## Summary

### How the World Works

| Subject | Year | Start date | Duration |
|---|---|---|---|
| English, Mathematics, Science Lab | Kindergarten | Week 2, January | 6 weeks |

## Inquiry

### Transdisciplinary Theme

**How the world works**

An inquiry into the natural world and its laws

### The Central Idea

Characteristics impact function

### Lines of Inquiry

- the way things move
- physical attributes
- monuments and memorials

### Teacher questions

- What is an example of a time pattern?
- How does time effect our lives?
- What is the connection between time and location?

## Learning Goals

### Scope & Sequence

English

[CCGPS] Writing

**Learning Outcomes**

Text Types and Purposes

ELACCKW2. Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

ELACCKW3. Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.

### Standards and benchmarks

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

Creating
ESGMK.CR.1 Improvise melodies, variations, and accompaniments.

b. Improvise soundscapes (e.g. weather, animals, other sound effects).

c. Improvise using various sound sources (e.g. electronic sounds, found sounds, body percussion, classroom instruments).

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

a. Sing simple accompanied and unaccompanied melodies in a limited range, using head voice.

b. Echo simple singing and speech patterns.

c. Sing multiple songs representing various genres, tonalities, meters, and cultures, including at least one song in a foreign language.

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

a. Echo simple rhythmic patterns with appropriate technique using body percussion and classroom instruments.

b. Perform steady beat and simple rhythmic patterns with appropriate technique using body percussion and classroom instruments.

ESGMK.PR.3 Read and Notate music.

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

b. Read simple melodic contour representations (e.g. roller coaster).

Responding
ESGMK.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, loud/soft, fast/slow, long/short).

c. Identify basic classroom instruments by sight and sound.

ESGMK.RE.2 Evaluate music and music performances.

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

ESGMK.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).

b. Perform choreographed and non-choreographed movements.

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

a. Describe connections between music and the other fine arts.

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

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

c. Demonstrate performance etiquette and appropriate audience behavior.

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

VAK.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 using observation, experience, and imagination using a variety of art materials.

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

b. Use pictures to tell a story.

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

a. Attempt to fill the space in an art composition.

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

VAK.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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Georgia State Standards: GSE: Mathematics (Concepts)
NUMERICAL REASONING (2021) (Kindergarten)

K.NR.2: Use count sequences within 100 to count forward and backward in sequence.

K.NR.2.1 Count forward to 100 by tens and ones and backward from 20 by ones.

K.NR.2.2 Count forward beginning from any number within 100 and count backward from any number within 20.

Georgia State Standards: GSE: Science (2016)
Physical Science (Kindergarten)

SKP1. Obtain, evaluate, and communicate information to describe objects in terms of the materials they are made of and

their physical attributes.

a. Ask questions to compare and sort objects made of different materials. (Common materials include clay, cloth, plastic, wood, paper, and metal.)

b. Use senses and science tools to classify common objects, such as buttons or swatches of cloth, according to their physical attributes (color, size, shape, weight, and texture).

c. Plan and carry out an investigation to predict and observe whether objects, based on their physical attributes, will sink or float.

SKP2. Obtain, evaluate, and communicate information to compare and describe different types of motion.

a. Plan and carry out an investigation to determine the relationship between an object's physical attributes and its resulting motion (straight, circular, back and forth, fast and slow, and motionless) when a force is applied. (Examples could include toss, drop, push, and pull.)

b. Construct an argument as to the best way to move an object based on its physical attributes.

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

SSKH1 Identify the national holidays and describe the people and/or events celebrated.

e. Martin Luther King, Jr. Day

h. Presidents Day (George Washington, Abraham Lincoln, and the current president)

Georgia State Standards: GSE: Physical Education (2018)
Personal and Social Behavior, Rules, Safety, and Etiquette (Kindergarten)

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

a. Follows directions individually and in a group setting (follows rules and takes turns).

b. Acknowledges responsibility for behavior when prompted.

c. Shares equipment and space with others.

d. Recognizes the established classroom procedures.

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

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

a. Recognizes that physical activity is important for good health.

b. Acknowledges that some physical activities are challenging/difficult.

c. Identifies physical activities that are enjoyable.

d. Recognizes the enjoyment of playing with others.

e. Accepts and respects differences and similarities of physical abilities in self and others.

## Key and Related Concepts

### Key Concepts

| Key Concepts | Key questions and definition | Related concepts |
|---|---|---|
| Form | **What is it like?** The understanding that everything has a form with recognizable features that can be observed, identified, described and categorized. | shape, organization |
| 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. | Consequences, Sequences, Pattern, Impact |
| Connection | **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. | Systems, Relationships, Networks, Homeostasis, Interdependence. |

## Developing IB Learners

### Learner Profile

Inquirers

Thinkers

Communicators

Description
Thinking Skills –

## ATL Skills

### Approaches to Learning

Description
Thinking Skills –

**Research Skills**

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

    Data gathering and recording

        Record observations by drawing, note taking, charting, tallying, writing statements, annotating images.

    Evaluating and communicating

        Draw conclusions from relationships and patterns that emerge from data.

## 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?

- KWL chart
- Teacher observation
- Student participation

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

Summative project -- Students will work in small groups to create a toy or game using classroom items. Students will then explain what items they used to make the game or toy (material composition) and will demonstrate how the game is played or how the toy moves. (forces and motion).

Teachers will use a rubric to assess students' understanding of central idea.

Students will also complete a peer and self-assessment rubric.

### Making flexible use of resources

playroom

videos

experiements

## 📖 Learning Experiences

### Designing engaging Learning Experiences

Draw pictures of things they do during the day and night.

-Chart with labels for different times of day.

-Model the movement of the Earth around the sun and the movement of the moon around the Earth.

-Sequence daily events.

-Groundhog Day legend and activities.

-Sorting activities (objects in sky, when activities occur, etc.)

-Non-fiction texts and videos about day and night sky

**Spanish:**

**Central Idea: Characteristics impact function**

**Key Concept:** Form, Causation, Connection

**Learner Profile:** Inquirer, Thinker, Communicator

**ATL:** Research Skills

- Recognize vocabulary of patterns that indicates differences between day and night. - Form & Causation
- Learn attributes as colors and sizes to describe objects. Form & Connection

Students will:

- Learn songs about day and night in Spanish. - Form & Causation
- Relate routine activities to different times of the day. - Form & Thinker
- Learn and use different greetings used throughout the day. - Communicator
- Identify and learn colors. - Form & Connection

**Music**

Central Idea: Characteristics impact function.

Key Concepts: Form, causation, and connection key concepts will be developed by exploring various ways that expression qualities in music are shown, develop, and connect to students' lives.

Learner Profile: Students will develop their inquirer, thinker, and communicator learner profiles in various ways:

- by thinking about the connections of musical expression to the concepts of songs being performed

-by communicating music, or performing for an audience.

Approaches to Learning: Students will develop research profile through speaking with classmates about their song reflections.

Students will:

-Perform songs connected to seasons or times

- Observe the aesthetic beautify of their repertoire song through movement and performance

**Visual Art:**

**Key Concepts:** form**,** connection, causation

**Learner Profile:** Inquirer, Thinker, Communicator

- Students will make connections between visual arts and their other classes (connection).
- Students will ask and answer questions related to the visual arts project (inquirer).

**ATL:** Research Skills

- Students will use the E. Rivers visual arts website to gather information about the project.

**Activities:**

**Science**

Key Concepts: Change, Causation, Connection

-Students will classify artifacts and realia according to whether observed in the day, night , or both.

-Students will use spheres, globes, and light sources to model the sun, earth , moon system and connect to the passing of time.

-Students will observe spheres, classify their movements with mini-roller coasters of clay and marble.

-Students will compare and describe different physical attributes of 3-D shapes to determine the types of motions they can produce. (Motion-stations: 3-d shapes, roll, slide, push, pull, spin, bounce)

**Physical Education:**

Key Concept: Form, Causation, Connection

Learner Profile: Inquirer, Thinker, Communicator

Students will take part in holiday activities allowing them to cooperate with each other and work together to accomplish a

common goal. Student's heart rate should increase throughout activity giving them maximum cardiovascular fitness.

## Reflections

### General Reflections

#### Looking Back

**Adrienne Mather** May 18, 2022 at 9:47 AM

Students created displays to document their understanding of how the sky changes in a 24-hour period. Students presented their projects. Other students had the opportinity to provide peer feedback (compliment, question, suggestion for improvement). Several students took action to bring in books about objects in the sky. Several students commented about how they were noticing the moon in the sky and how it changed appearance.

**Erica Schack** Feb 16, 2023 at 10:02 AM

We used a rubric for the summative assessment. Through student presentations we were able to assess their learning and use of academic language. Students were able to share the central idea. Drawings and models displayed their knowledge. Students used labels to name objects. Students participated in activities presented by High Touch High Tech about objects in the sky.

Several students took action by bringing in books from home.

During Readers Workshop we read non-fiction texts about the day and night sky.

Students made observations and commented on the moon phases.

The school celebrated Lunar New Year (cross curricular connections) and connected Lunar New Year to the phases of the moon.

#### Looking Forward

**Adrienne Mather** May 18, 2022 at 9:49 AM

We would like to find a way to make learning more relevant and meaningful so it well deepen their understanding and make the learning more long-lasting.

**Erica Schack** Feb 16, 2023 at 10:07 AM

Our music teacher is very intentional in integrating the planner concepts in her music class.

We can try to integrate the science standards into reading, writing, math.

Students seem particularly interested in this planner and making the connection with the passing of time and the seasons, birthdays, etc. Hands-on activities are always beneficial to student learning.

**Erica Schack** Feb 16, 2023 at 10:08 AM

We need to focus more on the approaches to learning.

### Additional Subject Specific Reflections

**Erica Schack** Feb 16, 2023 at 10:09 AM

We plan to work more closely with the art, PE, and world language teachers. We would like implement and design lessons that focus on the approaches to learning so that students are hearing, using, demonstrating the skills throughout the day.

**Erica Schack** Feb 16, 2023 at 10:13 AM

To foster international mindedness we would like to bring in (either in person or on Zoom) someone from the space program. We could also watch live feeds from the International Space Station.

## Stream & Resources

### Resources

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

**What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available?**

globes, fiction and non-fiction texts (time patterns, time, seasons, changes/objects in the sky, nocturnal animals, Groundhog Day), Internet videos

**How will the classroom environment, local environment, and/or the community be used to facilitate the inquiry?**

Teachers will have a variety of fiction and non-fiction texts available to students. Teachers will also use various resources such as picture cards, flash lights, etc. to facilitate the inquiry. Specialists will support the planner through art, science experiments, games, and songs. High Touch High Tech activities for “Me and My Planet” are great for frontloading.