

UNIT PLAN: 2nd Grade – 3 States of Matter (STEAM/Connections)

LESSON DETAILS

SUBJECT: Art

DATE:

TIME: 40 minutes per lesson

UNIT FOCUS:

- Creating a connection to the in-class science unit (the three states of matter) and various art media.
 - The pigment is the constant and the ways that the different media carry the pigment through the mixed media piece is the connective tissue.

STANDARD(S):

VA:Cr1.2.2a: Make art or design with various materials and tools to explore personal interests, questions, and curiosity.

VA:Cr2.1.2a: Experiment with various materials and tools to explore personal interests in a work of art or design.

VA:Cr3.1.2a: Discuss and reflect with peers about choices made in creating artwork

OBJECTIVE:

By the end of this Unit, students will be able to:

- Create a cohesive three layer mixed media piece
- Define what a pigment is and the role it plays in an art media (provides the coloration)
- Define what a binder is (what holds the art media together – what holds the pigment to the substrate; e.g. gum arabic in watercolor, wax in wax colored pencils or crayons)
- Define what a vehicle is in an art medium (the liquid in which the pigment is suspended during the painting process. It is the liquid component part; it is called the vehicle because it carries the pigment. In watercolour the vehicle is water.)
- Describe how each layer of media relates back to the three states of matter

MATERIALS: watercolor paper, watercups, brushes, crayons, oil pastels, colored pencils, drawing pencils, spraypaint, stencils [pre-made as a scaffold], wax-paper + scissors [to create their own simple stencils), laptops + internet for photo references

Resources

Videos:

How Crayons are Made

<https://www.youtube.com/watch?v=t5Mwlpayis4>

How to Make Watercolor Paints YOURSELF? – Collab. Genzäh Watercolours

<https://www.youtube.com/watch?v=-G1kf7Mnlu4>

Colorshift Watercolors [Ultrashifts] | Super Shifters | How to make Watercolors at Home

<https://www.youtube.com/watch?v=TQWhjBHpyDk>

Mike Learns How Spray Paint Is Made | Wheeler Dealers

<https://www.youtube.com/watch?v=QojavhJimlg>

How its made: aerosol can

<https://www.youtube.com/watch?v=ctMkHyMvrcl>

Art Historical Pieces: (Mixed Media Artists)

SCHOOL OF BEAUTY, SCHOOL OF CULTURE

2012, Kerry James Marshall, acrylic and glitter on unstretched canvas, 108 x 158 in

<https://figuringhistory.site.seattleartmuseum.org/kerry-james-marshall/school-beauty-school-culture/>

SOUVENIR I

1997, Kerry James Marshall, acrylic, collage, and glitter on unstretched canvas, 108 x 157 in.

<https://figuringhistory.site.seattleartmuseum.org/kerry-james-marshall/souvenir-i/>

Le déjeuner sur l'herbe: Les trois femmes noires

2010, Mickalene Thomas, rhinestones, acrylic, and enamel on wood panel, 120 x 288 x 2 in.

<https://figuringhistory.site.seattleartmuseum.org/mickalene-thomas/le-dejeuner-sur-lherbe-les-trois-femmes-noires/>

Tamika sur une chaise longue avec Monet

2012, Mickalene Thomas, rhinestones, acrylic, oil, and enamel on wood panel, 108 x 144 x 2 in.

<https://figuringhistory.site.seattleartmuseum.org/mickalene-thomas/tamika-sur-une-chaise-longue-avec-monet/>

Multiple Intelligences

Kinesthetic, Linguistic, Interpersonal, visual/spatial.

Vocabulary:

3 states of matter: **Solid** is the state in which matter maintains a fixed volume and shape, **liquid** is the state in which matter adapts to the shape of its container but varies only slightly in volume, and **gas** is the state in which matter expands to occupy the volume and shape of its container.

Pigment: a dry natural or man-made substance, usually in a fine powdered form, which is added to a binder (or vehicle) in order to produce coloured materials such as paint, dyes and inks.

Types of pigment

ORGANIC PIGMENTS: This type of pigments occurs naturally and they've been used for centuries. They're quite simple in their chemical structure. They're named organic as they contain minerals and metals that give them their colour. Organic pigment manufacturers produce them through a simple process that's made of washing, drying, powdering and combining into a formulation. Compared to inorganic pigments, these usage of these pigments is less frequent and that's why there are limited number of organic pigment suppliers. These pigments are used when the required colour strength isn't too much.

INORGANIC PIGMENTS: As you can guess by its name, this type of pigments is exactly the opposite type of organic pigments. These pigments are also known as "synthetic pigments." They're formulized in labs and offer great scope of control to inorganic pigment manufacturers. Inorganic pigments are manufactured by relatively simple chemical processes such as oxidation. Inorganic pigment suppliers supply this type of pigments mainly to paints, plastics, synthetic fibres and ink industry. In uses where bright colours are required, organic pigments are used as they bolster high colour strength. Inorganic pigments include white opaque pigments which are commonly used to lighten other colours and also to provide opacity.

Additional Pigment Information: https://www.artiscreation.com/Color_index_names.html

Binder: A binder is a material used in various art media that causes pigment particles to stick to each other and to the paper.

Types of Binders

- **Acrylic Paints:** Acrylic paints are formulated with acrylic polymer emulsion binders. Highly durable, acrylic binders dry to a clear, flexible, water-resistant film.
- **Oil Paints:** Oil paints are typically formulated with linseed, poppy, safflower or walnut oil binders. The type of oil binder used can impact drying time, film strength, and whether or not a color will yellow with time. Water-mixable oil paints are genuine oil paints, but the oil base has been modified so that it can be mixed with water.
- **Watercolor and Gouache:** Watercolor and gouache paints are formulated with gum arabic or other water-soluble binders, such as aquazol. They are not water resistant when dry.
- **Encaustic Paints:** Encaustic paints use a beeswax and a damar resin binder, designed to be heated and cooled during the painting process.
- **Tempera Paints:** Tempera and craft paints developed for use in scholastic settings can be formulated with either an acrylic polymer binder or plant-based starch binder, which is not usually water-resistant when dry.

Additional Binder Information: <https://www.romoe.com/en/conservation/binder>

Vehicle: the liquid in which the pigment is suspended during the painting process. It is the liquid component part; it is called the vehicle because it carries the pigment. In watercolour the vehicle is water.

Wax Resist: Coloured wax crayons or white wax candles are used in this technique which is based on the fact that wax repels water. Strokes are made with clear wax then overpainted with watercolour. The wash only adheres to the paper where there is no wax.

Undersketch: Underdrawing is a preparatory drawing done on a painting ground before paint is applied, for example, an imprimatura or an underpainting.

Visual Research: The process of gathering photo reference or style reference in the form of artwork created by other past or contemporary masters which will be used in the creation of your current piece

Procedure:

Discussion, Visual Research & Preliminary Sketch **[Materials: drawing pencil, printer paper]**

Day 1

- 1.) Teacher will place the following in a row in an easy to see accessible area of the room: marker, colored pencil, crayon, oil pastel, watercolor set, spraypaint can, pigment powder.
- 2.) Teacher will ask students "What are you studying in science?" [students will raise hands until all three states of matter are named]
- 3.) Teacher will explain what the pigment powder is and how it relates to art materials (it provides the color)
- 4.) Teacher will ask a volunteer to group the objects into solid, liquid, and gas groups [solid: colored pencil, crayon, oil pastel; liquid: marker and watercolor; gas: spraypaint]
- 5.) Teacher will explain the project: we are going to create three layer mixed media art pieces, where each layer will represent a state of matter. The subject matter will be student choice but will focus on using and combining different photo reference to create an interesting composition; ideally with a foreground, midground, and background as we've been learning about in art this year. [Students previously created a landscape unit that focused on foreground, midground, and background prior to this unit]
- 6.) Teacher will lay out the expectation that photo reference will be found and saved to desktop for future access.
- 7.) Teacher will lay out expectation that students will complete what is called a preliminary sketch on printer paper by the end of the class, and that the underdrawing on our final paper will be completed next class prior to the creation of the three layers.
- 8.) Students will work in voice level 1 - 2 (whisper - low talk) independent studio time

Underdrawing

[Material choices: drawing pencil, watercolor paper; preliminary sketch from last class, photo references]

Day 3

- 1.) Teacher will hold a “what do you notice, what do you wonder” of https://artsandculture.google.com/story/HAWBCAhf_FIFKg - Hidden layers, a gallery of European paintings 1500 - 1800 which shows the underdrawings and paintings of large scale pieces using infrared technology.
- 2.) Teacher will explain that we are following in the footsteps of old masters with our process of research, preliminary drawing before moving onto our fancier paper, underdrawing, then final layers of media.
- 3.) Teacher will set out the expectation that all underdrawings will be completely done, larger and with more detail than our preliminary drawings - that our preliminary drawings are a base that we are going to improve upon now that we are moving to larger paper.
- 4.) Students will work in voice level 1 - 2 (whisper - low talk) independent studio time

Solid State of Matter Layer

[Material choices: drawing pencil, colored pencil, oil pastel, crayon]

Day 4

- 1.) Teacher will hold a “what do you notice, what do you wonder” of one of the given mixed media art historical pieces, with special attention given to how the inclusion of different media provides different meaning to the piece.
- 2.) Teacher will demonstrate how to achieve gradients from one color to a fade out as well as how to transition two colors into each other through varying hand pressure. Teacher will demonstrate how students can create different kinds of texture and value build up through the following: hatching, cross-hatching, and stippling. Teacher will explain the concept of wax resist, and why we don't want to cover the paper completely with our solid layer, but instead leave moments of white where the watercolor can successfully hold onto the paper.
- 3.) Students will work in voice level 1 - 2 (whisper - low talk) independent studio time for the rest of the class. If the student finishes their current layer early, they can free-draw or free-read from the art bookshelf.

Liquid State of Matter Layer

[Material choices: watercolor, water-soluble marker + water]

Day 5

- 1.) Teacher will hold a “what do you notice, what do you wonder” of one of the given mixed media art historical pieces, with special attention given to how the inclusion of different

media provides different meaning to the piece.

- 2.) Teacher will demonstrate the following: wet on wet, wet on dry, dry brush, watercolor + salt, watercolor + isopropyl alcohol, and how to scrub out.
- 3.) Students will work in voice level 1 - 2 (whisper - low talk) independent studio time for the rest of the class. If the student finishes their current layer early, they can free-draw or free-read from the art bookshelf.

Gas State of Matter Layer

[Material choices: spraypaint (handled by teacher) with student choice of stencil + stencil placement or vignette]

Day 6

- 1.) Teacher will hold a "what do you notice, what do you wonder" of one of the given mixed media art historical pieces, with special attention given to how the inclusion of different media provides different meaning to the piece.
- 2.) Teacher will tell students that they will have a choice of stencil and stencil placement or of a vignette (a stylistic darkening of the edges to draw attention to the center of the composition). Teacher will be handling all spraypaint usage at this age. Spraypainting should happen outside on the grass with all students wearing masks as a precaution. Pieces will stay outside for a minimum of two hours to ventilate before being brought in onto the drying rack.

Critique

Day 7

The following class after the project wraps up, the first half of the class will be a full participation gallery walk with the critique routine of Praise-Critique-Praise. The second half of class will be an earned free-draw.

Extension: Students who finish their work early or are AT can always be pushed for more detailed or thoughtful compositions, more inclusion of demonstrated techniques and a higher level of polish

ASSESSMENT: *[Assess students' understanding and skills through their participation in discussions, the quality of their final pieces, and their ability to critique their own and peers' work,]*

Class Observations