



Summary

How the World Works -

Subject	Year	Start date	Duration
English, Mathematics, Science Lab, Music, Visual Arts	First Grade	Week 2, September	7 weeks

Inquiry

Transdisciplinary Theme



How the world works

The Central Idea

Patterns in nature affect daily life.

Lines of Inquiry

- an inquiry into the natural world and its laws
- the interaction between the natural world (physical and biological) and human societies
- how humans use their understanding of scientific principles
- the impact of scientific and technological advances on society and on the environment

Teacher questions

- How do we use instruments/data to measure and predict weather patterns?
- What are the different types of weather and their characteristics?
- How are we effected by seasonal changes?
- What do we do when the weather changes?
- What does it look like when the weather changes?
- How do we keep track of the weather changes?
- Why is it important to keep track of the weather changes?



Learning Goals

Scope & Sequence

English

[IB] Oral language - listening and speaking

Conceptual Understandings

Spoken words connect us with others.

People ask questions to learn from others.

[IB] Visual language - viewing and presenting

Conceptual Understandings

Visual language is all around us.

The pictures, images, and symbols in our environment have meaning.

We can enjoy and learn from visual language.

show understanding by matching pictures with context

Learning Outcomes

recognize familiar signs, labels and logos, for example, pedestrian walking sign, emergency exit sign, no dogs allowed; identify similarities and differences

select and incorporate colours, shapes, symbols and images into visual presentations

listen to terminology associated with visual texts and understand terms such as colour, shape, size.

[IB] Written language - writing

Overall Expectations

show an understanding that writing is a form of expression to be enjoyed. They know that how you write and what you write conveys meaning; that writing is a purposeful act, with both individual and collaborative aspects.

[CCGPS] Reading Literary

Learning Outcomes

Key Ideas and Details

ELACC1RL1. Ask and answer questions about key details in a text.

ELACC1RL2. Retell stories, including key details, and demonstrate understanding of their central message or lesson.

ELACC1RL3. Describe characters, settings, and major events in a story, using key details.

Craft and Structure

ELACC1RL4. Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.



ELACC1RL6. Identify who is telling the story at various points in a text. EL

Integration of Knowledge and Ideas

ELACC1RL7. Use illustrations and details in a story to describe its characters, setting, or events.

[CCGPS] Reading Foundational

Learning Outcomes

Print Concepts

ELACC1RF1. Demonstrate understanding of the organization and basic features of print.

Phonological Awareness

ELACC1RF2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).

[CCGPS] Writing

Learning Outcomes

Text Types and Purposes

ELACC1W3. Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure.

[CCGPS] Speaking and Listening

Learning Outcomes

Presentation of Knowledge and Ideas

ELACC1SL5. Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.

ELACC1SL6. Produce complete sentences when appropriate to task and situation. (See grade 1 Language standards 1 and 3 for specific expectations.)

Standards and benchmarks

Georgia State Standards: GSE: English Language Arts (2015)

SPEAKING AND LISTENING (SL) (Grade 1)

Comprehension and Collaboration

ELAGSE1SL1: Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

ELAGSE1SL1b. Build on others' talk in conversations by responding to the comments of others through multiple exchanges.

ELAGSE1SL1c. Ask questions to clear up any confusion about the topics and texts under discussion.

ELAGSE1SL3: Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.



Presentation of Knowledge and Ideas

ELAGSE1SL4: Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.

ELAGSE1SL5: Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.

ELAGSE1SL6: Produce complete sentences when appropriate to task and situation. (See grade 1 Language standards 1 and 3 for specific expectations.)

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

General Music (Grade 1)

Performing

ESGM1.PR.1 Sing a varied repertoire of music, alone and with others.

- a. Sing accompanied and unaccompanied melodies in a limited range, using head voice.
- b. Echo simple singing and speech patterns and perform call and response songs.
- c. Sing multiple songs representing various genres, tonalities, meters, and cultures, including at least one song in a foreign language.

Responding

ESGM1.RE.1 Listen to, analyze, and describe music.

- a. Distinguish between contrasts in music (e.g. pitch, duration, dynamics, tempo, timbre, form).
- b. Describe music using appropriate vocabulary (e.g. high/low, upward/downward, loud/soft, fast/slow, long/short, same/different).

ESGM1.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

ESGM1.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.

ESGM1.CN.2 Connect music to history and culture.

- a. Perform and respond to music from various historical periods and cultures.

Georgia State Standards: GSE: Fine Arts: Visual Arts (2017)

Creating (Grade 1)

VA1.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. Generate visual images in response to open ended prompts, themes, and narratives.
- c. Produce multiple prototypes in the planning stages for works of art (e.g. sketches, models).



VA1.CR.2 Create works of art based on selected themes.

- a. Create works of art emphasizing one or more elements of art and/or principles of design.
- b. Create works of art that attempt to fill the space in an art composition.

Georgia State Standards: GSE: Mathematics (Concepts)

MATHEMATICAL PRACTICES (2021) (Grade 1)

1.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.

- 1.MP.1 Make sense of problems and persevere in solving them.
- 1.MP.2 Reason abstractly and quantitatively.
- 1.MP.3 Construct viable arguments and critique the reasoning of others.
- 1.MP.4 Model with mathematics.
- 1.MP.5 Use appropriate tools strategically.
- 1.MP.6 Attend to precision.
- 1.MP.7 Look for and make use of structure.
- 1.MP.8 Look for and express regularity in repeated reasoning.

NUMERICAL REASONING (2021) (Grade 1)

1.NR.2: Explain the relationship between addition and subtraction and apply the properties of operations to solve real-life addition and subtraction problems within 20.

- 1.NR.2.1 Use a variety of strategies to solve addition and subtraction problems within 20.
- 1.NR.2.2 Use pictures, drawings, and equations to develop strategies for addition and subtraction within 20 by exploring strings of related problems.
- 1.NR.2.4 Fluently add and subtract within 10 using a variety of strategies.
- 1.NR.2.5 Use the meaning of the equal sign to determine whether equations involving addition and subtraction are true or false.
- 1.NR.2.7 Apply properties of operations as strategies to solve addition and

Georgia State Standards: GSE: Science (2016)

Physical Science (Grade 1)

S1P1. Obtain, evaluate, and communicate information to investigate light and sound.

- a. Use observations to construct an explanation of how light is required to make objects visible.
- b. Ask questions to identify and compare sources of light.
- c. Plan and carry out an investigation of shadows by placing objects at various points from a source of light.
- d. Construct an explanation supported by evidence that vibrating materials can make sound and that sound can make materials vibrate.
- e. Design a signal that can serve as an emergency alert using light and/or sound to communicate over a distance.



Georgia State Standards: GSE: Physical Education (2018)

Motor Skills and Movement Patterns (Grade 1)

Manipulative Skills

I. Dribbles a ball using the inside of the foot while walking in general space.

Movement Concepts and Principles (Grade 1)

PE1.2 The physically educated student applies the knowledge of concepts, principles, strategies, and tactics related to movement and performance.

e. Differentiates between strong and light force.

Personal and Social Behavior, Rules, Safety, and Etiquette (Grade 1)

PE1.4 The physically educated student exhibits responsible personal and social behavior that respects self and others in physical activity settings.

a. Accepts personal responsibility by using equipment and space appropriately.

b. Follows the rules and procedures of the learning environment.

c. Responds appropriately to feedback from the teacher.

d. Works independently with others in small and large groups.

e. Follows teacher directions for safe participation and proper use of equipment with minimal teacher reminders.

PE1.5 The physically educated student recognizes the value of physical activity for health, enjoyment, challenge, self-expression, and/or social interaction.

b. Recognizes that challenges in physical activity can lead to success.

Georgia State Standards: GSE: Science (2016)

Earth and Space Science (Grade 1)

S1E1. Obtain, evaluate, and communicate weather data to identify weather patterns.

c. Plan and carry out investigations on current weather conditions by observing, measuring with simple weather instruments (thermometer, wind vane, rain gauge), and recording weather data (temperature, precipitation, sky conditions, and weather events) in a periodic journal, on a calendar, and graphically.

d. Analyze data to identify seasonal patterns of change.

Georgia State Standards: GSE: Social Studies (2016)

Map and Globe Skills (Grade 1)

GOAL: The student will use maps to retrieve social studies information.

2. use intermediate directions I



 **Key and Related Concepts**

Key Concepts

Key Concepts	Key questions and definition	Related concepts	Subject Focus
 Function	How does it work? The understanding that everything has a purpose, a role or a way of behaving that can be investigated.		
 Causation	Why is it as it is? The understanding that things do not just happen; there are causal relationships at work, and that actions have consequences.	Properties, magnetism, energy	English, Mathematics, Science Lab, Music, Visual Arts

 **Developing IB Learners**

Learner Profile

-  Communicators
-  Inquirers
-  Risk-takers (Courageous)

Description

-SW use **thinking skills and communication skills** to form ideas and share about what to wear during particular seasons/ weather.

-SW use **research skills** to learn about severe weather.

 **ATL Skills**

Approaches to Learning

Description

-SW use **thinking skills and communication skills** to form ideas and share about what to wear during particular seasons/ weather.

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 **Communication Skills**



- Exchanging information - Listening, interpreting and speaking

Listening

Listen to, and follow the information and directions of others.

Listen actively to other perspectives and ideas.

Ask for clarifications.

Listen actively and respectfully while others speak.

Speaking

Speak and express ideas clearly and logically in small and large groups.

Give and receive meaningful feedback and feedforward.

State opinions clearly, logically and respectfully.

Discuss and negotiate ideas and knowledge with peers and teachers.

Communicate with peers, experts and members of the learning community using a variety of digital environments and media.

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

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.

 **Action**

Student-initiated Action

Students will collect coats and other items for colder weather by hosting a fundraiser for Atlanta Mission. Students will prepare a "speech" to present to each classroom asking for donations. Students will also create posters and speak on the morning announcements about the drive. Students and parents will meet and present donated items to the mission.



Assessment & Resources

Ongoing Assessment



G1 How the World Works Rubric Jun 2, 2022

1st_Grade_Throwing_Assessment_-_Google_Forms.pdf Nov 3, 2021



1st_Unit_2_Artifacts.docx Oct 27, 2021

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

GRASP- How the World Works

Goal- work to deliver an accurate weather forecast for a given place

Role- a meteorologist that interprets weather and data in order to make a forecast

Audience- first grade class

Situation- given weather data

Performance Challenge-

Your team must present an accurate weather forecast to the audience. The forecast will include a written forecast, a weather map, current conditions, and a three day forecast. Your terminology, use of weather symbols, and data analysis must be accurate.

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

circle map 'weather'- prior knowledge

picture sort/categorize-determine vocabulary

time-lapse video of tree changing throughout the seasons

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 **Learning Experiences**

Designing engaging Learning Experiences

Gifted/Extension activities



G1_World_works.docx
Dec 1, 2021



Braille.docx
71.64 KB

-TW read books about different weather types. SW draw and label a picture on an index card to show their favorite kind of weather.

-read aloud 'Cloudy With A Chance of Meatballs'

-write a weather report



-TW provide small groups with art materials to create a mural depicting weather, temperature, and environmental changes to represent each season.

-SW observe daily weather patterns and record on a chart.

-SW create a cloud in a jar.

-SW research different types of severe weather. SW create a weather safety plan.

-make a weather tool

- Ms. Benner, gifted teacher, will visit classrooms to teach about Extreme Weather.

Gifted Students:

- Students will research a weather tool not included in the standard and become the Expert on that tool. The students will then teach the class or small groups about the weather tool.

- Students had to identify why we need to know certain facts about the weather tools. Students had to conduct research to answer questions like: Why do we need to know which way the wind is blowing? Why do we need to know how much rain is in the rain gauge.

Music

Central Idea: Patterns in nature affect daily life.

Key Concepts: Function and Causation:

Causation will be developed through students being exposed to the written system of melodic notation and how it connects to performing a melody.

Function will be developed by teaching the students how to utilize their voice, instruments, or the notation system to perform different ranges of notes.

Learner Profile: Communicator, inquirer, risk-taker profiles will be developed as students prepare music to perform for an audience.

Approaches to Learning: Students will develop their communication by expressing reflections on how they can improve their performance(s), and sharing their music with an audience.

Activities: Students perform songs with various melodic patterns, and identify pitch using iconic notation or reduced staff. Students recognize melodic patterns.

Physical Education:

Central Idea: Force is used to push a soccer ball into a desired direction, but the amount of force applied needs to match the action and desired goal.

Key Concepts: Form

Learner Profile: Principled and Courageous

Students will identify the steps of kicking a stationary soccer ball. Students will dribble using both feet while trying to maintain control of the soccer ball.

Science Lab:

Key Concepts: Change, causation



Activities:

- students will obtain and communicate weather data collected after measuring with thermometers, wind vanes, and rain gauges.
- Students will use data to create graphs in order to determine patterns of the seasons.
- students will investigate different forms of water(water, blended ice, crushed ice, ice cubes) and determine which best represents "rain, snow, sleet, or hail" , by observing the changes

How the world works

Visual Art:

Key Concepts: function, causation

Learner Profile: communicator, inquirer, risk taker

- Students will discuss the function of art in society, such as beautification, communicating ideas, celebration of culture (function).
- Students will ask and answer questions related to the project (inquirer).

ATL: communication skills

- Students will communicate their prior knowledge, communicate their use of supplies and communicate their ideas with peers and teachers.

Activities:



Printmaking Poinsettias - Copy.pptx
4.78 MB

Spanish

Central Idea: Patterns in nature affect daily life.

Learner Profile: Knowledgeable, Inquirer, Communicator

Key Concepts: Form, Change, and Connection

ATL Communication Skills.

- Students will be inquiring into Hispanic culture. Connection
- Students will learn weather/seasons vocabulary in Spanish. The students will listen the song of Las estaciones. Change & Connection.
- Students will make connections between/review color and emotions in Spanish. Caring & Connection.



Reflections

General Reflections

Looking Back



Jessica Weingart Nov 29, 2021 at 8:14 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.



Jessica Weingart Nov 30, 2021 at 3:57 PM

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



Kendall Willis Jan 31, 2024 at 1:34 PM

All members are present in PLC and commenting on reflection as a group.

The monitoring, documenting, and measuring of learning was effective based on evidence of tracking live hurricane, tracking weather patterns throughout the month, and weather experiments. Students compare and contrast weather patterns from various days and times of the week. Students monitored the clouds and predicted what the weather would be like based on what they looked like.

Students participated in a summative assessment where they presented a weather report as a meteorologist either on video or in person. They used various weather language, props, and posters.

Students continue to monitor the weather in their daily lives and show interest in the weather and wind direction.

Looking Forward



Kendall Willis Jan 31, 2024 at 1:45 PM

We need to continue to incorporate hands on activities and experiments such as high touch high tech and the make a cloud experiment. They allowed the students to be engaged and show their learning in hands on activities.

Due to time restraints, it can be difficult to schedule time to perform experients, however, we would love to come up with a resolution for this.



Stream & Resources

Resources



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

Thermometers, rain gauge, wind vane, paper cups, Science A to Z, scenarios for tools,

<http://extension.illinois.edu/treehouse/index.cfm>



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

-books about weather, climates of different lands, and seasons, maps and globes, weather tools, unitedstreaming.com, National Geographic Video, brainpop.com, weather.com, Ziploc bags, baby food jars