

# Lesson Plan: The Anatomy of Art - Leonardo da Vinci's Study of Hands

Subject: Science

Grade Level: High School

Duration: 2 class periods (90 minutes each)

Standards: VA.912.C.1.4, SC.912.L.14.36

- Visual Arts: VA.912.C.1.4 - Use contextual information to form, support, and enrich interpretations of art and design.
- Science (Biology/Anatomy): SC.912.L.14.36 - Describe the structure and function of the human body in terms of physical principles, including the laws of motion and the properties of materials.

## Objectives

- Students will understand the principles of human anatomy, with a focus on the structure of the human hand, and explore how Leonardo da Vinci applied his anatomical knowledge to create art.
- Students' appreciation for the integration of science and art and develop their analytical and observational skills.

## Materials

- Copies of Leonardo da Vinci's anatomical sketches, focusing on hands.
- Anatomy textbooks or online resources showing the human hand's structure.
- Drawing paper, pencils, and erasers.
- Optional: clay or modeling material for 3D anatomical models.

## Day 1: Understanding Anatomy through Leonardo's Eyes

Introduction (15 minutes)

- Present a brief overview of Leonardo da Vinci, emphasizing his work in both art and science, particularly anatomy.

- Introduce the concept of how detailed anatomical study contributes to more realistic and dynamic art.

Anatomy Lesson (30 mins):

- Using textbooks or online resources, teach the anatomy of the human hand, including bones, muscles, tendons, and movement principles.
- Highlight how understanding these elements can enhance artistic depiction.

Analysis of Leonardo's Sketches (30 mins):

- Display Leonardo's anatomical sketches of hands.
- In groups, students discuss how Leonardo's understanding of anatomy is reflected in his art. They should identify specific anatomical features in the sketches and compare them to the scientific diagrams.

## **Day 2: Applying Anatomy to Art**

Drawing Exercise (60 mins):

- Students will attempt to draw their own or a classmate's hand using Leonardo's sketches as inspiration.
- Emphasize the importance of observing the underlying anatomical structure to guide their drawing.

(Optional) Sculpting Activity (30 mins):

- If time and materials allow, students can create a simple 3D model of a human hand. This activity can help students understand the volume and three-dimensionality of the hand's anatomy.

Reflection and Discussion (15 mins):

- Conclude with a class discussion on the intersection of art and science. Ask students to reflect on how their understanding of anatomy has changed their approach to drawing and their appreciation of Leonardo's work.

## **Assessment**

- Evaluate students' hand drawings or sculptures based on accuracy, attention to anatomical detail, and overall creativity.
- Participation in discussions and activities.
- A short written reflection on what they learned about the relationship between art and anatomy.

## **Extension Activity**

- Explore other artists who were influenced by scientific principles in their work.
- Investigate modern applications of anatomy in art, such as medical illustration or animation.

This lesson plan offers a holistic approach to learning, bridging the gap between the sciences and the arts, and encourages students to appreciate the interconnectedness of human knowledge.