## Summary

### How We Organize Ourselves

| Year | Start date | Duration |
|---|---|---|
| Fourth Grade | Week 4, September | 5 weeks |

## Inquiry

### Transdisciplinary Theme

**How we organize ourselves**

An inquiry into the interconnectedness of human-made systems and communities
The structure and function of organizations
Societal decision-making

### The Central Idea

Form Lends Itself to Function

### Lines of Inquiry

- Form and function of organizations (Government) and systems (sun-earth-moon, light) OR man-made and natural systems
- Responsibilities and functions of governments
- Impacts of change
- Impacts of a changing Sun-Earth-Moon system
- An inquiry into how materials impact form and function of light energy

### Teacher questions

- 1. How are the forms and functions of human-made systems interconnected with natural systems
- 2. How can the form of an organization or system affect the function?
- 3. What are the responsibilities of a changing society?
- 4. What are the patterns of change?
- 5.What makes change necessary in society?

## Learning Goals

### Connections: Transdisciplinary and Past

Students will be applying the central idea to development of their personal learning and SEL goal for the year:

**Learner Profile Goal and Action Plan**

- Students learn how to use ManageBac Portfolio: Goal setting
- Students will be participating in team building activities to help form their goals: **Jamboard Community Meeting Goal Setting**

**Other Resources:**

- **Peer/Self Feedback: "Glows and Grows"**
  - **Glows and Grows forms**
  - **Glows/Grows Sentence Starters Guidance**

Key_Concepts_Converstaion_Bingo_Board.pdfJun 1, 2022

## Standards and benchmarks

Georgia State Standards: GSE: English Language Arts (2015)
READING FOUNDATIONAL (RF) (Grade 4)

Fluency

ELAGSE4RF4c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

READING INFORMATIONAL (RI) (Grade 4)

Key Ideas and Details

ELAGSE4RI1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

ELAGSE4RI2: Determine the main idea of a text and explain how it is supported by key details; summarize the text.

ELAGSE4RI3: Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

Craft and Structure

ELAGSE4RI4: Determine the meaning of general academic language and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

ELAGSE4RI5: Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

ELAGSE4RI6: Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

Integration of Knowledge and Ideas

ELAGSE4RI7: Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

ELAGSE4RI8: Explain how an author uses reasons and evidence to support particular points in a text.

ELAGSE4RI9: Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

SPEAKING AND LISTENING (SL) (Grade 4)

Comprehension and Collaboration

ELAGSE4SL1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

Presentation of Knowledge and Ideas

ELAGSE4SL4: Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

ELAGSE4SL5: Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.

WRITING (W) (Grade 4)

Text Types and Purposes

ELAGSE4W2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

ELAGSE4W2a. Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.

ELAGSE4W2b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.

ELAGSE4W2c. Link ideas within categories of information using words and phrases. (e.g., another, for example, also, because).

ELAGSE4W2d. Use precise language and domain-specific vocabulary to inform about or explain the topic.

ELAGSE4W2e. Provide a concluding statement or section related to the information or explanation presented.

Production and Distribution of Writing

ELAGSE4W5: With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language Standards 1–3 up to and including grade 4.)

ELAGSE4W6: With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

Research to Build and Present Knowledge

ELAGSE4W7: Conduct short research projects that build knowledge through investigation of different aspects of a topic.

ELAGSE4W9: Draw evidence from literary or informational texts to support analysis, reflection, and research.

ELAGSE4W9b. Apply grade 4 Reading Standards to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text").

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

General Music (Grade 4)

Creating

ESGM4.CR.1 Improvise melodies, variations, and accompaniments.

b. Improvise pentatonic melodies and accompaniments.

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.

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

c. Perform simple major/minor melodic patterns with appropriate technique.

d. Perform multiple songs representing various genres, tonalities, meters, and cultures.

ESGM4.PR.3 Read and Notate music.

b. Read and notate melodic patterns within a treble clef staff.

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

c. Identify and classify (e.g. families, ensembles) classroom, orchestral, American folk, and world instruments by sight and sound.

ESGM4.RE.2 Evaluate music and music performances.

a. Use teacher-provided and collaboratively developed criteria for evaluation of music and music performances (e.g. learned, student-composed, improvised).

b. Use formal and/or informal criteria to evaluate music and musical performances by themselves and others.

c. Refine music performances by applying personal, peer, and teacher feedback.

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.

Georgia State Standards: GSE: Fine Arts: Visual Arts (2017)
Creating (Grade 4)

VA4.CR.1 Engage in the creative process to generate and visualize ideas by using subject matter and symbols to communicate meaning.

c. Produce multiple prototypes in the planning stages for a work of art (e.g. sketches, 3D models).

VA4.CR.2 Create works of art based on selected themes.

b. Create works of art emphasizing multiple elements of art and/or principles of design.

c. Create representational works of art from direct observation (e.g. landscape, still life, portrait).

VA4.CR.3 Understand and apply media, techniques, processes, and concepts of twodimensional art.

a. Apply drawing and painting techniques with a variety of media (e.g. pencil, crayon, pastel, charcoal, tempera, watercolor, acrylic).

c. Combine materials in creative ways to make works of art (e.g. mixed-media, collage, available technology).

d. Apply understanding of multiple color schemes to create works of art (e.g. monochromatic, analogous, neutral, complementary).

e. Explore multiple spatial concepts to create works of art (e.g. one point perspective, atmospheric perspective, positive and negative space).

Georgia State Standards: GSE: Mathematics (2016)

Operations & Algebraic Thinking (Grade 4)

4.OA Use the four operations with whole numbers to solve problems.

MGSE4.OA.1. Understand that a multiplicative comparison is a situation in which one quantity is multiplied by a specified number to get another quantity.

MGSE4.OA.1a. Interpret a multiplication equation as a comparison e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5.

MGSE4.OA.1b. Represent verbal statements of multiplicative comparisons as multiplication equations.

MGSE4.OA.2. Multiply or divide to solve word problems involving multiplicative comparison. Use drawings and equations with a symbol or letter for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

MGSE4.OA.3. Solve multistep word problems with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a symbol or letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

4.OA Gain familiarity with factors and multiples.

MGSE4.OA.4. Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.

4.OA Generate and analyze patterns.

MGSE4.OA.5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. Explain informally why the pattern will continue to develop in this way.

Number & Operations in Base Ten (Grade 4)

4.NBT Use place value understanding and properties of operations to perform multi-digit arithmetic.

MGSE4.NBT.5. Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

MGSE4.NBT.6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Measurement & Data (Grade 4)

4.MD Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

MGSE4.MD.1. Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec.

MGSE4.MD.1b. Express larger units in terms of smaller units within the same measurement system.

MGSE4.MD.1c. Record measurement equivalents in a two column table.

MGSE4.MD.2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

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.

k. Punts a ball using mature form.

l. Receives and passes the ball with the inside and outside of the feet to a stationary and moving target.

m. Volleys underhand using a mature form in small-sided games.

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)
Earth and Space Science (Grade 4)

S4E2. Obtain, evaluate, and communicate information to model the effects of the position and motion of the Earth and the moon in relation to the sun as observed from the Earth.

a. Develop a model to support an explanation of why the length of day and night change throughout the year.

b. Develop a model based on observations to describe the repeating pattern of the phases of the moon (new, crescent, quarter, gibbous, and full).

c. Construct an explanation of how the Earth's orbit, with its consistent tilt, affects seasonal changes.

Physical Science (Grade 4)

S4P1. Obtain, evaluate, and communicate information about the nature of light and how light interacts with objects.

a. Plan and carry out investigations to observe and record how light interacts with various materials to classify them as opaque, transparent, or translucent.

Georgia State Standards: GSE: Social Studies (2016)

Historical Understandings (Grade 4)

SS4H1 Explain the causes, events, and results of the American Revolution.

c. Describe the major events of the American Revolution and explain the factors leading to American victory and British defeat; include the Battles of Lexington and Concord, Saratoga, and Yorktown.

d. Explain the writing of the Declaration of Independence; include who wrote it, how it was written, why it was necessary, and how it was a response to tyranny and the abuse of power.

SS4H2 Analyze the challenges faced by the framers of the Constitution.

a. Identify the major leaders of the Constitutional Convention (James Madison, George Washington, and Benjamin Franklin).

Geographic Understandings (Grade 4)

SS4G2 Describe how physical systems affect human systems.

a. Explain how each force (American and British) attempted to use the physical geography of each battle site (Lexington and Concord, Saratoga, and Yorktown) to its benefit.

Government/Civic Understandings (Grade 4)

SS4CG1 Describe the meaning of:

a. Natural rights as found in the Declaration of Independence (the right to life, liberty, and the pursuit of happiness)

SS4CG3 Describe the structure of government and the Bill of Rights.

a. Describe how the three branches of government interact with each other (checks and balances and separation of powers), and how they relate to local, state, and federal government.

Information Processing Skills (Grade 4)

GOAL: The student will be able to locate, analyze, and synthesize information related to social studies topics and apply this information to solve problems/make decisions.

1. compare similarities and differences A

7. interpret timelines M

17. interpret political cartoons I

## Key and Related Concepts

### Key Concepts

| Key Concepts | Key questions and definition |
|---|---|
| Form | **What is it like?** The understanding that everything has a form with recognizable features that can be observed, identified, described and categorized. |
| Function | **How does it work?** The understanding that everything has a purpose, a role or a way of behaving that can be investigated. |
| Responsibility | **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. |

## Developing IB Learners

### Learner Profile

Communicators

Risk-takers (Courageous)

## ATL Skills

### Approaches to Learning

Description

**Social Skills**

- Interpersonal relationships, social and emotional intelligence - developing positive interpersonal relationships and collaboration

    Interpersonal relationships

        Help others to succeed.

        Build consensus and negotiate effectively.

        Make fair and equitable decisions.

        Practise empathy and care for others.

Listen closely to others' perspectives and to instructions.

Be respectful to others.

Learn cooperatively in a group: being courteous, sharing, taking turns.

Encourage others to contribute.

Take on a variety of roles in group learning.

Advocate for one's own rights and needs, and those of others

**Research Skills**

- Information literacy - Formulating and planning, data gathering and recording, synthesizing and interpreting, evaluating and communicating

  Synthesizing and interpreting

  Sort and categorize information: arrange information into understandable forms such as narratives, explanatory and procedural writing, tables, timelines, graphs and diagrams.

  Use critical literacy skills to analyse and interpret information.

**Self-management Skills**

- Organization - Managing time and tasks effectively

  Plan short- and long-term tasks.

  Set goals that are challenging and realistic.

  Use time effectively and appropriately.

  Bring necessary equipment and supplies to class.

  Keep an organized and logical system to document learning.

  Understand and use learning preferences.

  Use technology effectively and productively.

  Take on and complete tasks as agreed.

  Delegate and share responsibility for decision-making.

## Assessment & Resources

### Ongoing Assessment

**Culminating Activity: Interest-based peer groups will select a knowledge product from the attached choice board: Summative Assessment Choice Board and Rubric Who We Are**

**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"**

Who We Are: Reflection Google Form

Music 4th_IB_Artifact_Notation_Unit_2.pdfOct 25, 2022

### 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.**
- **Making Thinking Visible: Jamboard and Google Slide Templates #1**
- **Making Thinking Visible: Jamboard and Google Slide Templates #2**

## Science:

**1) Phases Of The Moon (1 week)**

**Phases Of The Moon**

Moon Phases Flip Book

Moon Phases interactive presentation/goes with moon phase flipbook

**2) Day and Night (2 weeks)**

Day & Night/Seasons

Sun, Earth and Moon Google Slideshow

https://docs.google.com/presen...

**3) Seasons (1 week)**

**4) Materials and Light (1 week)**

**Materials and Light**

## Social Studies

Studies Weekly Order Of Units

**Why Take Risks Project**

**6) The Declaration of Independence (1 week)**
**7) Waging The Revolutionary War (1 Week)**

**Betsy Ross Vs. King George**

1) **Revolutionary War Battles And Bravery** (1 week)

2) **Growing Pains: The Articles Of Confederation** (1 week)

3) **Constitutional Conventions** (1 week)

4) **We The People** (1 week)

5) **Three Branches Of Government** (1 week)

6) **Federalism** (1 Week)

## Resources:

Social-Studies-4th-Grade-Founding-Fathers-Social-Studies-Lab.pdf Jun 1, 2022

cartoon_analysis_worksheet.pdf Jun 1, 2022

Social-Studies-4th-Grade-Unit-2-Document-Set-Sample-Unit__1_.pptx Jun 1, 2022

Social-Studies-4th-Grade-Unit-3-Document-Set-Sample-Unit.pptx Jun 1, 2022

Description_Organizer.pdf Jun 2, 2022

Writing_Windows_2022.pdf Jun 2, 2022

## Videos:

**American Revolution: The Fight for Independence**
**The Constitution and the Constitutional Convention**

## Gifted/Enrichment

**Music:** Central Idea: Systems support structure.

Key Concepts: Causation, Change

Learner Profile: Students will develop risk-taker, reflective, and knowledgeable profiles as they play, sing, and analyze the notation and melodic structure of various songs. They will communicate knowledge of the musical system of notation as they perform the various recorder songs.

Activities: Students will learn how to read musical notation and they will perform song from various times and places as they study, analyze, and learn about the music's harmonic structure, including the notation system and simple recorder arrangements.

Assessments: Students will be assessed using the performance assessments from the class rubric. Students will self-assess throughout the lesson using the rubric.

**Art Class Instruction:**

Central Idea: Challenges can be the catalyst for change: Example: As well as color theory. Students will learn to mix colors using only primary colors.

Key Concepts: Connection, responsibility

Students will focus on IB profiles Inquirer, and knowledgeable, and communicators by:

-creating works of art that display the following elements of art: color, line, space, shape

-Identifying positive and negative space

-Connecting to Mexican Art forms: Example: drawing and painting a pot with cacti - using perspective, line, value and overlapping objects

-participating in class discussions and problem solving to make artistic connections

-Creating a tree that create a positive and negative space within the branches. Using warm and cool colors to paint within the spaces.

-Creating radial Symmetry: How can we create a pattern that shows radial symmetry? What is the difference between radial symmetry and normal symmetry?

Assessment: Color Wheel mixing with primary colors, tree branches color artwork, Mexican cacti with pot

**Physical Education**

Key Concepts: Responsibility, Form, Function

Central Idea: Connecting real life environments and situations to fleeing and tagging games.

Learner Profile: Communicator, Risk taker

Students will practice throwing a frisbee using the proper technique into a target with accuracy

Students will focus on IB profiles Inquirer, and knowledgeable, and communicators

Students will use same side foot when throwing a frisbee into target.

Student will use wrist when throwing the frisbee

**Spanish**

Central Idea: Challenges can be the catalyst for change: Students will learn how Spanish reflexive verbs change according to the subject pronoun used.

Key Concepts: Causation, Change

Learner Profile: Students will develop risk-taker, reflective, and knowledgeable profiles as they analyze the changes of reflexive verbs in Spanish and learn to apply the knowledge.

### 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

**Jessica Weingart** Nov 29, 2021 at 8:12 AM

Caring Bingo: Kids were excited, but we need more time. There has

been lots going on in the month of November.  Promoting unified expectations across specials was nice.

**Rachel Bailey** Nov 30, 2021 at 3:59 PM

Measuring Learning: Students were assessed using google forms, paper multiple choice assessments, Quizizz, PearDeck, cooperative projects,  student-teacher and peer-to-peer feedback. Assessment varied based on student needs (SST, 504).

Evidence Gathered: Student articles, cooperative projects, rubrics, reflections via journal entries, and questions posed in

Google Classroom.

Related Reflection:  Culminating "Take Away" Discussions and remaining questions posted on the classroom parking lot

**Wendy Sanders** May 17, 2023 at 3:14 PM

**How effective was the monitoring, documenting and measuring of learning?**

Very effective. Students chose activities from the Summative Assessment choice-boards to complete.
We did formative and summative assessments throughout the unit across all subjects to determine students' learning.

**What evidence did we gather about students' knowledge, conceptual understandings and skills?**

Students directly communicated about their new knowledge, connections to the central idea, ATL, learner profile and actions in their portfolio reflections.
Students added pictures of their Star models and Branches of Government posters.
Some students had technical difficulties with Manage-Bac reflections.
Some students went to every 4th grade class to recite the preamble of the constitution, this sparked more interest for students when their peers took action to share their knowledge.
Students improved their Glows- and Grows comments during gallery walks/presentations. Students  were more consistent with constructive feedback.
Many concluded that they liked presentations where the audience could ask more questions and participate.

Evidence of Learning

Star Model Projects
 2-d and 3-D Models of solar system (yard sticks, cut-out of planets and balloons, place in correct order and scaled distance from sun)
Branches of Government Project
Preamble speeches

**Erica Pease** Dec 4, 2023 at 1:17 PM

As a grade level we did not have the students create a cohesive GRASP. Rather individual classrooms completed different formative and summative tasks (Battle vs Battle, Visible Thinking Strategy, Informational Writing Essay)

Students were given a chance to present information and provide feedback.

## Looking Forward

**Jessica Weingart** Nov 30, 2021 at 3:50 PM

We would do our bingo again in a less busy time of year, perhaps September and March.

**Erica Pease** Dec 4, 2023 at 1:18 PM

Writing: Informational writing of Revolutionary War was extremely successful. Some classes used Book Creator for their presentations.

Science: Modeling, Kinesthetic allowed movement. Make sure to introduce the vocabulary strongly at the beginning of the unit.