

Lesson Plan Title

Ionic and Covalent Bonds Paintings

Grade Level

7th Grade

Subject Area

Science

MSCCRS

P.75C.6- Using the periodic table, make predictions to explain how bonds form between groups of elements.

Art Form

Visual Arts

MSCCR Creative Arts Standards

VA:Cn10.1.7a- Individually or collaboratively create visual documentation of places and times in which people gather to make and experience art or design in the community.

Duration

1 hour

Materials

White construction paper- one per group

Tempera paint in primary and secondary colors

Paint palettes

Paint brushes, medium size

Water containers

Objectives

TLs will create a piece of art that displays covalent and ionic bonds, **using concentric circles and warm and cool colors.**

Vocabulary

Covalent Bonds

Ionic Bonds

Concentric Circles

Cool Colors

Warm Colors

Lesson Description

1. TTW begin by reviewing several different simple elements on the periodic table such and hydrogen, carbon, oxygen, and nitrogen. These elements easily form bonds.
2. TTW then explain that these elements can come together to form different bonds such as covalent and ionic bonds.
3. TTW play a review video (in resources below) on how covalent and ionic bonds form.
4. TTW explain that we will create a piece of art from an artist called Kandinsky. Kandinsky uses color, circles and squares to create meaning through art.
5. TTW read a short biography on Kandinsky and how he uses his work.
6. TTW then show the learners the print. TLs will talk about what they see in the print.
7. TTW explain that each circle will represent an element, but if they are next to one another, they must form a bond.
 - a. For example, if we decided to do hydrogen on the circle. Hydrogen has an atomic number of 2; therefore, it must have 2 additional circles around it.
 - b. Then we must find another element that will bond with it. Oxygen will bond with it, and TLs can display oxygen in the next circle.
 - c. TLs will have to tell what type of bond is being formed as well.
8. Here are some pointers when creating the art.
 - a. Paint each circle and background a different color.
 - b. The same colors should not touch
 - c. Try to stay inside the lines.
9. TTW pass out all supplies, and each group will complete six squares. Each group can create one paper with six squares.
10. TTW walk around the room, providing help when needed.
11. When the learners are done, each group will present their paintings and explain why they chose what they did.

Recommended Resources

1. Covalent and Ionic Bonds- <https://www.thoughtco.com/ionic-and-covalent-chemical-bond-differences-606097#:~:text=The%20two%20main%20types%20of,bonds%20occur%20between%20identical%20atoms.>
2. Covalent and Ionic Bonds Video- https://www.youtube.com/watch?v=S_k0kr2eZSQ
3. Kandinsky Biography and Lesson- <https://artprep.weebly.com/kandinsky-concentric-circles.html#:~:text=Kandinsky%20%22Squares%20with%20Concentric%20Circles,an%20art%20style%20called%20Expressionism.>

Extended Learning Activities

N/A

Sources

N/A

Tips

N/A

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