

Shedding light on art; the use of optics in visual art

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This unit is designed to explore the topic of optics specifically in the realm of visual art and art conservation. Contemporary museum historians and conservationist have a plethora of tools to use when investigating artworks from history. In contemporary art conservation, the electromagnetic spectrum is employed to illustrate the unseen. Through the use of modern imaging techniques, art conservationist can see through the surface of paintings to the sketches and surprises underneath. Conservationist also use light to identify substances in paint, varnish, and pigment. Students will explore the effects if light on different materials through investigative experiments and research. This unit is designed for use in the middle school classroom, but it is easily applicable to high school. An elementary adaptation is possible, but the content will be challenging for younger students. Students will work with one to one technology to conduct online web-quest and research to form hypothesis. Additionally, this unit uses experiments to test out student hypothesis. Through reading this unit, teachers will gain an understanding of the electromagnetic spectrum, the use of different wavelengths of light in the imaging of historic artwork, and the techniques for how to use them.