrate the process of making a small amount of oil paint:
  - a. On a clean, flat surface such as a plate of glass, pour out a small amount of dried pigment.
  - b. Use a palette knife to mound the pigment and then make a small crater in the center.
  - c. Pour a small amount of linseed oil into the crater. A good starting ratio is



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- 1 part linseed oil to 5 parts pigment.
- d. Use your palette knife to carefully fold the oil into the pigment, keeping the oil in the center of the pigment mix.
  - e. Continue to fold and blend the pigment and oil, applying pressure with the palette knife.
  - f. When the pigment and oil mix is complete, it is ready to be used as oil paint.
2. Set up a station with the materials and allow students to work in small groups to create sets of colors.
  3. Finished oil paints can be used by the class to create oil paintings. Oil paint should be used on a primed canvas.

### **TEKS:**

§117.32. Art, Grade 6.

(C) Knowledge and skills. (1) Perception. The student develops and organizes ideas from the environment.(A) illustrate themes from direct observation, personal experience, and traditional events; and (B) analyze and form generalizations about the interdependence of the art elements such as color, texture, form, line, space and value and principles such as emphasis, pattern, rhythm, balance, proportion and unity, using art vocabulary appropriately.

§112.18. Science, Grade 6.

(6) Matter and energy. The student knows matter has physical properties that can be used for classification.



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The Art:



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*Passion Flowers with Three Hummingbirds*, 1875

Oil on Canvas

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