



Summary

Who We Are

Subject	Year	Start date	Duration
Science Lab, Social Studies	Fourth Grade	Week 4, February	7 weeks

Inquiry

Transdisciplinary Theme



Who we are

- Beliefs and values
- Human relationships, including families, friends, communities and cultures
- Rights and responsibilities
- What it means to be human

The Central Idea

Impacts of Change

Lines of Inquiry

- Rights and Responsibilities of a changing culture
- Changing values of society
- Impacts of changing forces and roles
- Impacts of society on the environment

Teacher questions

- Change - How did the new inventions change life, production, and communication?
- Form-
- Responsibility-

Learning Goals

Standards and benchmarks

Georgia State Standards: GSE: English Language Arts (2015)
READING LITERARY (RL) (Grade 4)

Key Ideas and Details

ELAGSE4RL1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

ELAGSE4RL2: Determine a theme of a story, drama, or poem from details in the text; summarize the text.



ELAGSE4RL3: Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

Craft and Structure

ELAGSE4RL6: Compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.

Integration of Knowledge and Ideas

ELAGSE4RL7: Make connections between the text of a story or drama and a visual or oral presentation of the text identifying similarities and differences.

ELAGSE4RL9: Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.

Georgia State Standards: GSE: Fine Arts: Music (2018)

General Music (Grade 4)

Performing

ESGM4.PR.1 Sing a varied repertoire of music, alone and with others.

- a. Sing accompanied and unaccompanied melodies within an appropriate range using head voice.
- b. Sing with others (e.g. rounds, canons, game songs, partner songs, and ostinato).
- c. Sing multiple songs representing various genres, tonalities, meters, and cultures, including at least one song in a foreign language.
- d. Sing expressively, following the cues of a conductor.

ESGM4.PR.2 Perform a varied repertoire of music on instruments, alone and with others.

- a. Perform rhythmic patterns with body percussion and a variety of instruments using appropriate technique.
- b. Perform body percussion and instrumental parts, including ostinatos, while other students play or sing contrasting parts.
- c. Perform simple major/minor melodic patterns with appropriate technique.
- d. Perform multiple songs representing various genres, tonalities, meters, and cultures.
- e. Perform instrumental parts expressively, following the cues of a conductor.

Responding

ESGM4.RE.1 Listen to, analyze, and describe music.

- a. Distinguish between repeating and contrasting sections, phrases, and formal structures (e.g. AB, ABA, verse/refrain, rondo, introduction, coda).
- b. Describe music using appropriate vocabulary (e.g. fortissimo/pianissimo, presto/largo/moderato/allegro/adagio, legato/staccato, major/minor), intervals (e.g. step, skip, repeat, leap), timbre adjectives (e.g. dark/bright), and texture adjectives (e.g. thick/thin).
- c. Identify and classify (e.g. families, ensembles) classroom, orchestral, American folk, and world instruments by sight and sound.



- d. Aurally distinguish between various ensembles.
- e. Aurally distinguish between soprano, alto, tenor, and bass instruments and voices.
- f. Aurally identify tonal center.

ESGM4.RE.2 Evaluate music and music performances.

- c. Refine music performances by applying personal, peer, and teacher feedback.
- d. Explain personal preferences for specific musical works using appropriate vocabulary.

ESGM4.RE.3 Move to a varied repertoire of music, alone and with others.

- a. Respond to contrasts and events in music with locomotor and non-locomotor movement.
- b. Perform choreographed and non-choreographed movements.
- c. Perform line and circle dances, including traditional folk dances.

Connecting

ESGM4.CN.1 Connect music to the other fine arts and disciplines outside the arts.

- a. Discuss connections between music and the other fine arts.
- b. Discuss connections between music and disciplines outside the fine arts.

ESGM4.CN.2 Connect music to history and culture.

- a. Perform and respond to music from various historical periods and cultures.
- b. Discuss how sounds and music are used in daily lives.
- c. Describe and demonstrate performance etiquette and appropriate audience behavior.

Georgia State Standards: GSE: Physical Education (2018)

Motor Skills and Movement Patterns (Grade 4)

Manipulative Skills

- e. Throws underhand and overhand using a mature form to a stationary partner or target with reasonable accuracy.
- f. Throws to a moving partner or target with reasonable accuracy.
- g. Catches a ball thrown from a partner at three different levels (high, medium, and low) with proper form.
- h. Dribbles with dominant and non-dominant hands in general space with control of ball and body while increasing and decreasing speed.
- i. Dribbles (with feet) in general space with control of ball and body while increasing and decreasing speed.
- j. Kicks an object along the ground and in the air.
- l. Receives and passes the ball with the inside and outside of the feet to a stationary and moving target.
- n. Volleys a ball upward with a two-hand overhead pattern.
- o. Strikes an object with a short-handled implement (lollipop paddle or ping pong paddle) alternating hits with a partner over a low net, line, or against a wall demonstrating mature form.



p. Strikes an object with a long-handled implement (hockey stick, golf club, bat, tennis or badminton racket) while demonstrating three of the five critical elements of a mature form (grip, stance, body orientation, swing plane, and follow-through).

q. Combines traveling with the manipulative skills of dribbling, throwing, catching, striking, and kicking in small-sided games.

r. Creates and/or performs a jump rope routine.

Georgia State Standards: GSE: Science (2016)
Physical Science (Grade 4)

S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.

a. Plan and carry out an investigation on the effects of balanced and unbalanced forces on an object and communicate the results.

b. Construct an argument to support the claim that gravitational force affects the motion of an object.

Life Science (Grade 4)

S4L1. Obtain, evaluate, and communicate information about the roles of organisms and the flow of energy within an ecosystem.

a. Develop a model to describe the roles of producers, consumers, and decomposers in a community.

b. Develop simple models to illustrate the flow of energy through a food web/food chain beginning with sunlight and including producers, consumers, and decomposers.

c. Design a scenario to demonstrate the effect of a change on an ecosystem.

d. Use printed and digital data to develop a model illustrating and describing changes to the flow of energy in an ecosystem when plants or animals become scarce, extinct or overabundant.

Georgia State Standards: GSE: Social Studies (2016)
Historical Understandings (Grade 4)

SS4H3 Explain westward expansion in America.

c. Describe territorial expansion with emphasis on the Louisiana Purchase, the Lewis and Clark expedition, and the acquisitions of Texas (the Alamo and independence), Oregon (Oregon Trail), and California (Gold Rush and the development of mining towns).

SS4H4 Examine the main ideas of the abolitionist and suffrage movements.

a. Discuss contributions of and challenges faced by Susan B. Anthony, Frederick Douglass, Elizabeth Cady Stanton, Sojourner Truth, and Harriet Tubman.

SS4H5 Explain the causes, major events, and consequences of the Civil War.

a. Identify Uncle Tom's Cabin and John Brown's raid on Harper's Ferry and explain how each of these events was related to the Civil War.

b. Discuss how the issues of states' rights and slavery increased tensions between the North and South.

c. Identify major battles, campaigns, and events: Fort Sumter, Gettysburg, the Atlanta Campaign, Sherman's March to the Sea, and Appomattox Court House.

Geographic Understandings (Grade 4)



SS4G2 Describe how physical systems affect human systems.




b. Describe physical barriers that hindered and physical gateways that benefited territorial expansion from 1801 to 1861.
Economic Understandings (Grade 4)

SS4E1 Use the basic economic concepts of trade, opportunity cost, specialization, voluntary exchange, productivity, and price incentives to illustrate historical events.

- a. Describe opportunity cost and its relationship to decision-making across time (e.g., decisions to settle in the west).
- b. Explain how price incentives affect people’s behavior and choices: decisions about what crops (e.g., cotton, and tobacco) to grow and products (e.g., textiles) to produce.
- c. Describe how specialization improves standards of living (e.g., differences in the economies in the North and South).
- d. Explain how voluntary exchange helps both buyers and sellers (e.g., Gold Rush mining towns).
- f. Give examples of technological advancements and their impact on business productivity during the development of the United States (e.g., cotton gin, steamboat, steam locomotive, and telegraph).

 **Key and Related Concepts**

Key Concepts

Key Concepts	Key questions and definition	Related concepts	Subject Focus
 Form	<p>What is it like? The understanding that everything has a form with recognizable features that can be observed, identified, described and categorized.</p>	conflict, resources, amenities	Science Lab
 Change	<p>How is it transforming? The understanding that change is the process of movement from one state to another. It is universal and inevitable.</p>		
 Responsibility	<p>What are our obligations? The understanding that people make choices based on their understandings, beliefs and values, and the actions they take as a result do make a difference.</p>		



Developing IB Learners

Learner Profile



Communicators



Thinkers

Description

Acquisition of knowledge, Analysis, Evaluation, and Dialectical thought



ATL Skills

Approaches to Learning

Description

Acquisition of knowledge, Analysis, Evaluation, and Dialectical thought



Communication Skills

- Literacy - Reading, writing and using language to gather and communicate information

Reading

Read a variety of sources for information and for pleasure.

Read critically and for comprehension.

Make inferences and draw conclusions.

Use and interpret a range of terms and symbols.

Writing

Use appropriate forms of writing for different purposes and audiences.

Paraphrase accurately and concisely.

Record information and observations by hand and through digital technologies.

Use a variety of scaffolding for writing tasks.

Organize information logically.

Make summary notes.

Communicate using a range of technologies and media.

Understand and use mathematical notation and other symbols.

Responsibly participate in, and contribute to, digital social media networks.



Thinking Skills

- Creative Thinking - Generating novel ideas and considering new perspectives



Considering new perspectives

Ask “what if” questions and generate testable hypotheses.

Apply existing knowledge to design new products processes, media and technologies.

Consider multiple alternatives, including those that might be unlikely or impossible.

Practise flexible thinking—develop multiple opposing, contradictory and complementary arguments.

Practise “visible thinking” strategies and techniques.

Generate metaphors and analogies.

Action

Student-initiated Action

Students in the 4th grade after learning about food chains, food webs and ecosystems, took action and went to youtube and found a channel that talked about Protecting the Animals, and how they are being affected by Humans. A student then went home and wrote a paragraph on their own about their learning. They then want to make a club about protecting animals and habitats.

Students researched organizations that help protect ecosystems, some wanted to donate or spread the word to support.

Assessment & Resources

Ongoing Assessment

What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for? What are the possible ways of assessing students' prior knowledge and skills? What evidence will we look for?

What are the possible ways of assessing student learning in the context of the lines of inquiry? What evidence will we look for?

Culminating Activity: Interest-based peer groups will select a knowledge product from the attached choice board:

Summative Assessment Choice Board and Rubric How the World Works

Students will use their newly acquired knowledge and experiences to complete and present their choice product to peers while connecting their product to central idea and/or Key concepts. Student will engage in a feed back session to explore these connections: Peer/Self Feedback: "Glows and Grows"

Making flexible use of resources

Independent reading, internet research, science lab resources, outdoor learning

Independent Reading/MyOn books:



Civil War Cooking: The Confederacy

The US Civil War

The Battle Over Slavery

Civil War Cooking: The Union

Student Self-assessment and Peer Feedback

Students will learn about how to give and receive effective feedback. Students will be presenting their choice-board activity (knowledge-product) in a class gallery walk. Students will learn to write "glow and grow" feedback for themselves and peers. They can write it on a sticky note or digitally. Students will be given time to reflect on the "glows and grows" by taking a picture of their project AND the glows and grows and uploading to their unit reflection in their ManageBac portfolio.

[Peer/Self Feedback: "Glows and Grows"](#)

[Learner Profile Goal and Action Plan](#)

Learning Experiences

Designing engaging Learning Experiences

Provocations

- Teachers will utilize the [Provocation/Print for Classroom Inquiry Boards](#) to start the unit, print for inquiry board, and for provocation activities.

Social Studies

Order Of Units:

- 1) Acquiring Texas (1 Week)
- 2) Westward Expansion (1 Week)
- 3) Industry and Agriculture (1 Week)
- 4) Abolitionism (1 Week)
- 5) Suffrage (1 Week)
- 6) Tensions Between The North And South (1 Week)
- 7) The Civil War (1 Week)

Science

Order Of Units: 7 weeks

- 1) Food Chains and Webs (1.5 Week) 2/26-3/6

[\(2022\) G4- Lesson 5: Food Chains and Webs](#)

- 2) Environments and Communities (1.5 Week) 3/7-3/19

- 3) **Food Chain/Webs Knowledge Product** choiceboard: Post reflections/images in ManageBac (1 week) 3/19-3/22



4) Force and Motion (2 Weeks) 3/25-4/12

5) Force Tricks to Try Knowledge Product Post reflections/images in ManageBac (1 week) 4/15-4/19 [Force Tricks To Try Challenge](#)

Gifted and enrichment activities:



[4 How The World Works](#) Apr 21, 202

Music: Key Concepts: Form, Function, Causation

Central idea: Structure promotes function.

Learner IB Attitudes: Appreciation, open-minded, commitment, creativity.

Students will explore movement as it relates to art. Students will explore movement concepts and create their own movement piece.

Physical Education:

Key Concepts: Form, Change, Responsibility

Learner Profile: Communicator, Thinker

Activity:

Students will explore a variety of games using skills taught in previous lessons. Each student is responsible for communicating effectively with peers while completing the fitness task.

Science Lab: Key Concepts: Form, Function Causation

Students will view the teacher pulling a table cloth off a table without disturbing the items on the cloth (or view Steve Spangler Science), play tug-of-war with a string (balanced/unbalanced forces), observe and try the egg drop into glass of water activity, then experiment with FOSS balanced/unbalanced pieces, and finally view Generation Genius video about balanced and unbalanced forces. Students will use these experiences to communicate results and to formulate and argument to support the claim that gravitational forces affects the motion of an object, using CSQ (Claim Support Question) format.

- Students will prove how forces change when simple machines are used to complete tasks, by utilizing various simple machine parts to create a "simple-machine" museum and demonstration.
- Students will culminate knowledge of forces, motion, and simple machines to complete the Rube Goldberg Design Challenge where the create a Rube Goldberg machine with at least 3 simple machines then record on Flipgrid.

Spanish -



Students will recognize vocabulary associated with simple machines

Supporting Student Agency

- Students will be choosing their own choice board activity for their knowledge product.
- Through their presentation in the gallery walk, they will be making and reflecting upon own learning goals
- students will decide their own action ideas
- students will implement their own action ideas
- students will be uploading knowledge products and evidence they feel was important to their understanding of the the Central Idea into the MangageBac Portfolios.

Reflections

General Reflections

Looking Back



Wendy Sanders Feb 29, 2024 at 2:41 PM

Students in the 4th grade after learning about food chains, food webs and ecosystems, took action and went to youtube and found a channel that talked about Protecting the Animals, and how they are being affected by Humans. A student then went home and wrote a paragraph on their own about their learning. They then want to make a club about protecting animals and habitats.



Brittany Torma Apr 24, 2024 at 2:20 PM

Students clearly showed the impacts of change on ecosystems and were able to articulate the negative affects of their ecosystems by people living within their ecosystem. They created different models that showed the ecosystems before and after the negative impacts. Students made generalizations that the negative affect are happening all around the world to endangered species and their environments, not just in the US.

Looking Forward



Rachel Bailey May 17, 2023 at 2:24 PM

Students in Fourth Grade should be creating portfolios and projects for the end-of-year gallery walk. Students need to be prepared for the fifth-grade work load and should be prepared to present to teachers, students, parents and administrators. Multiple content areas should be included in each lesson. We attempted to push in geography skills, mathematics, and reading and writing within each unit.



Rachel Bailey May 17, 2023 at 2:26 PM

Students will take more ownership of their learning and implement action plans in class and write about them in Managebac as they reflect on their learning goals.
Learning goals were addressed at the beginning of the unit and throughout. We need to be more consistent in reviewing the learning goals and linking them state standards.



Brittany Torma Apr 24, 2024 at 2:21 PM

We can strengthen the transdisciplinary connections by not only discussing the negative affects globally, but also discussing the population of people and the amount of available natural resources in different countries.

Additional Subject Specific Reflections



Rachel Bailey May 17, 2023 at 2:31 PM

Reading/Writing: Informational Text and Narrative Writing
Mathematics: Geometry and Measurement & Data
Science: Force & Motion and Simple Machines
History: Suffrage, Abolitionist,



Stream & Resources

Resources



Note posted on Aug 15, 2019 at 9:49 AM

<http://www.zianet.com/sparks/coder.html>

S. St. textbook

www.howstuffworks.com

Videos – “L. Latimer”, “Invention of the Bicycle”, Schlessinger – “Industrialization and Urbanization”

www.americaslibrary.org

primary and secondary sources

media center research