Summary

How We Organize Ourselves

Subject	Year	Start date	Duration
Science Lab, Social Studies	Second Grade	Week 4, August	6 weeks

Inquiry

Transdisciplinary Theme

How we organize ourselves

The Central Idea

Patterns in systems

Lines of Inquiry

- patterns within a system (government, regions and matter, force/motion)
- what are examples patterns (government, regions and matter, force/motion)
-

Teacher questions

- What is a system?
- What are systems that are created in our society?
- What makes a system?
- Why do systems need rules to function?
- What are systems that are created in nature?
- Do you see any patterns within the systems?

Learning Goals

Scope & Sequence

Social Studies

[IB] Human systems and economic activities

Overall Expectations

will explore their understanding of people and their lives, focusing on themselves, their friends and families, and their

immediate environment. They will practise applying rules and routines to work and play. They will gain an increasing awareness of themselves in relation to the various groups to which they belong and be conscious of systems by which they organize themselves.

will develop their sense of place, and the reasons why particular places are important to people. They will also develop their sense of time, and recognize important events in their own lives, and how time and change affect people. They will explore the role of technology in their lives.

Conceptual Understandings

Identify roles, rights and responsibilities in society

Learning Outcomes

exhibit skills and strategies for organizing his or her time and belongings

demonstrate a positive attitude towards learning

demonstrate ability to apply existing rules and routines to work and play with others.

suggest some suitable rules and routines for the class

[CCGPS] Government/Civic Understandings

Learning Outcomes

SS2CG1 The student will define the concept of government and the need for rules and laws.

SS2CG2 The student will identify the roles of the following elected officials:

a. President (leader of our nation)

b. Governor (leader of our state)

c. Mayor (leader of a city)

SS2CG3 The student will give examples of how the historical figures under study demonstrate the positive citizenship traits of honesty, dependability, liberty, trustworthiness, honor, civility, good sportsmanship, patience, and compassion.

Standards and benchmarks

Georgia State Standards: GSE: English Language Arts (2015)
LANGUAGE (L) (Grade 2)

Conventions of Standard English

ELAGSE2L2: Demonstrate command of the conventions of Standard English capitalization, punctuation, and spelling when writing.

ELAGSE2L2b. Use commas in greetings and closings of letters.

ELAGSE2L2e. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

READING INFORMATIONAL (RI) (Grade 2)

Key Ideas and Details

ELAGSE2RI1: Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

ELAGSE2RI2: Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within the text.

ELAGSE2RI3: Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.

Craft and Structure

ELAGSE2RI4: Determine the meanings of words and phrases in a text relevant to a grade 2 topic or subject area.

ELAGSE2RI5: Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.

ELAGSE2RI6: Identify the main purpose of a text, including what the author wants to answer, explain, or describe.

READING LITERARY (RL) (Grade 2)

Craft and Structure

ELAGSE2RL4: Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song.

ELAGSE2RL5: Describe the overall structure of a story including describing how the beginning introduces the story, the middle provides major events and challenges, and the ending concludes the action.

ELAGSE2RL6: Acknowledge differences in the points of view of characters, including by speaking in a different voice for each character when reading dialogue aloud.

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

General Music (Grade 2)

ESGM2.CR.2 Compose and arrange music within specified guidelines.

b. Compose rhythmic patterns (e.g. quarter notes, quarter rests, barred eighth notes, half notes, half rests).

Performing

ESGM2.PR.1 Sing a varied repertoire of music, alone and with others.

b. Sing with others (e.g. rounds, canons, game songs, and ostinato).

ESGM2.PR.2 Perform a varied repertoire of music on instruments, alone and with others.

a. Perform steady beat and simple rhythmic patterns using body percussion and a variety of instruments with appropriate technique.

b. Perform simple body percussion and instrumental parts including ostinato while other students play or sing contrasting parts.

ESGM2.PR.3 Read and Notate music.

a. Read, notate, and identify quarter notes, quarter rests, barred eighth notes, half notes, and half rests using iconic or standard notation.

Responding

ESGM2.RE.1 Listen to, analyze, and describe music.

a. Distinguish between repeating and contrasting sections, phrases, and simple formal structures (e.g. AB, ABA).

b. Describe music using appropriate vocabulary (e.g. upward/downward, forte/piano, presto/largo, long/short), appropriate mood (e.g. happy/sad), and timbre adjectives (e.g. dark/bright, heavy/light).

c. Identify classroom, folk, and orchestral instruments by sight and sound.

d. Aurally distinguish between solo/ensemble, and accompanied/unaccompanied singing.

ESGM2.RE.2 Evaluate music and music performances.

a. Evaluate music (e.g. learned, student-composed, improvised) and musical performances by themselves and others with given criteria.

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

c. Explain personal preferences for specific musical works using appropriate vocabulary.

ESGM2.RE.3 Move to a varied repertoire of music, alone and with others.

a. Respond to contrasts and events in music with locomotor movement (e.g. walk, run, hop, jump, gallop, skip) and non-locomotor movement (e.g. bend, twist, stretch, turn).

Connecting
ESGM2.CN.1 Connect music to the other fine arts and disciplines outside the arts.

b. Describe connections between music and disciplines outside the fine arts.

Georgia State Standards: GSE: Fine Arts: Visual Arts (2017)
Creating (Grade 2)

VA2.CR.1 Engage in the creative process to generate and visualize ideas by using subject matter and symbols to communicate meaning.

a. Generate individual and group ideas in response to visual images and personal experiences.

b. Produce visual images in response to open-ended prompts, themes, and narratives.

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

VA2.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.

VA2.CR.3 Understand and apply media, techniques, and processes of two-dimensional art.

a. Create drawings and paintings with a variety of media.

VA2.CR.5 Demonstrate an understanding of the safe and appropriate use of materials, tools, and equipment for a variety of artistic processes.

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Connecting (Grade 2)

VA2.CN.3 Develop life skills through the study and production of art (e.g. collaboration, creativity, critical thinking, communication).

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Georgia State Standards: GSE: Mathematics (K-8)

MATHEMATICAL PRACTICES (2021) (Grade 2)

2.MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.

2.MP.1 Make sense of problems and persevere in solving them.

2.MP.2 Reason abstractly and quantitatively.

2.MP.3 Construct viable arguments and critique the reasoning of others.

2.MP.4 Model with mathematics.

2.MP.5 Use appropriate tools strategically.

2.MP.6 Attend to precision.

2.MP.7 Look for and make use of structure.

2.MP.8 Look for and express regularity in repeated reasoning.

NUMERICAL REASONING (2021) (Grade 2)

2.NR.1: Using the place value structure, explore the count sequences to represent, read, write, and compare numerical values to 1000 and describe basic place-value relationships and structures.

2.NR.1.1 Explain the value of a three- digit number using hundreds, tens, and ones in a variety of ways.

2.NR.2: Apply multiple part-whole strategies, properties of operations and place value understanding to solve real-life, mathematical problems involving addition and subtraction within 1,000.

2.NR.2.1 Fluently add and subtract within 20 using a variety of mental, part-whole strategies.

PATTERNING & ALGEBRAIC REASONING (2021) (Grade 2)

2.PAR.4: Identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns.

2.PAR.4.1 Identify, describe, and create a numerical pattern resulting from repeating an operation such as addition and subtraction.

MEASUREMENT & DATA REASONING (2021) (Grade 2)

2.MDR.5: Estimate and measure the lengths of objects and distance to solve problems found in real-life using standard units of measurement, including inches, feet, and yards.

2.MDR.5.1 Construct simple measuring instruments using unit models. Compare unit models to rulers.

Georgia State Standards: GSE: Science (2016)

Physical Science (Grade 2)

S2P1. Obtain, evaluate, and communicate information about the properties of matter and changes that occur in objects.

a. Ask questions to describe and classify different objects according to their physical properties.

b. Construct an explanation for how structures made from small pieces (linking cubes, building blocks) can be disassembled and then rearranged to make new and different structures.

c. Provide evidence from observations to construct an explanation that some changes in matter caused by heating or cooling can be reversed and some changes are irreversible.

S2P2. Obtain, evaluate, and communicate information to explain the effect of a force (a push or a pull) in the movement of an object (changes in speed and direction).

a. Plan and carry out an investigation to demonstrate how pushing and pulling on an object affects the motion of the object.

b. Design a device to change the speed or direction of an object.

c. Record and analyze data to decide if a design solution works as intended to change the speed or direction of an object with a force (a push or a pull).

Georgia State Standards: GSE: Social Studies (2016)
Historical Understandings (Grade 2)

SS2H1 Describe the lives and contributions of historical figures in Georgia history.

a. James Oglethorpe, Tomochichi, and Mary Musgrove (founding of Georgia)

b. Sequoyah (development of a Cherokee alphabet)

c. Jackie Robinson (sportsmanship and civil rights)

d. Martin Luther King, Jr. (civil rights)

e. Juliette Gordon Low (Girl Scouts and leadership)

f. Jimmy Carter (leadership and human rights)

Geographic Understandings (Grade 2)

SS2G1 Locate and compare major topographical features of Georgia and describe how these features define Georgia's surface.

a. Locate and compare the geographic regions of Georgia: Blue Ridge, Piedmont, Coastal Plain, Ridge and Valley, and Appalachian Plateau.

b. Locate on a physical map the major rivers: Savannah, Flint, and Chattahoochee.

Government/Civic Understandings (Grade 2)

SS2CG1 Define the concept of government and the need for rules and laws.

Define the concept of government and the need for rules and laws.

SS2CG2 Identify the following elected officials of the executive branch and where they work:

a. President (leader of our nation) and Washington, D.C. – White House

b. Governor (leader of our state) and Atlanta, GA – State Capitol Building

c. Mayor (leader of a city) and city hall

SS2CG3 Give examples of how the historical figures in SS2H1 demonstrate positive citizenship traits such as: honesty, dependability, trustworthiness, honor, civility, good sportsmanship, patience, and compassion.

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Georgia State Standards: GSE: Physical Education (2018)
Movement Concepts and Principles (Grade 2)

PE2.2 The physically educated student applies the knowledge of concepts, principles, strategies, and tactics related to movement and performance.

a. Maintains personal space in a movement setting.

b. Uses a variety of shapes, levels, and pathways in a variety of movement settings.

c. Demonstrates gradual increases and decreases in speed and force in dance and/or a variety of activities.

Fitness (Grade 2)

PE2.3 The physically educated student demonstrates knowledge and skills to help achieve and maintain a health-enhancing level of physical activity and fitness.

a. Recognizes physiological indicators that accompany moderate to vigorous physical activities (feels hot, thirsty, sweaty, increased heart rate and heavy breathing).

b. Actively engages in physical education.

c. Identifies physical activities that contribute to fitness in and outside of a physical education setting.

💡 Key and Related Concepts

Key Concepts

Key Concepts	Key questions and definition	Rationale	Subject Focus
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.	To participate and/or use a system, there are responsibilities in supporting the upkeep of the system as the rules are followed.	Social Studies

Developing IB Learners

Learner Profile

Principled

Balanced

Description

Students will demonstrate their communicator skills by explaining the similarities and differences between systems locally and nationally.

. Students learned the various responsibilities of a government, such as voting process, length of terms, what different leaders are responsible for, and how government officials are responsible for establishing the law and regulations by which we live by.

ATL Skills

Approaches to Learning

Description

Looking at systems from machines, animals, organizations, communities, and government, to see what is similar in characteristics and consequences if the rules are not followed.

Social Skills

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

    Interpersonal relationships

        Help others to succeed.

        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.

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

    Social and Emotional Intelligence

        Be aware of own and others' emotions.

        Be self and socially aware.

        Be aware of own and others' impact as a member of a learning group.

Action

Student-initiated Action

Students looked for other examples of systems in the world and found examples in their bodies and in their community.

Students wanted to learn more about the solar system and checked books out from the library.

Assessment & Resources

Ongoing Assessment

GRASP: Georgia region cookies or regions book

georgia regions (2).png
886.65 KB

What are the possible ways of assessing students' prior knowledge and skills? What evidence will we look for?

Class discussions about systems. What do the students consider systems? Activities that have written responses on the systems such as home, churches, school, and government, provide student prior knowledge. We hope to see evidence of recognition of why and purpose of rules in the making systems work.

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?

Learning Experiences

Designing engaging Learning Experiences

1. During their independent reading and shared reading, students and teacher will read a variety of books related to the Solar System, Stars, and the Moon.

2. Students will observe the moon nightly for 15 days and complete a "Moon Journal". They then will draw the moon in their journals. Students will share and discuss their findings with the class in order to deepen their understanding about the phases.

3. In collaborative groups, students will compare and contrast selected planets. The focus will be on the distance, diameter, length of a day, moons, and rings of each planet. Students will discuss and record their findings and observations on a Venn diagram.

4. Students will investigate a specific planet. They will write a descriptive paragraph and five descriptive facts about the planet. Using these facts, students will create imaginative activities that they could do on their planet.

Music Class Instruction:

Central Idea: Patterns in systems.

Key Concepts: Responsibility will be developed as students learn how to utilize and care for instruments appropriately.

Learner Profile: Students will develop principled behavior while they utilize instruments and work with others. Students will develop their balanced profile by developing their rhythm intellect alone and through song concepts.

Approaches to learning:

Students will develop their social skills while working with others to learn how to collaborate, share, and perform music.

Activities

- Students will identify patterns in music (how to read, write, and perform)
- identify and demonstrate ways music is used to communicate

PE Class Instruction:

Key Concepts: Responsibility

Learner Profile: Principled, Balanced

- **How is it linked to other things?** The understanding that we live in a world of interacting systems in which the actions of any individual element affect others.
- The way we move through space individually affects others around us. Moving with safety in mind using all locomotor skill, pathways, speed and force can affect others.
- Safety is a responsibility for all participants moving around in personal space while performing a locomotor skill.

How we organize our selves

Visual Art:

Key Concepts: Responsibility

Learner Profile: Principled, balanced

· Students will show respect to each other and to the supplies while working on the project (principled)

· Students will balance their time between planning and creatin their project. Students will balance their use of the supplies in order to share with their classmates (balance).

ATL: Social skills

· Students will

Activities:

Spanish WL

Central Idea: Patterns in systems

Key Concepts: Responsibility

Learner Profile: Principled, Balanced

ATL: Social Skills

- Learn, follow, and use basic commands in class. - Responsibility, Principled & Social Skills
- Learn about "fall", and how patterns in our solar system make the days become shorter during this time. - Balanced
- Learn vocabulary about school supplies and will demonstrate ways to use them safely in class. - Principled & Responsibility

Activities:

- Create a poster with an essential agreement in Spanish - Responsibility & Communicator.
- Introduce themselves explaining where they are from. They will use complete sentences in Spanish, and will listen attentively to peers. - Principled
- Create a short picture story to demonstrate the importance of essential agreements and being empathic toward each other. - Social Skills

Science Class Instruction:

Key Concepts: form, function, connection

- Systems in science and engineering: students will utilize inquiry and observation skills to engage in science and engineer design practices.
  - Observation stations: focus on form and connection
  - Build a back-scratcher: Engineer Design Challenge: inquiry into how the form of the scratchier affects the function.
- Students connect central idea with the sun-earth-moon system by building and observing various models (observation of the moon phases journal; Sky view activity from Mystery Science, lamps, balls, Next Time You See the Moon: story, video of model)

Provocations

Students see a photo on the Promethean Board of two famous amusement parks. Students are asked what is this? . How can I go there? What is the purpose of this place? Do I need to do anything in particular to go to this place? I can just show up? Are there certain actions I need to do to be able to participate? (buy a ticket, stand in line, only participate in rides that are age appropriate according to height, age, safety.) As the students discuss the guidelines or rules, they hopefully realize to participate in a system and stay safe, there are rules.

Reflections

General Reflections

Looking Back

Devon Russert Nov 30, 2021 at 3:48 PM

Students were able to identify a system. They could state the parts of the system, how they made the sytem work, and what would happen if part of the system was broken or missing. Students were able to classify things that were not systems as well as compare and contrast different types of systems as they relate to science, social studies and math. Students created a model of a system, wrote about their system, and shared their projects with their peers. Students reflected on their knowledge by making connections to real life and applying the skills learned to solving problems.

Liz Jacobs May 25, 2023 at 12:54 PM

Doing this planner at the beginning of the year makes sense because we are talking about systems in the clasroom, school and our community that make our world safe and conducive to learning. It is then easy to broaden the scope to include the systems of government in the city, state and country. Students showed mastery by creating the GRASP assessment: Make a list of 4 systems, sort the systems into natural and man-made, pick two systems and write how they connect to your life.

Looking Forward

Devon Russert Nov 30, 2021 at 3:53 PM

It was helpful to do this unit at the beginning of the year when we are organically disucssing rules and laws in the school and classroom. This helped provide students with background knowledge and understanding of how a system works. We could have students create 3D systems such as roller coasters or Rube Goldberg inspired demonstrations as an innovation for future learning.

Liz Jacobs May 25, 2023 at 12:56 PM

We would like to keep this planner at the beginning of the year. Also, this GRASP was more manageble than in past years and included visible thinking strategies.

Stream & Resources

Resources

Video posted on Aug 15, 2019 at 9:48 AM

https://www.youtube.com/watch?v=oT7dMHAiCfs