

Lesson Plan Title

Indigo Dyeing

Grade Level

7th Grade

Subject Area

Science

MSCCRS

P.7.5A.2- Analyze and interpret qualitative data to describe substances using chemical properties.

Art Form

Visual Arts

MSCCR Creative Arts Standards

Va: Cr2.3.7a- Apply visual organizational strategies to design and produce a work of art, design, or media that clearly communicates information or ideas.

Duration

1 hour

Materials

Rubber gloves

Buckets

Water

Plastic table cloth liner

Paint stirrer

Cotton fabric cut into squares for dyeing

Indigo Dye kit

Rubber bands

Various size clothes pins

Objectives

TLs will create a piece of art that expresses physical and chemical change.

Vocabulary

Physical Change

Chemical Change

State of matter

Substance

Material

Heat

Reversible change

Irreversible change

Indigo Dye

Indican

Shibori

Lesson Description

1. TTW review physical and chemical changes.
2. TTW introduce TLs to the Art of Shibori with images (in resources below).
3. Shibori is a technique that results in both physical and chemical changes.
4. TTW divide the class into small groups.
5. TLW fill a bucket with 4 gallons of water.
6. TLW add the thiox and soda ash to the water while stirring.
7. TLW add the reduced indigo.
8. TLW stir in a clockwise motion until indigo is dissolved, reverse the direction and place the lid on the bucket.
9. TLW let indigo sit for 20 minutes.
10. TTW demonstrate shibori folding techniques. TLW should fold their cloth and bind to create a resist.
11. TLW remove lid from the indigo vat and remove the frothy bloom. The bloom is the result of oxygen leaving the vat.
12. Now the vat is ready for dyeing.
13. TLW put on rubber gloves.
14. TLW dip our fabric bundle into clean water and wring out.
15. TLS hold the bundle under the surface of the indigo vat, massaging the dye into the fabric for 1 minute.
16. TLW remove bundle, notice the physical characteristics of the bundle.
17. It should be a yellow color that changes from green to blue as it oxidises.
18. The bundle may be dipped multiple times to obtain a deep blue color.
19. TLWs will allow the bundle to sit for 10 minutes.
20. TLWs will rinse under water.
21. TLs will unbind the bundle and admire your design.
22. Lastly hang it to dry.

Recommended Resources

Indigo Dye Kit- <https://www.dharmatrading.com/kits/starter/sets/indigo-dye-kit.html>

Images of Shibori-

https://www.google.com/search?q=art+of+shibori+images&rlz=1C5CHFA_enUS904US904&oq=art+of+shibori+images&aqs=chrome..69i57j0.6008j0j7&sourceid=chrome&ie=UTF-8

Shibori: <https://www.seamwork.com/issues/2015/08/shibori-dyeing>

Indigo Dyeing Chart- <https://artsnowlearning.org/wp-content/uploads/2017/01/Indigo-Dyeing-Chart.pdf>

Chemistry of Indigo- <https://artsnowlearning.org/wp-content/uploads/2017/01/Chemistry-of-Indigo.pdf>

Extended Learning Activities

A great extension would be to have the students make a pillow cover or handkerchief out of the shibori pieces.

Sources

<https://artsnowlearning.org/project/module-5-chemical-physical-changes/>

Tips

N/A

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