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School In The Park Curriculum 2011-2012

Reuben H. Fleet Science Center Rotation 1 Grade 5

Topic: Physical Science - Physical Properties

Overarching Theme:

Students observe, identify and separate mixtures and solutions, conduct various experiments and investigate the physical and properties of multiple substances using scientific explanation of inquiry.

Instructional Goals & Objectives for the Week:

Students will:

- Discuss and demonstrate states of matter and phase changes.
- Compare properties of solid, liquid, and gaseous substances.
- Investigate physical properties: volume, mass, magnetism, shape, color, buoyancy, electrical conductivity.
- Apply knowledge of physical properties to separate 3 different mixtures.
- Select appropriate scientific tools to conduct 3 mixture experiments.
- Compare different types of mixtures, solutions, alloys, and emulsions.
- Observe the differences between Physical and Chemical Changes.
- Understand that scientist use chemical symbols and chemical formulas to describe how atoms rearrange themselves during a chemical reaction.
- Perform a scientific experiment to observe Indicators of a chemical change.
- Perform a LifeSavers Inquire Investigation and investigate variables, which may affect the dissolving rates of LifeSavers.
- Demonstrate safety guidelines/rules for a scientific experiment.
- Use and demonstrate knowledge of the scientific process.

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Career Connections:

Endless possibilities!

Chemist- A chemist studies matter on an atomic and molecular level to understand how elements join together.

Geochemistry- A geochemist is a type of scientist who uses both geology and chemistry to study the earth. A geochemist works primarily with rocks and minerals and various substances found in the earth.

Oceanography- An oceanographer studies ocean plants, animals and the chemical and physical properties of the ocean.

Space Exploration- Study of the composition of stars, planets and using space technology to explore outer space. An astronaut conducts investigation by spaceflights or robotic spacecrafts.

Forensic Science- A Forensic scientist helps solve crimes by collecting and analyzing physical evidence and other facts to solve a crime.

Teacher/College Professor in the Sciences- Teach chemistry, biology, geology etc... and conduct research in their chosen fields.

Schedule and Activity Descriptions

MONDAY

Introduction into Chemistry and Matter

Vocabulary: alloy, buoyancy, chemistry, dissolve, emulsion, evaporate, gas, liquid, mass, matter, physical property, solid, mixture, solubility, solution, volume

Purpose(s):

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Outcome(s):

 Students will

- separate three different types of mixtures based on their physical properties (sand & gravel, gravel & Rice Krispies, sand & salt).
- use scientific equipment (strainers, Petri dishes, syringe etc...) to separate mixtures.
- write a sequential procedure to separate mixtures.
- work in table-halves to predict, test and draw conclusions about the best method for separating mixtures.

Schedule:

9:00-9:20

Welcome and Introduction

The classroom teacher will seat students in table groups.

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- In Learning Lab 2 (first classroom) there are 6 tables that seat 6 each.
- In Learning Lab 1 there are 5 tables that seat 6 each.

Students will

- Be welcomed to the Reuben H. Fleet Science Center.
- Daily SITP Motto and stretch.
- Review checkout /return procedures for Take-home science bags.
- Be issued science notebooks to record and organize scientific information.
- Understand the procedure for gluing and writing notes into their science notebooks.
- Review policies (Safety guidelines, respect materials, follow directions).
- Take a Pre-Post test.

General Teacher involvement for the Week:

- Organize students into appropriate seating assignments
- Maintain classroom behavioral standards
- Help pass out classroom materials
- Check student's understanding on verbal/instructional directions

General Aide involvement for the Week:

- Help pass out classroom materials
- Check student's understanding on verbal/instructional directions
- Assign name tags/journals
- Pass out Pre-Post test
- Lead SITP Mantra and stretching

9:20-9:45 - Introduction to Chemistry and Matter (Part 1)

Students will

- Understand that scientific explanations (process skills) are what chemist/scientist use to investigate and support investigations and experiments.
- Be introduced to Chemistry and know that chemistry is the study of matter and the changes it goes through.
- Be introduced to a brief discussion of the three states of matter and come up with ideas about their physical properties. (Whole class)
- Be introduced to the definition and characteristics of Physical Properties.

9:45-10:00-What are Physical Properties?

Bead Classification

Students will

- Sort beads based on physical properties (color, shape, size etc.) (Table-half)

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- Understand that physical properties are characteristics of an object that can be observed without changing the identity of the object.

10:00- 10:15 What is a Mixture?

Students will

- Brainstorm a list of possible mixtures. (Fruit salad, cereal and milk, etc.) (Whole class)

10:15-11:20-Separating Mixtures

Students will

- Participate in a class demonstration of separating a mixture of sand and marbles.
- Separate three different types of mixtures based on their physical properties (sand & gravel, gravel & Rice Krispies, sand & salt). (Table-half)
- Write a sequential plan to separate mixtures in their science notebooks.
- Clean up tables and prepare notes for class discussion
- Participate in a class discussion about which physical properties were used to separate each mixture.
- **Teacher and Aide:** Encourage students to collectively talk about ideas and help students work out any issues they may encounter when separating mixtures. Assist students to think about using a variety of different objects to separate mixtures. "I wonder what would happen if ..."
Assist with classroom materials. **Be Patient!**

11:20-11:30 Writing Prompt-

Working as scientist, we use physical properties to separate mixtures to organize objects, substances and even your lunch! Name three physical properties you use to separate your collection of rocks, turkey sandwich or items in your backpack. **Hint:** think about how you separated your mixtures in today's activity-size, shape, volume, texture?

Checking for Understanding:

Students will

- Select correct tools to separate mixtures.
- Record an accurate and sequential procedure for separating mixtures.
- Verbally describe a sequential procedure to separate a mixture to a friend.

Additional Information About the Day:

- If time permits, begin Mixture Maps
- Pass out question of the day.

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TUESDAY

Mixtures and Solutions, continued Ice and Salt

Vocabulary: alloy, emulsion, physical property, solid, mixture, solubility, solution

Purpose:

Outcome(s):

- Students will work in table-halves to predict, test and draw conclusions about the best method for separating mixtures.
- Students will conduct multiple trials to determine the effects salt has on the temperature of ice.
- Students will successfully separate mixtures using scientific equipment based on the mixtures physical properties.
- Students will observe when salt is added to ice, the temperature drops to minus 0 degrees.

Schedule:

9:00-9:15

Vocabulary Review/Take-Home Check-In

Students will

- Work with their table to review vocabulary from the previous day.
- Return Take-Home Science kits (refilled for the next group of students).

9:15-9:35-Challenge Question:

Which of these materials is a mixture? Why do you think so? (Place the following items on each table: a piece of granite, a paper clip, a bottle with water and oil, and a cup with salt and pepper).

Students will

- Think-Pair-Share and write their predictions in their science notebooks.
- Share their answers with the class. Ask student to explain how they could separate the mixtures. (What physical properties would they use to separate them?)

9:35-10:00-Separating Mixtures (continued if needed)

Students will

- Continue separating mixtures based on their physical properties (sand & gravel, gravel & Rice Krispies, sand & salt). (Table-half)
- Write a sequential plan to separate mixtures in their science notebooks.
- Clean up tables and prepare notes for class discussion

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- Participate in a class discussion about which physical properties were used to separate each mixture.

10:00-10:20-Mixture Maps

Students will

- Use a circular map to write the definition and examples of mixtures, solutions, alloys and emulsions. Students will be encouraged to use previous examples from separating mixture investigation and mixture maps. (Whole class)

10:20-11:20 Part 1: Investigating Ice and Salt (prelude to Part 3: Making Ice Cream)

Students will

- Conduct investigations to determine what effects salt has on the temperature of ice.
- Use thermometers to measure the temperature of ice water (°C) (Table-half)
- Construct organized data sheet for ice and salt investigation.
- Record observation and questions in their science notebooks.
- Generate a list of **testable and non-testable questions** to investigate in Part 2 of Investigating Ice and Salt (Table-half).
- **Teacher and Aide:** Encourage students to discuss ideas about variables they can test for Part 2 of investigating ice and salt. Have students choose a question (can be testable/non-testable at this point) and write it down on magnetic sentence strips. Encourage students to place their table-half question on the board for whole class discussion.

11:20-11:30 Writing Prompt-

Thinking about today's ice and salt experiment, what other substances/equipment would you use to decrease the temperature of the mixture? What is your reasoning for choosing such items?

Note: students can choose a testable/non-testable question to expand upon from our previous class discussion.

Checking for Understanding:

Students will

- Use scientific tools correctly.
- Record an accurate and sequential procedure for separating mixtures.
- Verbally describe a sequential procedure to separate a mixture.
- Design organized data sheets for ice and salt investigation.

Additional Information About the Day:

- Separating sand and salt is challenging for students. Prompting from the teacher may include a story about going to the beach. (You swim in salt water-ocean and when the water evaporates the salt is left behind)

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Solubility is the physical property used to separate sand and salt, evaporation is the process.

- Review vocabulary and/or use fishbowl questions.
- Pass out question of the day.

WEDNESDAY

Ice and Salt Investigation (continued)

Vocabulary: dissolve, emulsion, mixture, solubility, solution

Purpose(s):

- Students practice process skills to support testable research questions.

Outcome(s):

- Students will conduct multiple trials to determine the effects salt has on the temperature of ice.
- Students will observe when salt is added to ice, the temperature drops to minus 0 degrees.
- Students will design organized data charts to support testable research questions.

Schedule:

9:00-9:15

Vocabulary Review/Take-Home Check-In

Students will

- Work with their table to review vocabulary from the previous day.
- Return Take-Home Science kits (refilled for the next group of students).

9:15-9:35-Challenge Question: “Where did the frost on the outside of the can come from?” “What is the process called?”

- Think-Pair-Share and write their predictions in their science notebooks.
- Participate in a class discussion about the process of freezing (going from a liquid to a solid). Demonstrate the process of freezing with students acting as water molecules.

9:35-10:45-Part 2: Investigating Ice and Salt-Student’s testable questions

Students will

- Discussion of **testable and non-testable questions** regarding lowering the temperature of ice. (i.e. using a different salt-Calcium Chloride, Magnesium Chloride; different quantities of salt; different amounts of ice, etc...) (Table-half).

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- Write 1 testable/non-testable question on magnetic strip (Table-half)
- Participate in class discussion about what are testable and non-testable questions for today's experiment.
- Decide to investigate 2 to 3 **testable questions** as a class and then each table will choose 1 question to investigate. (Whole class/table-half).
- Conduct investigation (Table-half).
- Practice developing process skills to conduct a Claim, support student's claim by the Evidence gathered, and explain the Reasoning for today's investigation. **Note:** Scaffolding Process Skills: Reasoning for today's investigation will be given to students so they can focus on the first two components of the Process skills (Whole class).
- Participate in class discussion about their Claim and Evidence in today's investigation.

10:45-11:00 Part 3: Making Ice Cream

Students will

- Brainstorm a material list using the state of matters/mixtures and solutions on board. (Whole class)
- Record information in their scientific notebooks.
- Discuss physical change of making ice cream.

11:00-11:20 Churning Ice Cream

Students will

- Measure ingredients to make ice cream. Each table will be responsible for measuring specific ingredients and taking turns churning the ice cream. Note: salt and ice will need to be continually added through out the ice cream making process (Tables).
- Predict how long the mixture of ice cream will take (going from a liquid to a solid) when churning by hand!
- Eat and clean up their physical change investigation-ice cream!.
- **Teacher and Aide:** Have students explain the ingredients their table added and how churning will effect the process of making ice cream. Re-examine student's investigation on salt and ice. Have students help hold ice cream machine when churning.

11:20-11:30 Writing Prompt-

The Dreyers' Ice Cream Company is in the process of developing a slow churned vanilla ice cream. Before the ice cream can be release to the general public, you must first explain how the ice cream freezes (the process of making ice cream and how the salt lowers the temperature) to the Board of Directors-The head honchos that make ALL the decisions! They will then decide if they should start production of slow churned vanilla ice cream.

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Checking for Understanding:

Students will

- Design accurate chart for investigating ice and salt.
- Verbally describe procedure and data when testing testable ice and salt investigation.
- Verbally describe the process of why salt lowers the temperature of ice in the process of making ice cream.

Additional Information About the Day:

- Review vocabulary and/or use fishbowl questions.
- Pass out question of the day.

WEDNESDAY

After School Balboa Park

Finding Mixtures in Balboa Park

12:20-12:40 Review of Mixtures

Students will

- Review definition of mixture.
- Brainstorm list of possible mixtures found around Balboa Park.

12:40-1:15 Finding Mixtures in Balboa Park

Students will

- Receive instructions on the proper use of a Flip Camera (how to turn it on, point, and record a short video). (Whole class).
- Take 10 pictures of mixtures they find in the Park and record their information on their data sheet. (Places to visit may include Zorro Gardens, Botanical Gardens, Koa Pond, etc...). (Table-half).

1:15-2:00 Making Story Boards/Mixture Movies

- Review and discuss pictures taken by classmates. (Whole class)
- If time permits: Create a story board to narrate how a mixture got to be in Balboa Park for visiting tourists to see or create an imovie.
- **Aids** will help in the supervision of ALL students. Divide students into smaller groups when touring the park. Remind students of assignment and appropriate camera filming. Assist students to think “outside the box” when approached with a hidden mixture (i.e. composite lamppost)

2:00-2:40 Physical Activity

Students will

- Participate in an obstacle course outside/station rotation (Location: Natural History Fig Tree, Butterfly Garden or Fleet Community Forum if raining).

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Activities may include: Light Stretching
Hula Hoops
Lap around the Fig Tree
Relay around the cones
Soccer dribble

Aids will help in the supervision of ALL students. Aids can lead a group of students in a station rotation and encourage students to participate in the activities.

2:45-2:55 Writing Prompt-

You are part of the Balboa Park recycling program. Each day your program receives many items that can be separated (mixtures of recycled materials-newspaper, aluminum cans, plastic bottles, etc...). What methods would you use to separate all your recyclables?

I would separate _____ by using _____.

2:55- 3:00 Clean up/Facilitators take students to buses: Buses leave Park

THURSDAY

Investigating Physical Changes

Vocabulary: chemical change, physical change, physical property

Purpose(s):

- Students will participate in an investigation to learn more about physical and chemical changes

Outcome(s):

- Students will observe and provide evidence for 6 investigations to determine if physical changes have occurred.
- Students will identify indicators of a chemical change (gas, color change, odor etc...)

Schedule:

9:00-9:15

Vocabulary Review/Take-Home Check-In

Students will

- Work with their table to review vocabulary from the previous day.
- Return Take-Home Science kits (refilled for the next group of students).

9:15-9:35 Challenge Question: Producing a strong Scientific Claim

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Students will

- Read Paragraph: Whenever ice cream sales rise, so do shark attacks. (Note: the purpose of this paragraph is to get students to think about cause and effect and coming up with a large amount of possibilities to test (testable and non-testable questions). When two pieces of information are correlated, how do scientists describe the phenomenon? What facts/evidence would students include?)
- See attached article.

9:35-11:00 Physical Changes

Students will

- Participate in an investigation to learn more about physical changes. (Table groups)
- Rotate between 6 different stations to determine if the investigation is a physical change. Note: chemical changes will be introduced during the discussion when students share their results.
- Fill appropriate data charts and tables in their science notebooks.
- Provide evidence for their predictions/conclusion and share their results with the class. Student's observations that are not consistent with the definition of a physical change can now be thought of as a chemical change.

11:00-11:20 Discussion of Physical and Chemical Changes

Students will

- Compare the differences between physical changes and chemical changes by making a T-chart and record information in science journals (Whole class).

2:45-2:55 Writing Prompt-

Your family has planned a camping trip this weekend and you will be making S'mores (chocolate, graham crackers and marshmallows) over the camp fire. What are the physical and chemical changes that occur when making S'mores? What are the indicators (clues) that lead you to this conclusion?

Checking for Understanding:

Students will

- Record procedures and make a reasonable prediction in the physical change investigations.
- Work with a partner to complete today's investigations (sharing equipment, verbally discussing directions and procedures to their partner, etc.)

Additional Information About the Day:

- Additional physical change experiments can be given to students who finish first.

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- Review vocabulary and/or use fishbowl questions.
- Pass out question of the day.

FRIDAY

Chemical Changes and Indicators

Vocabulary: chemical change, chemical property, indicator, physical change, physical property, variable

Purpose(s):

- Students will participate in an investigation to observe evidence of a chemical change.

Outcome(s):

- Students will identify the dependent and controlled variables in an investigation.
- Students will select appropriate tools and make quantitative observations in today's investigation.
- Students will perform 4 experiments using Sodium Bicarbonate, Calcium Chloride and Phenol Red to determine evidence (indicators) that a chemical change has taken place.

9:00-9:15 Schedule:

Vocabulary Review/Take-Home Check-In

Students will

- Work with their table to review vocabulary from the previous day.
- Return Take-Home Science kits (refilled for the next group of students).

9:15-9:40 Challenge Question: Decide which items on your table are physical changes and which are chemical changes? What are your clues? Why do you think this?

Students will

- Think-Pair-Share and write their predictions on 4 items in their science notebooks.
- Follow directions for any items on table-pour baking soda into the vinegar etc.
- Class discussion on the 4 physical and chemical changes.

9:40-9:50 Safety Procedures for Chemical Change

Students will

- Participate in a discussion on the tools and procedures that scientist use while conducting an experiment.

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9:50-11:05 Indicators of a Chemical Change

Students will

- Combine various chemicals to produce several chemical changes. (Students will be looking specifically for evidence that might tell us that a chemical change has happened.) (Table-half)
- Use scientific tools and safety goggles at all times during today's experiment. (Whole class)
- Design data table for Chemistry in a bag experiment.
- Follow procedural directions and write observations/ predictions /evidence of a chemical change in their science notebooks.
- Be reminded that they can only change *one variable* at a time.
- Assist in clean up-wipe tables, throw away trash, put away materials.
- Review and brainstorm possible indicators of a chemical change (Whole class).
- **Possible Teacher Moments:** Discuss variables in a scientific experiment. Relate student's prior knowledge of experiments to today's activity.
- **Teacher and Aide:** Encourage groups of students to collectively talk about ideas/procedures. What do students think will happen when ____ ?

11:00-11:15 Chemical Equations

Students will

- Review chemical equations (reinforce products, reactants and the conversion of matter.
- Write and label chemical equation in science notebooks.
- **Possible Teacher Moments:** interjection of knowledge of chemical equations-products, reactants and conversion of matter.

11:15-11:30 Review and Post-Test

Classroom teachers will conduct a brief review and then give the post-test.

Checking for Understanding:

Students will

- Test different variables as part of an experiment that could be changed depending on what you are investigation.
- Record procedures and make a reasonable prediction.
- Work with a partner to complete today's experiment (sharing equipment, verbally discussing directions and procedures to their partner, etc.)

Additional Information About the Day:

- Review for Pre/Post Test/Jeopardy

Assessment

1. The building blocks of matter are called _____.
 - a. hydrogen
 - b. solids
 - c. atoms
 - d. molecules
2. What are the 3 states of matter?
 - a. solid, gas, water
 - b. solid, liquid, gas
 - c. hard, soft, smooth
 - d. salty, sweet, sour
3. Which of the following is **NOT** an example of a physical property?
 - a. volume
 - b. odor
 - c. color
 - d. buoyancy
4. A(n) _____ is a combination of two or more substances that can be physically separated.
 - a. metal
 - b. mixture
 - c. compound
 - d. atom
5. The diagram below shows a mixture of salt and water.
(Printed test includes picture of beaker of saltwater.)
What could you use to separate this mixture?
 - a. balance
 - b. magnet
 - c. the Sun
 - d. funnel
6. Inflating a balloon is an example of a _____ change.
 - a. physical
 - b. chemical

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- c. radical
- d. elemental

7. Sharpening a pencil is an example of a(n) _____ change.

- a. physical
- b. chemical
- c. compound
- d. element

8. Which of the following represents a chemical change?

- a. ice cream melting
- b. getting a haircut
- c. cutting a piece of paper
- d. baking a cake

9. Which of these is a possible indicator of a chemical change?

- a. temperature
- b. gas is released
- c. color change
- d. all of the above

10. During a chemical reaction, the atoms of the reactants are:

- a. gained
- b. rearranged
- c. lost
- d. unchanged

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Use complete sentences to answer these questions:

| | |
|--|--|
| <p>11. The chemists at the Fleet want to organize their chemistry lab equipment but don't know where to start. What advice can you give the chemists for separating and organizing all the flasks, graduated cylinders, beakers and test tubes? Describe how they could separate the equipment by their physical properties.</p> <hr/> | <p><u>WORD BANK</u> Buoyancy Color Hardness Mass Shape Size Volume</p> |
| <p>12. During this week's chemistry in a bag experiment, what type of change occurred? Was it a physical change or a chemical change? Support you answer by listing at least 3 examples of evidence/indicators you observed.</p> <hr/> | <p><u>WORD BANK</u> Change Color Gas Indicator Odor Produce Substance Temperature Volume</p> |

California State Standards Addressed:

Physical Science Standards:

- 1 a. Classify objects (e.g., rocks, plants, leaves) in accordance with appropriate criteria.
- 1 b. *Students know* all matter is made of atoms, which may combine to form molecules.
- 1c. *Students know* metals have properties in common, such as high electrical and thermal conductivity. Some metals, such as aluminum (Al), iron (Fe), nickel (Ni), copper (Cu), silver (Ag), and gold (Au), are pure elements; others, such as steel and brass, are composed of a combination of elemental metals.
- 1 f. *Students know* differences in chemical and physical properties of substances are used to separate mixtures and identify compounds.
- 1 g. *Students know* properties of solid, liquid, and gaseous substances, such as sugar (C₆H₁₂O₆), water (H₂O), helium (He), oxygen (O₂), nitrogen (N₂), and carbon dioxide (CO₂).
- 1 i. *Students know* the common properties of salts, such as sodium chloride (NaCl).

Investigation and Experimentation:

- 6 b. Develop a testable question.
- 6 d. Identify the dependent and controlled variables in an investigation.
- 6 f. Select appropriate tools (e.g., thermometers, meter sticks, balances, and graduated cylinders) and make quantitative observations.
- 6 g. Record data by using appropriate graphic representations (including charts, graphs, and labeled diagrams) and make inferences based on those data.
- 6 h. Draw conclusions from scientific evidence and indicate whether further information is needed to support a specific conclusion.
- 6 i. Write a report of an investigation that includes conducting tests, collecting data or examining evidence, and drawing conclusions.

Key Vocabulary Definitions:

- **Alloy:** a mixture of a metal and one or more other elements.
- **Atom:** the smallest unit of an element that has all the properties of that element.
- **Buoyancy:** having the ability to rise or float in a fluid.
- **Chemistry:** the study of matter and the changes it undergoes.
- **Chemical change:** a change in matter during which the properties of the substances change and produce something new.
- **Compound:** substance that contains two or more elements chemically combined in a fixed proportion.
- **Condensation:** to change form a gas to a liquid.
- **Element:** a substance made up of only one atom; substance that cannot be separated into simpler substances by a chemical change.

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- **Emulsion:** a mixture containing drops of liquid in another liquid: usually separates upon standing.
- **Dissolve:** to break down into molecules and mix evenly and completely.
- **Freezing:** to change form a liquid to a solid.
- **Gas:** state of matter without a definite shape or volume.
- **Graduated Cylinder:** a container for liquids with a wider base gradually narrowing at the top and marked with a graded scale.
- **Liquid:** state of matter with a definite volume but no definite shape.
- **Matter:** anything that has mass and takes up space.
- **Mass:** the amount of matter an object.
- **Melting:** to change from a solid to a liquid.
- **Mixture:** blend of two or more materials that are not chemically combined.
- **Molecule:** a grouping of two or more atoms joined together by chemical bonds.
- **Periodic Chart:** a way to organize elements according to their chemical properties.
- **Physical change:** a change that alters the form or appearance of a substance but does not make the material into another substance.
- **Physical property:** characteristic of a substance that can be observed without altering the identity of the substance.
- **Plasma:** a fourth state of matter composed of ions and electrons; formed when gases are heated to extremely high temperatures.
- **Solid:** state of matter with definite shape and a definite volume.
- **Solubility:** the ability of one substance to be dissolved in another substance.
- **Solution:** a type of mixture in which the particles of the two substances are evenly mixed.
- **Sublimation:** to change directly from a solid to a gas.
- **Variable:** a part of an experiment that can be changed depending on what you are investigating.
- **Volume:** the amount of space an object takes up.

Classroom Information

Seating groups:

In LL2 (First classroom) there are 6 tables. Each table seats 6-Total: 36 students

In LL1 there are 5 tables. Each table seats 6 chairs -Total: 30 students

Technology Available: Information not provided by museum at this time.

Additional Materials for Students

Seeking Cause and Effect:

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Whenever ice cream sales rise, so do shark attacks.

- Eating ice cream makes you tastier.
- Sharks like ice cream but find it really difficult to buy them, so they resort to eating humans in the hope they will still have ice cream inside them.
- Ice cream sales rise in hotter weather, which also forces sharks to get their Aircon serviced. This is very expensive and angers the shark. Angry shark equals more attacks.
- Eating ice cream will cause people to urinate a large quantity of lipids (fats) similarly to seals and other fatty sea mammals, which happen to be the sharks' favorite prey.
- When there is a horrible shark attack on the beach, people stay out of the water and have an ice cream instead.
- It is easier to swim away from a shark if you are not trying to hold on to an ice cream.
- Ice cream sales rise in hot weather, people go to the beach in hot weather, there are sharks at the beach, people steal the sharks' deck chairs, the sharks attack them.
- During warm weather more people swim in the sea. Warm weather also heats up the sea which brings the sharks closer to shore.
- Warmer weather brings people to beaches where people buy ice cream, sharks see ice cream, sharks become jealous. The sharks want the ice cream, and attack people to get it.