Curriculum Map
Name of Teacher: Sr. Aram
Subject: Science (4th Grade)
Month: September

Unit/Theme

- Scientific Summer
- Science Fair
- STEAM
- Be a Scientist
- Ch.1: Ecosystems (3 lessons were covered)

Enduring Understandings

- Students will be able to access previous knowledge about the topics of science they have learned. Along with that, they will be able to make further connection to science by recalling events from summer vacation.
- Students will be able to understand the importance of eating healthy along with the benefits of physical activities.
- Students will be able to become critical thinkers and explore many scientific activities.
- Students will be able to identify the steps in the scientific method.
- Students will be able to identify the characteristics of living things.
- Students will be able to describe the environmental factors that affect living organisms.
- Students will be able to use components of STEAM to create their 3D illusion.
- Students will be able to identify abiotic and biotic factors in an ecosystem.
- Students will be able to describe ecosystem, communities and populations.

Essential Questions:

- What is a scientist?
- What does a scientist do?
- Why is science important?
- Why are science fair important?
- What is the scientific method?
- Why do we use the scientific method when conducting experiments?
- What happens when a volcano erupts?
- What makes some mountains volcanoes?
- Why do you think we have to be very careful when recording data?
- Where do plants and animals live and how do they depend on each other?
- Why do the zebras and flamingos travel in groups?
- Why is space necessary for survival?
- How does the amount of direct sunlight affect the plant growth in an area?
- What affects the health, growth, and development of living things?
- Which components of STEAM did we use today to create our project?
- How do parts of ecosystem interact?
- What are some of the living things that surround us?
- What are some of the nonliving things that make up our environment?

- What kinds of biotic and abiotic factors do you depend on?
- How can a change in one population affect the entire community in an ecosystem?
- How do plants make food?
- What traits do plants have in common?
- What are three plants that are eaten as food?
- Which gas is made by the plant?
- Desert plants often keep their stomata closed during the day. Why?
- Why are plants important as a food source for so many organisms?

Activities:

- KWL Chart
- Defining vocabulary words
- Reading chapter and answering end of chapter questions
- Exit slips
- Weekly STEAM Friday Projects
- Science workbook

Assessments

Formative

- Students will be assessed at the end of every lesson by working on end of lesson questions.
- Students will be assessed on their exit slips along with class discussions.

Summative

- Students will take an assessment at the end of every chapter.

Time Frame/Month

Resources/Websites(Primary/Secondary)

- Brainpop
- Youtube

Textbook Name (Chapters/Pages)

- **New York Science (Grade 4)**
- **Ch. 1 (3 Lessons Covered) pg. 1-40**

Curriculum Map

Name of Teacher: Sr. Aram

Subject: Science (4th Grade)

Month: October

Unit/Theme

Week 1

- STEAM: Water solubility
- Examine Leaves Experiment
- Ch.1 L.4
- STEAM: Life cycle of a leaf

Week 2

- Ch.1 L.5
- STEAM: Rainbow Rain

Week 3

- Persuasive writing in Science
- STEAM: Phases of Moon

Week 4

- Ch. 1 Review
- STEAM: Paper clip helicopter

Enduring Understandings

Week 1

- Students will be able to gain understanding about water solubility.
- Students will be able to identify the difference between the leaves texture, color, size and shape.
- Students will be able to tell the difference between various members of a food chains.
- Students will be able to gain understanding to why leaves change color.

Week 2

- Students will be able to identify the stages of human life.
- Students will be able to describe how humans grow.
- Students will be able to list the necessary things for a human to stay healthy.
- Students will be able to experiment with cause and effect.
- Students will be able to experiment with coloring mix.

Week 3

- Students will be able to write a persuasive essay about the benefits of exercising.
- Students will be able to learn about the different phases of the moon and what causes us to see only part of the moon at certain times of the month.

Week 4

- Students will be able to review their knowledge of lessons 1-5 in chapter 1.
- Students will be able to engineer their own helicopter by using a paperclip.

Essential Questions

Week 1

- What is water solubility?
- Does temperature impact how much water our paper towel can absorb?
- How do leaves from different plants differ from each other?
- What would happen if producers disappeared?
- Why do ecosystems have more producers than consumers?
- How can we find out a leaves life cycle?

Week 2

- Which stage of growth do you think has the least cell division? Explain.
- What can happen if a person engages in unhealthful activities?
- How can humans grow and develop properly?
- How did the food coloring separated from the oil and water?
- Why are the colors separating in a slow pace?
- What would happen if we didn't use the oil? Would we still be able to make an effective rainbow rain?

Week 3

- How does the writer of *Health Kick!* Write persuasively?
- How can we convince our readers?
- Have you ever noticed any changes in the moon?

Week 4

- Explain how abiotic factors are important to an ecosystem.
- How do plants and animals depend on decomposer?
- Explain the difference between a food chain and a food web.
- What is a helicopter? How does it work?
- What is the difference between helicopter and an airplane?

Activities

Week 1

- Checking water solubility by drawing pictures on a paper towel using markers and spraying water on the paper towel. Fill in scientific method
- Examine various leaves and fill in a chart identifying color, texture, size and length of each leaf
- Lesson read aloud/ definitions/ end of lesson questions
- Placing leaves in rubbing alcohol to learn about the stages of a leaf's life cycle

Week 2

- Lesson read aloud/definitions/ end of lesson questions
- Health Chart: Keep a track on of your daily diet for a week
- Fill in scientific method
- Placing food coloring and oil mixture in water

Week 3

- Persuasive essay graphic organizer
- Using Oreos to represent different phases of the moon
- Matching the phases of the moon with pictures

Week 4

- Vocabulary review of lessons 1-5
- Critical thinking questions
- State exam review questions that correlate with chapter 1
- Scientific method
- Construct helicopter rotors using paper and paper clip

Assessments

Formative (Throughout)

- Students will be assessed at the end of every lesson by working on end of lesson questions.
- Students will be assessed on their exit slips along with class discussions.
- Students will be assessed on their graphic organizers and food chart.

Summative (End of Year)

- Students will be assessed on their persuasive essays and STEAM project completion.

Time Frame/Month: October
Resources/Websites(Primary/Secondary) Brain Pop YouTube
Textbook Name (Chapters/Pages) New York Science (Grade 4) Ch.1 L.4-5 and review pgs. 41-75

Curriculum Map

Name of Teacher: Sr. Aram

Subject: Science (4th Grade)

Month: November

Unit/Theme **Week 1** • Chapter 1 Test • Persuasive Essay Feedback • STEAM: Building and Erupting Volcanoes **Week 2** • Chapter 2 Lesson 1 • STEAM: Building and Erupting Volcanoes Foldable **Week 3** • Chapter 2 Lesson 2 • STEAM: Floating Egg Experiment **Week 4** • Chapter 2 Lesson 3 • Chapter 2 Lesson 4
Enduring Understandings **Week 1** • Students will be assess their understanding of chapter 1. • Students will be able to gain understanding on how to improve their writing skills. • Students will be able to understand about the structures of volcanoes and what causes them to erupt. **Week 2** • Students will explain how variations help animals survive over time. • Students will explain how fossils provide information about the past. • Students will be able to create a foldable about the structures and eruptions of volcanoes. **Week 3** • Students will explain how animals use the five primary sense. • Students will explain special senses that animals other than humans developed to help them survive. • Students will be able to gain understanding that adding salt to water will allow things to float. **Week 4** • Students will be able to describe ways in which plants respond to their environments. • Students will be able to describe plant adaptations. • Students will be able to describe how living and nonliving things cause ecosystem to change. • Students will be able to understand that changes to ecosystem affect living organisms.

Essential Questions

Week 1

- How can I enhance my test taking skills?
- What is a persuasive essay?
- Did the writer persuade you to exercise?
- How are volcanoes formed?
- Why do volcanoes erupt?

Week 2

- How do organisms change over time?
- What might happen to desert animals if you move to the artic?
- How are eagle's claws and a giraffe's neck similar?
- How did organisms become extinct millions of years ago?
- What is a volcano?
- How are volcanoes formed?
- Why do volcanoes erupt?
- How many different types of volcanoes are there?
- What is the difference between lava and magma?
- What are the volcano safety tips?

Week 3

- How do senses help animals survive?
- How does echolocation help animals find food?
- How would the ability to sense light help an earthworm survive?
- How does the ability to sense heat help a rattlesnake hunt?
- Why would the ability to sense electricity be less helpful for land animals?
- What is the difference between salty and regular water?
- Will our egg sink or float in salty water?

Week 4

- What might happen if you brought a desert plant into a humid greenhouse?
- What is a stimulus?
- How are the adaptations of a desert plant different from those of a rain forest plant?
- How do plants survive in their environment?
- What do you think would happen to trees if their leaves did not fall off before winter?
- How can changes in an environment affect the organism that lives there?
- What might happen to a wetland that is hit by a hurricane?
- How are deforestation and overpopulation related to each other?
- What would happen to pandas if scientists did not help them have cubs?
- What do you call a species when it no longer exists?
- Why do you think birds and other small animals might move to an alligator hole even if an alligator might eat them?

Activities

Week 1

- Chapter 1 Test
- Peer feedback on essays: Glow and Grow
- Building and erupting volcanoes

Week 2

- Class read aloud/ definitions / end of chapter questions/ workbook
- Foldable on volcanoes

Week 3

- Class read aloud/ definitions/ end of chapter questions/ workbook
- Placing egg in regular water vs. salt water

Week 4

- Class read aloud/ definitions/ end of chapter questions/ workbook

Assessments

Formative (Throughout)

- Students will be assessed at the end of every lesson by working on end of lesson questions.
- Students will be assessed on their exit slips along with class discussions.
- Students will be assessed on their peer feedback.

Summative (End of Year)

- Students will be assessed on chapter 1 test.
- Students will be assessed on the completions of their STEAM projects and foldable.

Time Frame/Month: November

Resources/Websites(Primary/Secondary)

- Brain Pop
- YouTube

Textbook Name (Chapters/Pages)

- New York Science (4th Grade)
- Chapter 2 Lessons 1-4: pages 76-105

Curriculum Map

Name of Teacher: Sr. Aram
Subject: Science (4th Grade)
Month: December

Unit/Theme

Week 1

- Chapter 2 Lesson 5
- STEAM: Moving Water

Week 2

- Chapter 2: Test Review
- Chapter 2 Test
- STEAM: Wizard's Brew

Week 3

- Chapter 3 Lesson 1
- STEAM: Egg Drop Challenge

Week 4

- Chapter 3 Lesson 2
- Hybrid Power

Enduring Understandings

Week 1

- Students will be able to identify the effects of pollution to land, water and air.
- Students will be able to describe ways to reduce pollution and conserve resources.
- Students will be able to gain an understanding on how gravity impacts the movement of water from one object to another.

Week 2

- Students will be able to self-assess their understanding of chapter 2.
- Students will be able recall their understanding of chapter 2 by taking an end of chapter assessment.
- Students will be able to gain understanding on how certain materials can cause explosions.

Week 3

- Students will be able to describe the characteristic of electrically charged objects.
- Students will be able to explain the difference between static and current electricity.
- Students will be able to create their own device to protect their eggs from breaking.

Week 4

- Students will be able to explain how electrical energy is converted to heat, light, and motion.
- Students will be able to illustrate how electricity travels from generator to consumer.
- Students will be able to understand the difference between hybrid and traditional cars.

Essential Questions

Week 1

- Are people always aware of the pollution they cause?
- How can people reduce pollution and conserve resources?
- What is pollution?
- What are some methods of conservation?
- What do you think is happening in the picture?
- How is water traveling from one cup to another?
- How did we use the 5 components of STEAM in this experiment?

Week 2

- How can I improve my test taking skills?
- What did I struggle with on the test? Why?
- How will we make our own bubbling wizard brew?
- Which components of STEAM did we use today?
- How is the wizard's brew explosion different from our volcano explosion?
- What types of ingredients cause an explosion and why?

Week 3

- How do we use electricity?
- What happens when two objects touch?
- Why do you sometimes feel a small shock when you touch something?
- What happens when one lightbulb is removed from a series circuit?
- A parallel circuit has two lightbulbs. One of them burns out. What happens to the other bulb?
- What is the difference between a conductor and an insulator?
- What do you think egg drop challenge is?
- How can we save our egg from cracking?
- What would you change about your invention?

Week 4

- How is electricity helpful and harmful to people?
- How did people survive before most homes had electricity?
- Why do incandescent bulbs and fluorescent bulbs produce different amounts of heat?
- Eventually a filament will melt and break. When it breaks, what will happen to the bulb?
- What happens to electric current as it travels between your home and a power plant?
- What do you know about hybrid cars?
- Why do hybrid cars use less gas than traditional cars?
- How do hybrid cars reduce air pollution?

- How do hybrid cars work?
- How are hybrid cars more efficient than traditional cars?

Activities

Week 1

- Class read aloud/ definitions / end of chapter questions/ workbook
- Traveling water activity from one cup to another using tissues.

Week 2

- End of chapter questions and definitions.
- Chapter 2 Test
- Creating a slow impact explosion

Week 3

- Class read aloud/ definitions/ end of chapter questions/ workbook
- Draw and label picture of series circuit vs. parallel circuit.
- Create a device to protect your egg from breaking by using finding supplies around the house.

Week 4

- Class read aloud/ definitions/ end of chapter questions/ workbook
- Class read aloud/ questions/ main idea and key detail chart
- Create an invention to help reduce pollution in the environment.

Assessments

Formative (Throughout)

- Students will be assessed at the end of every lesson by working on end of lesson questions.
- Students will be assessed on their exit slips along with class discussions.
- Students will be assessed on the drawing of parallel and series circuits.
- Students will be assessed on their inventions to help reduce pollution.

Summative (End of Year)

- Chapter 2 Test
- Students will be assessed on their weekly STEAM projects and completion of scientific method.

Time Frame/Month: December

Resources/Websites(Primary/Secondary)

- Brain Pop
- YouTube

Textbook Name (Chapters/Pages)

- New York Science (4th Grade)
- Chapter 2 Lessons 4-5 (pages 106-130)
- Chapter 3 Lessons 1-2 (pages 136-152)
- Hybrid Reading (pages 160-161)

Curriculum Map

Name of Teacher: Sr. Aram

Subject: Science (4th Grade)

Month: January

Unit/Theme

Week 1

- Animal Adaptation Presentations

- STEAM: Rainbow in a Jar

Week 2

- Chapter 3 Lesson 3
- STEAM: Lava Lamp

Week 3

- Chapter 3 Test Review
- STEAM: Life Cycle of Frog

Week 4

- Chapter 3 Assessment
- Chapter 4 Lesson 1
- STEAM: States of Matter

Enduring Understandings

Week 1

- Students will be able to work on their oral communication skills while obtaining feedback from their peers.
- Students will be able to gain understanding about how rainbows are formed along with recalling the colors of rainbow.

Week 2

- Students will be able to describe a magnetic field and the effect of distance of magnetic force.
- Students will be able to understand how an electromagnet, an electric motor, and a generator work.
- Students will be able to become young scientists and create their own version of lava lamp.

Week 3

- Students will be able to assess their understanding of chapter 3.
- Students will gain understanding of each phase of a frog's life cycle.

Week 4

- Students will be able to recall material learned from chapter 3 by taking their end of the unit assessment.
- Students will be able to define and describe the three states of matter.
- Students will be able to compare and contrast properties of matter.
- Students will be able to demonstrate their understanding of how each state of matter is alike and different.

Essential Questions

Week 1

- How can I give my peers proper feedback?
- Why shouldn't I feel offended at the feedback I receive?
- What keeps all the layers all separated from each other?
- What if you had added the layers in the reverse order? Would you still see a rainbow?
- What is density?

Week 2

- How can two magnets repel each other?
- Birds have natural magnets in their bodies. How might this help them?
- What happens to the atoms of iron bar in an electromagnet when the current is turned on?
- What do simple generators and simple electric motors have in common?
- How are electricity and magnetism related?
- How do magnets attract?

- Does the temperature of the water affect the reaction?
- Does the size of the bottle affect how many bubbles are produced?
- Does the effect still work if the cap is put on the bottle?
- Does the size of the tablet pieces affect the number of bubbles created?

Week 3

- How can we become good test takers?
- Take a chapter walk, what did you struggle with?
- What are the 4 stages of a frog's life cycle?
- How much time does a frog spend in each phase?
- How does the habitat affect each stage of the frog's life cycle?

Week 4

- What did I struggle with on the test?
- What are the properties of matter?
- How are solids, liquids and gases the same? How are they different?
- What is the difference between using matter and reusing matter?
- How do we explain what matter is?
- How do scientists classify matter?
- How can matter change?
- What happens when something dissolves?
- How does temperature affect matter?

Activities

Week 1

- Provide glow and grow to their peers
- Use various liquids to create a rainbow in a jar

Week 2

- Class read aloud/ defining vocabulary/ comprehension questions
- Using scientific method and creating a lava lamp using household materials

Week 3

- Class review of chapter 3
- Using playdough to create life cycle of a frog

Week 4

- Chapter 3 assessment
- KWL chart/ class read aloud/ defining vocabulary/ comprehension questions
- Create a trifold of three states of matter using cereal

Assessments

Formative (Throughout)

- Comprehension questions
- Class discussion
- Exit slips
- Notebook checks

Summative (End of Year)

- Animal Adaptation projects/presentations
- STEAM projects and completion of scientific method
- Chapter 3 Test

Time Frame/Month

- January

Resources/Websites(Primary/Secondary)

- Brain Pop
- YouTube

Textbook Name (Chapters/Pages)

- New York Science (4th Grade)
- Chapter 3 Lesson 3: pages 162-175
- Chapter 3 Test Review: pages 178-181
- Chapter 4 Lesson 1: pages 186-195

Curriculum Map

Name of Teacher: Sr. Aram
Subject: Science (4th Grade)
Month: February

Unit/Theme

Week 1

- Chapter 4 Lesson 2
- Chapter 4 Lesson 3
- STEAM: Recycled Robot

Week 2

- Chapter 4 Review
- Chapter 5 Lesson 1
- STEAM: What keeps apples from browning?

Week 3

- Chapter 4 Assessment
- STEAM: Rainbow baking soda and vinegar science

Enduring Understandings

Week 1

- Students will describe some properties of matter that can be measured.
- Students will measure properties of matter using correct units.
- Students will describe some properties of matter that can be measured.
- Students will measure properties of matter using correct units.
- Students will engage in an engineering design process while recognizing and celebrating their personal qualities and strengths.

Week 2

- Students will be able to assess their understanding of the material learned in chapter 4.
- Students will be able to comprehend that a change of state is a physical change.
- Students will be able to differentiate between physical change and chemical change.
- Students will be able to gain understanding about how acid helps keep the cut apple fresh.

Week 3

- Students will be able to take recall information learned from previous chapter to help them complete their assessment.
- Students will be able to make rainbow explosion using vinegar and baking soda.

Essential Questions

Week 1

- What tools can be used to study matter?
- What should a hot-air balloonist do to go higher? Explain.
- What is the difference between a balance and a scale?

- How can you describe physical properties of water?
- Which properties of water depend on its state?
- Which property of water caused it to have a high specific heat?
- What steps do manufacturers take to design and build a product?
- Why do humans need robots?
- What does a robot do?
- What does a robot look like?
- Which components of STEAM were used to build our robot?

Week 2

- Take a chapter walk, what did you struggle with?
- Am I ready for the assessment?
- How can matter change?
- What is the difference between ice and water?
- Is the material still water when it is turned into ice?
- What happens when ice turns into liquid form?
- How does the water enter and leave the atmosphere?
- Over time, a copper statue will turn green? Is this a chemical change? Explain.
- The flesh of a cut apple turns brown when left out in the air. Is tis change physical or chemical? Explain.
- Why do apples change color?
- How can we keep our apples from turning brown?
- Which substance do you think will protect your apple? Why?
- Did this experiment include physical or chemical change? Explain.

Week 3

- Why are tests important?
- What did I struggle with?
- How do exams help us assess our understanding?
- What are rainbows?
- How are actual rainbows formed?
- Why do we use vinegar and baking soda to make explosions?
- Which components of STEAM were used today?

Activities

Week 1

- Class read aloud/ defining vocabulary/ comprehension questions
- Construct a robot using recyclable items

Week 2

- Test review
- KWL Chart about matter
- Class read aloud/ defining vocabulary/ comprehension questions
- Apple experiment: dipping apple slices in various liquids to test hypothesis

Week 3

- Chapter 4 test
- Creating rainbow using vinegar and baking soda mixture

Assessments

Formative (Throughout)

- Comprehension questions
- Class discussion

• Exit slips • Notebook checks • KWL chart
Summative (End of Year) • STEAM projects and completion of scientific method • Chapter 4 Test
Time Frame/Month: • February
Resources/Websites(Primary/Secondary) • Brain Pop • YouTube
Textbook Name (Chapters/Pages) • New York Science (4th Grade) • Chapter 4 Lesson 2: pages 200-207 • Chapter 4 Lesson 3: pages 208-217 • Chapter 4 Test Review: pages 218-224 • Chapter 5 Lesson 1: pages 226-234

Curriculum Map

Name of Teacher: Sr. Aram

Subject: Science (4th Grade)

Month: March

Unit/Theme **Week 1** • Chapter 5 Lesson 2 • Chapter 5 Review **Week 2** • Chapter 5 assessment • Chapter 6 Lesson 1 • STEAM: Construct your own pencil case **Week 3** • Chapter 6 Lesson 2 • Chapter 6 Lesson 3 • STEAM: Why is the Statue of Liberty green? **Week 4** • Chapter 6 Lesson 4 • Chapter 6 Lesson 5
Enduring Understandings **Week 1** • Students will explain that mixtures are combinations of matter. • Students will describe ways of separating mixtures. • Students will be able to self-assess their understanding of chapter 5. **Week 2** • Students will be able to take an end of chapter assessment to determine their understanding of the material learned. • Students will be able to identify Earth's landform and features of the ocean floor.

- Students will describe the layer of Earth.
- Students will be able to create a hanging 3D pencil case using paper plates.

Week 3

- Students will be able to describe how the movement of plates build mountains and cause earthquakes and volcanoes.
- Students will explain how scientists use seismic waves to study earthquakes.
- Students will define and give examples of physical and chemical weathering.
- Students will explain how erosion helps break down and build up Earth's land.
- Students will define and give examples of physical and chemical weathering.
- Students will explain how erosion helps break down and build up Earth's land.

Week 4

- Students will be able to describe the effects of floods, fires, tornadoes, and hurricanes.
- Students will be able to explain the cause and effects of landslides and avalanches.
- Students will be able to list the steps in the water, carbon and nitrogen cycles and explain their importance.
- Students will be able to explain how recycling and composting benefits the ecosystem.

Essential Questions

Week 1

- What is a mixture?
- How are solutions and mixtures related?
- How can you separate any two things that are next to each other?
- How can the gelatin be different colors and flavors?
- What did you struggle with in chapter 5?

Week 2

- What did you struggle with on the test?
- How is Earth shaped?
- Which landforms are shaped by water?
- Which landforms are shaped by Wind?
- Which are plains?
- What is formed when a river meets the ocean?
- What kind of landforms are found in the ocean?
- How do features of the ocean floor compare to those on land?
- How do you think we will construct our own pencil case using paper plates?
- Which components of STEAM were used today?
- As engineers, why is important to draft out our plan before we begin constructing our model?

Week 3

- How can Earth's crust change?
- What is a volcano?
- What causes the Earth's plates to move?
- What happens to the land during an earthquake?
- How can an earthquake cause a tsunami?
- What causes seismic waves?
- How can volcanic eruption build mountains?
- What forces shape and change Earth's landform?
- What natural processes shape the land?
- What are two kinds of weathering?
- What do you think glaciers form today?

- Why would scientists be worried about losing forest?
- Why do pennies change color?
- What is the original color of penny?
- What is the difference between physical and chemical change?
- Why is the Statue of Liberty Green?

Week 4

- How does weather shape and change the land?
- What kinds of weather cause floods and fires?
- How are tornadoes similar to hurricane? How are they different?
- Could a pioneer species occur in a forest?
- What is the water cycle?
- What things do you recycle or reuse at home?
- What are the stages of the water cycle?
- How is underground water, or ground water obtained for use?
- What is the difference between snow and ice?

Activities

Week 1

- Class read aloud/ defining vocabulary/ comprehension questions
- Group test review

Week 2

- Chapter 5 assessment
- Class read aloud/ defining vocabulary/ comprehension questions
- Constructing a personalized 3D pencil case from household supplies

Week 3

- Class read aloud/ defining vocabulary/ comprehension questions
- Experiment on changing colors of pennies

Week 4

- Class read aloud/ defining vocabulary/ comprehension questions

Assessments

Formative (Throughout)

- Comprehension questions
- Class discussion
- Exit slips
- Notebook checks
- KWL chart
- Completion of scientific method

Summative (End of Year)

- Chapter 5 assessment
- Constructing of 3D pencil case
- Poem about water cycle

Time Frame/Month

- March

Resources/Websites(Primary/Secondary)

- Brain Pop
- YouTube

Textbook Name (Chapters/Pages)

- New York Science (4^{th} Grade)

- Chapter 5 Lesson 2: pages 238-247
- Chapter 5 Review: pages 248-250
- Chapter 6 Lesson 1: pages 258-267
- Chapter 6 Lesson 2: pages 270-278
- Chapter 6 Lesson 3: pages 282-291
- Chapter 6 Lesson 4: pages 294-300
- Chapter 6 Lesson 5: pages 304-310

Curriculum Map

Name of Teacher: Sr. Aram

Subject: Science (4th Grade)

Month: April

Unit/Theme

Week 1

- Chapter 6 Review
- Chapter 7 Lesson 1
- STEAM: Floating Drawing Experiment

Week 2

- Chapter 6 Assessment
- Chapter 7 Lesson 2

Week 3

- Chapter 7 Lesson 3
- STEAM: Egg Shall Garden

Week 4

- Chapter 7 Review

Enduring Understandings

Week 1

- Students will be able to self-assess their understanding of the chapter.
- Students will be able to explain how changes in motion, including changes in speed and direction are caused by forces.
- Students will be able to use measurements to compare the speeds and acceleration of different objects.
- Students will be able to gain understanding on how strong buoyancy force of ink would cause our drawing to float.

Week 2

- Students will be assessed on their understanding of chapter 6.
- Students will be able to describe the forces that affect the motion of transportation devices, including rockets, airplanes, boats, cars and trains.
- Students will be able to use measurements, graphs, and tables to represent motion and evaluate the design of a moving object.

Week 3

- Students will understand the process engineers and scientists use to design and build new technologies.
- Students will propose a solution to a problem related to transportation of people or goods by testing and evaluating a vehicle design.

- Students will be able to follow the 3 R's by reusing household objects.

Week 4

- Students will be able to work collaboratively to review for their test.

Essential Questions

Week 1

- What did you struggle with in chapter 6?
- How can you compare moving objects?
- How can you tell something has moved?
- Mars is a planet that is smaller than Earth. How would the pull of gravity be different on Mars?
- Bowling balls and soccer balls are about the same size. Why is a bowling ball harder to throw?
- Can we make our drawings float?
- What is the difference between and expo and permanent marker?
- Why do the figures made of whiteboard or dry erase marker inks float?
- Which components of STEAM were used today?

Week 2

- How did you do on the test?
- How do we move people and things?
- What type of transportation do you use to get to school and on a vacation?
- Look at the image on page 337 and answer the following question, How does this plane compare to the plane you have flown in?
- Do you need fraction to ride your bicycle? Why?
- Why is friction needed to get an object moving and to slow the object down?
- What causes an object to float?
- Look at the image of the boat on page 341 and answer the following question: What does the part of the boat under the water probably look like?
- How do you change the direction of the car?

Week 3

- How do things get designed?
- How is technology created? How is technology helpful?
- Why is brainstorming an important part of designing new technologies?
- What is the design process?
- What is Earth Day?
- How can we conserve resources?
- Where will you place your egg shells?
- How often should we water our egg shells?
- How important is sunlight to new plants?
- How did we conserve our resources by planting in egg shells?
- Which components of STEAM were used today?

Week 4

- Take a chapter walk, what did you struggle with in chapter 7?

Activities

Week 1

- Group test review
- Class read aloud/ defining vocabulary/ comprehension questions
- Making an expo marker drawing float

Week 2

- Chapter 6 assessment
- Class read aloud/ defining vocabulary/ comprehension questions

Week 3

- Class read aloud/ defining vocabulary/ comprehension questions
- Celebrating Earth day by recycling and planting seeds in egg shells

Week 4

- Group test review

Assessments

Formative (Throughout)

- Comprehension questions
- Class discussion
- Exit slips
- Notebook checks
- KWL chart
- Completion of scientific method

Summative (End of Year)

- Chapter 6 assessment
- Completion of STEAM projects

Time Frame/Month

- April

Resources/Websites(Primary/Secondary)

- Brain Pop
- YouTube

Textbook Name (Chapters/Pages)

- New York Science (4th Grade)
- Chapter 6 Review: pages 314-317
- Chapter 7 Lesson 1: pages 320-328
- Chapter 7 Lesson 2: pages 332-342
- Chapter 7 Lesson 3: pages 346-352
- Chapter 7 Review: pages 356-358

Curriculum Map

Name of Teacher: Sr. Aram
Subject: Science (4th Grade)
Month: May

Unit/Theme

Week 1

- Science State Exam Review
- Chapter 7 Assessment

Week 2

- Science State Exam Review
- STEAM: 3D Aquarium

Week 3

- Science State Exam Review
- STEAM: Life Cycle of a Butterfly

Week 4

- State Exam Review
- Digestive System
- Refraction Experiment

Enduring Understandings

Week 1

- Students will be able to begin preparing for their Science State Exam.
- Students will be able to assess their understanding of chapter 7.

Week 2

- Students will be able to self asses their understanding of the material learned throughout the year.
- Students will be able to take a virtual tour to an aquarium to help them create their own 3D aquarium.

Week 3

- Students will be able to find strategies to cope with test anxiety while practicing for State Exam.
- Students will be able to gain knowledge about the different stages of a butterfly life cycle.

Week 4

- Students will be able to prepare for NYS Science State Exam.
- Students will be able to identify the various parts of the digestive system.
- Students will be able to identify the function of the various parts of the digestive system.
- Students will be able to gain understanding about the refraction theory and how it applies to various objects.

Essential Questions

Week 1

- What does the Science State Exam consist of?
- How can we prepare for Science State Exam?
- What did you struggle with and why?

Week 2

- What test strategies did you use to help you complete your practice test?
- How can we improve our test taking skills?
- What is an aquarium?
- Have you ever visited an aquarium? What is it like?
- Which components of STEAM did we use today?
- Who lives in an aquarium?

Week 3

- What are State Exams?
- What is the difference between rotate and revolve?
- How can we overcome test anxiety?
- What is the difference between migration and hibernation?
- Are all butterflies the same and why?
- How does a caterpillar transform into a butterfly?
- What do caterpillars need to transform into a butterfly?
- Why are there so many differences in butterflies? What are some of these differences?

Week 4

- Why do we take state exams?

- Which color shirt absorbs the most heat?
- How do we become good test takers?
- What is deposition?
- What is digestive system?
- How do our organs help our bodies to function properly?
- Where does human digestion start?
- Where is food broken up into smaller pieces?
- Which part of the small intestine absorbs the nutrients found in food?
- What transports food to all the cells of our body?
- What organ excretes chemicals to digest food in the small intestine?
- Where does the food travel through before entering the colon?
- What is in charge of grinding our food?
- Before being swallowed, what mixes with food to soften it up?
- What is refraction?
- Does light pass through a glass of water? Why or Why not?
- What are examples of refraction in our daily lives?
- What is light?

Activities

Week 1

- 2017 Practice State Exam
- Chapter 7 Test

Week 2

- 2016 and 2019 Practice State Exam
- Creating 3D aquarium using plastic plates

Week 3

- 2014 and 2015 Practice State Exam
- Creating a trifold about the stages of a butterfly's life cycle.

Week 4

- 2018 Practice State Exam
- Read aloud/ Comprehension questions
- Testing theory of refraction

Assessments

Formative (Throughout)

- Exit slips
- Notebook Checks
- Class discussion
- Completion of scientific method

Summative (End of Year)

- Completion of Science State Exams
- Chapter 7 Assessment
- Completion of STEAM projects

Time Frame/Month: May

Resources/Websites(Primary/Secondary)

- YouTube

Textbook Name (Chapters/Pages)

- https://nysedregents.org/Grade4/Science/home.html