

Sycamore Elementary / Holt Public Schools

Project Title: The States of Matter and Integrated Arts

Grade: 4th

Overall Goal of the Project:

To integrate the learning in science with the learning in integrated art.

Objective(s):

- The students will understand the concept 'zoom in' using drawing of shells and magnifying glasses.
- The students will create a rough draft of the life of a liquid, solid, and gas.
- The students will create a presentation using Moviemaker with the theme of The States of Matter.
- The students will perform a play using expression in the theme of The States of Matter.
- The students will create percussion style music in the way the molecules move in each state of matter.
- The students will understand how to use video and computer equipment appropriately in order to create movies of the states of matter.

Arts Standards (GLCEs, HSCEs)

1. 3-5.CI.2. use a variety of technology tools and applications to demonstrate his/her creativity by creating or modifying works of art, music, movies, or presentations
2. ART.VA.I.5.1 Use technologies to communicate ideas and experiences.
3. ART.VA.V.4.3 Identify connections between technology and the arts.
4. ART.T.III.4.7 Predict emotions and thoughts evoked by performances.
5. ART.M.I.4.5 Blend timbres and match dynamic levels in the group in response to the cues of the conductor.
6. ART. M.II.4.2 Create through exploration, improvisation and composition answers that are rhythmic and melodic.

Content Area Standards (GLCEs, HSCEs)

Science Process - Reflection and Social Implications

S.RS.04.11 Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.

S.RS.04.16 Identify technology used in everyday life.

Science Process - Inquiry Analysis and Communication

S.IA.04.12 Share ideas about science through purposeful conversation in collaborative groups.

S.IA.04.13 Communicate and present findings of observations and investigations.

P.EN.04.12 Identify heat and electricity as forms of energy.

Physical Science - Properties of Matter

P.PM.04.23 Compare and contrast the states (solids, liquids, gases) of matter.

P.PM.04.16 Measure the weight (spring scale) and mass (balances in grams or kilograms) of objects.

P.PM.04.17 Measure volumes of liquids in milliliters and liters.

P.CM.04.11 Explain how matter can change from one state (liquid, solid, gas) to another by heating and cooling.

Science Process - Inquiry Process

S.IP.04.11 Make purposeful observation of the natural world using the appropriate senses.

S.IP.04.12 Generate questions based on observations.

S.IP.04.13 Plan and conduct simple and fair investigations.

S.IP.04.14 Manipulate simple tools that aid observation and data collection (for example: hand lens, balance, ruler, meter stick, measuring cup, thermometer, spring scale, stop watch/timer, graduated cylinder/beaker).

Goals related to Eight habits of Mind

1. Develop craft – students will use their content knowledge from science in creating different forms of art in integrated art class.
2. Engage and persist – both area teachers will use the knowledge and ideas to emphasize the importance and skill of each other's content. The information will be repeated in both classes and taught in multiple teaching forms and expressed by the students in multiple learning styles.
3. Stretch and explore – students will be directed in integrated arts but the final outcome is up to them, the artists.

Instructional Outline

1) Set Up

a) Diagnosing

For the Movie maker presentation I gave the students an assignment using this program prior to our states of matter assignment. This way I could see what each student needs help with.

As for the video each lesson was created in sections so each student could learn effectively also the students worked in pairs.

I also invited the science teachers into my classroom to ensure the science vocabulary was used effectively and to demonstrate that the students were held accountable for the accurate information in both subject areas.

b) Classroom Management

I did need to explain new procedures, we worked with various new technology forms that the students needed to work with. Also I took them through steps for each part of the lessons to scaffold into a larger thought.

c) Accommodations

The students with special needs needed further assistance and individual instruction. Also parts of each lesson were altered to quietly accommodate for their needs. By pairing individuals with other students in the class or I would work with students individually.

d) Prep Work/Materials

Materials were step up prior to each lesson. Last year the elementary science program, Robyn, wrote and received a proposal for Flip cameras and laptops, a total of seven. We were fortunate enough to use these for their integrated lesson. So preparing time to use

these was necessary and giving the students the proper instruction on how to use this equipment.

2) Beginning

a) Introduction

The students learned about the states of matter in science so in integrated arts they were familiar with the subject and eager to share their learning in my classroom.

b) Warm Up/Ice Breaker

We did many warm up activities for each part of the unit plan. Viewing videos of animations with music, viewing photos and how to create a good composition, practicing plays in small groups and as a class, working in the computer lab to familiarize student with the technology.

3) Middle

a) Main Activity

1. Personal narrative, snapshot of your life, snapshot and zoom in of shells in drawing, use of moviemaker. Examined photos, used magnified glasses.
2. Narrative rough draft of solid, liquid, gas.
3. Practice play and discuss expression
4. Create Moviemaker using images and notation of states of matter, use voice to tell the story and add music created by the students in class.
5. Use Flip cameras and knowledge from zoom in drawings and narrative writings to narrate as zooming out of solids, liquids, and gas forms.
6. Perform play as a class using expression and movement to enhance the part of the play.

b) Reflection

1. Students view each others movies and performances, make connections to science and all the parts through the arts.
2. Students will complete critique form based on creation of all three art projects

4) End

1. Performance of Play
2. Movies created by each student
3. Moviemaker presentation with music created by students

a) Closure

Performances and critiques will announce the end.

5) After

- a) Follow up assignment

We are videotaping student reactions and opinions of the lessons.

- b) Assessment Task

one major assessment is their learning in science. Did they understand the States of Matter more clearly.

- c) Document

We have many photos and videos of the students learning and of their final products.