Summary

How the World Works

Subject	Year	Start date	Duration
English, Science Lab, Social Studies	Fifth Grade	Week 3, September	6 weeks

Inquiry

Transdisciplinary Theme

How the world works

The Central Idea

Instability produces change

Lines of Inquiry

- Changes as a result of instability
- Causes of instability
- Surviving in an unstable environment

Teacher questions

- How does instability cause change?
- What are some causes of instability?
- How do we survive an unstable environment?

Learning Goals

Scope & Sequence

Social Studies

[IB] Human systems and economic activities

Overall Expectations

will extend their understanding of how and why groups are organized within communities, and how participation within groups involves both rights and responsibilities. They will understand the interdependency of systems and their function

within local and national communities.

will gain an appreciation of how cultural groups may vary in their customs and practices but reflect similar purposes. They will deepen their awareness of how people influence, and are influenced by, places in the environment.

Conceptual Understandings

Formulate and ask questions about the past, the future, places and society

Identify roles, rights and responsibilities in society

Orientate in relation to place and time

[CCGPS] Historical Understandings

Learning Outcomes

SS5H4 The student will describe U.S. involvement in World War I and post-World War I America.

b. Describe the cultural developments and individual contributions in the 1920s of the Jazz Age (Louis Armstrong), the Harlem Renaissance (Langston Hughes), baseball (Babe Ruth), the automobile (Henry Ford), and the airplane (Charles Lindbergh).

a. Explain how German attacks on U.S. shipping during the war in Europe (1914- 1917) ultimately led the U.S. to join the fight against Germany; include the sinking of the Lusitania and concerns over safety of U.S. ships, U.S. contributions to the war, and the impact of the Treaty of Versailles in 1919.

SS5H3 The student will describe how life changed in America at the turn of the century.

d. Describe the reasons people emigrated to the United States, from where they emigrated, and where they settled.

[CCGPS] Economic Understandings

Learning Outcomes

SS5E1 The student will use the basic economic concepts of trade, opportunity cost, specialization, voluntary exchange, productivity, and price incentives to illustrate historical events.

c. Describe how specialization improves standards of living, (such as how specific economies in the north and south developed at the beginning of the 20th century).

d. Explain how voluntary exchange helps both buyers and sellers (such as how specialization leads to the need to exchange to get wants and needs).

English

[CCGPS] Reading Literary

Learning Outcomes

Key Ideas and Details

ELACC5RL3. Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters Interact).

Integration of Knowledge and Ideas

ELACC5RL7. Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).

ELACC5RL9. Compare and contrast stories in the same genre (e.g., mysteries and adventure stories) on their approaches to similar themes and topics.

[CCGPS] Writing

Learning Outcomes

Text Types and Purposes

ELACC5W2.c. Link ideas within and across categories of information using words, phrases, and clauses (e.g., in contrast, especially).

ELACC5W3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

ELACC5W3.b. Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations.

Standards and benchmarks

Georgia State Standards: GSE: Fine Arts: Music (2018)
General Music (Grade 5)

ESGM5.CR.2 Compose and arrange music within specified guidelines.

a. Create rhythmic and melodic motives to enhance literature.

b. Compose music (with or without text) within an octave scale in simple meter (e.g. quarter notes, quarter rests, barred eighth notes, half notes, half rests, dotted half notes, barred sixteenth notes, whole notes, whole rests, dotted quarter notes, single eighth notes, eighth rests, triplets).

c. Arrange rhythmic patterns to create simple forms, instrumentation, and various styles.

Performing
ESGM5.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, ostinatos).

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.

ESGM5.PR.2 Perform a varied repertoire of music on instruments, alone and with others.

b. 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.

ESGM5.PR.3 Read and Notate music.

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

Responding
ESGM5.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, theme/variations).

ESGM5.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.

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

Connecting
ESGM5.CN.1 Connect music to the other fine arts and disciplines outside the arts.

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

ESGM5.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: Fine Arts: Visual Arts (2017)
Creating (Kindergarten)

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

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

d. Experiment with color mixing.

e. Develop manual dexterity to develop fine motor skills.

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

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

Georgia State Standards: GSE: Physical Education (2018)
Motor Skills and Movement Patterns (Grade 5)

Manipulative Skills

d. Throws underhand and overhand using a mature form utilizing a variety of objects with accuracy.

e. Throws accurately while both partners are in motion.

f. Catches an object with both partners moving.

Personal and Social Behavior, Rules, Safety, and Etiquette (Grade 5)

PE5.4 The physically educated student exhibits responsible personal and social behavior that respects self and others in physical activity settings.

a. Engages in responsible behavior through adherence to rules and procedures in a variety of physical activities.

b. Participates with independent and cooperative responsibility.

c. Gives and accepts corrective feedback respectfully to and from others (peers and adults).

d. Applies safety principles with peers and equipment in physical activity settings.

Georgia State Standards: GSE: Science (2016)

Earth and Space Science (Grade 5)

S5E1. Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.

a. Construct an argument supported by scientific evidence to identify surface features

b. Develop simple interactive models to collect data that illustrate how changes in surface features are/were caused by constructive and/or destructive processes.

c. Ask questions to obtain information on how technology is used to limit and/or predict the impact of constructive and destructive processes.

💡 Key and Related Concepts

Key Concepts

Key Concepts	Key questions and definition	Related concepts
 Function	**How does it work?** The understanding that everything has a purpose, a role or a way of behaving that can be investigated.	communications, discovery
 Change	**How is it transforming?** The understanding that change is the process of movement from one state to another. It is universal and inevitable.	
	**What are our obligations?** The understanding that people make choices	Initiative

Key Concepts	Key questions and definition	Related concepts
Responsibility	based on their understandings, beliefs and values, and the actions they take as a result do make a difference.	

Developing IB Learners

Learner Profile

Thinkers

Reflective

Description

Student Centered: 20 years from now. You are living anywhere in the world that you want.

- What sort of natural disaster took place in that region?

- Learn about their country/City/government

- Who are you reaching out to get the problem solved?

- How can you ensure it wont take place again?

Student Centered- SS WW1

- Research the role of women and minority groups during WW1. What impact did these groups make?

- Globally and Local to US (women in Germany vs women in US)- Compare/Contrast their roles

ATL Skills

Approaches to Learning

Description

Transdisciplinary Skills: Formulating Questions, Presenting Research, Organization, Time Management, Informed Choices, Analysis, Synthesis, Evaluation, Listening, Speaking, Reading, Writing.

Communication Skills

- Exchanging information - Listening, interpreting and speaking

Listening

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

Speaking

State opinions clearly, logically and respectfully.

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

Writing

Paraphrase accurately and concisely.

Make summary notes.

Research Skills

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

Formulating and planning

Evaluate and select appropriate information sources and/or digital tools based on the task.

Evaluating and communicating

Draw conclusions from relationships and patterns that emerge from data.

Present information in a variety of formats and platforms.

Self-management Skills

Action

Student-initiated Action

Science: Through science class students learned relationship between constructive and destructive forces as well weathering, erosion, and deposition of minerals. Students will recreate/design a structure that has been affected by deconstructive forces.

Social Studies: Stock Market Activities. 1) Students tracked 5 stocks over course of 2 week period. 2) Students played stock market game which included the "purchase" of 1900s stocks/pricing and watched as different events caused the market to crash in 1929.

Students will also use the stock market simulator. Students track 4 early 1900s businesses following 1909-1929.

Assessment & Resources

Ongoing Assessment

How the World Works.pptx
14.51 MB

How the World Works GRASP.pptx
1.89 MB

HTW IB Project Example.pptx
1.41 MB

Como funciona el mundo.pptx
14.5 MB

How the World Works Rubrics.pdf
51.51 KB

How_the_World_WorksPLAN.docx Nov 17, 2021rubric_How_the_World_Works.docx Nov 17, 2021Throwing_Assessment_-_Google_Forms.pdf Nov 3, 20215th Self-Rating Oct 25, 2021What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for?

How the World Works: Instability and Change

Central Idea: Instability produces change

Goal: To create a plan outlining the reconstruction of a region. This plan should also create jobs.

Role: You are a government employee.

Audience: You are explaining to government leaders the devastation that occurred in various regions of the United States. (Regions include: Atlanta; Chicago; Pittsburgh; Montgomery, AL; Kitty Hawk, NC; and Pearl Harbor, HI)

Situation: There has been a disruption on land. Propose a plan to restore the land. Some things you need to consider are: how can it be used for future use? What will the government do with the land? Remember…has the land shifted? Or changed? Give different situations: earthquake, fault line, volcano, tornado, and erosion.

Product: A model of what the land will be used for; you must show why that will work best so keep in mind the existing physical features. Additionally, you must include a written plan that details what kind of jobs you are creating and how this project is being funded; include a budget for this project.

Standard: SS5H1d, SS5G1, SS5H2, SS5E1, SS5E4, SS5E2d, S5E1 (a-c), ELAGGSE5W2

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

KWL, class discussion, hook activities, wonder chart

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

📖 Learning Experiences

Designing engaging Learning Experiences

Introduction/Provocation: Visible Thinking Strategy: Zoom In; find a picture of erupting volcano (rock, lava, volcano)

- **Changes as a result of instability**
  - Science - AIMS lab: Earth's Construction Zone, landform booklet; Rate the Risks - charting the number of earthquakes in each state; making observations about which geographic region has the highest potential for earthquakes
  - STEMscopes - Writing in Science; taking a deeper look at how earthquakes and volcanoes are both constructive and destructive
  - Social Studies
    - Great depression. Stock market crash, bank foreclosure
- **Causes of instability** (Tectonic plates, boundaries, weathering, erosion)
-
  - Science - Question starts thinking routine (why? what are the reasons? what if? what is the purpose of? what would be different if? what if we knew? suppose that..?) use this to explore various science vocabulary around causes of instability
    - Lab to show the difference between weathering and erosion (Amy Reed, gelatin)
    - Writing prompt: show a picture and students decide if weathering, erosion, deposition or all three; must explain answer (STEMscopes 6th grade scope)
  - Social Studies
    - Spending/lending, banks/credit
- **Surviving an unstable Environment** (human interventions)
  - Science - students will select an intervention and complete a brief research activity; they will present one form of media (Google slide, poster, brochure, etc) that provides information about the intervention. The students are responsible for "teaching" this information to the class
  - Red Light, Yellow Light - provide students with a nonfiction reading passage, they read and locate information that makes them STOP and think, information that makes them slow down, and information that is already assimilated in their schema
  - Headlines (visible thinking strategy) - summary activity for the unit; class creates a newspaper matching the 3 lines of inquiry and different groups will create a headline that matches one particular line of inquiry that incorporates science material as well
    - Social Studies
    - New Deal, job creation

Science Lab Activities: Exploring constructive and destructive forces/changes

- Provocation "Instability Creates Change" I-movie/ Phenomena Video: "Georgia's Grand Canyon": Students write wonderings
- Lab 1: Weathering/Erosion/Deposition with sand, gravel, frozen blocks of ice, steady stream of water: observe sediment,

changes, "grand canyon"
- Lab 2: Volcanoes: Stemscopes, erupt, layers of clay, see how land builds up
- Lab 3: Earthquakes: Model with marbles, rubber bands, cardboard: AIMS, then build a cup tower without, then with the use of skewers as "earthquake rods"
  - Seismographs explore
  - Pan of jello and cup tower explore
- Lab 4: Beachfront property: use sand, various sized rocks to model beach erosion, jetty, sea wall, and levee
- Students will create their own "Changing Earth" model, then justify, explain, and determine what type of force caused the change and the resulting land forms by recording on Flipgrid.

Music

- Central Idea: Musicians depend on human and non-human factors to create effective performances.
- Key Concepts: Connection, Change
- Activities: Play, sing, analyze melodic and harmonic components of class musical literature
- Learner Profile: Students will develop IB attitudes of curiosity, independence, commitment, and creativity as they learn singing and instrumental techniques, analyze melodic and harmonic structure of their songs (figuring out how they are connected), and develop the beginnings of a performance. Students will analyze how they can combine different parts of a song to create an effective performance.
- Assessment: Students will use the class rubric to self-assess, and teacher will assess as well. Students will also assess other works, using the rubric, through listening. Students will recognize chords and notation through performance of songs and written/electronic assessment.

Art Class Instruction:

Central Idea: Choices lead to consequences: Example: Students will create radial symmetry studying positive and negative space , 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, thinker, risk-taker:

-creating works of art that display the following elements of art: color, line, value, texture

-Connecting to Mexican Art forms: Example: creating a repeating and printed Mexican tile

-Math Connection: creating 1/4 of Mexican tile design. Learning how to rotate and reflect a design to make a "whole" tile.

-Science Connection: Creating a shaded dragon eye using only primary colors. Practicing what hues mix to make other colors

Assessment: Color Wheel mixing with primary colors, Dragon eye drawing with warm and cool colors using primary colors, Mexican tile using printmaking

Physical Education:

Key Concepts: Function and Responsibility

Students will be able to explain the function of a proper throw when aiming at a target and their responsibility when throwing in the gym with others around.

Learner Profile: Reflective and Thinker

Students will think about changes that need to be made to their throwing process to accurately aim at a target, reflect on their

success, and make changes accordingly.

Activities:

Students will aim at a target and hit the target 7 out of 10 times. Students will reflect on why they are/are not hitting the target by adjusting the function of their throwing pattern or aim.

Throwing overhand and underhand at a target

Throwing overhand and underhand with a partner

Catching with a partner

Spanish

- Students will recognize vocabulary related to constructive and destructive forces, layers of earth, natural disasters: Quizlet

Key concepts: Causation and Responsibility

Reinforce Central Idea - Instability produces change

Profile: Inquirer

Attitude: Curiosity

Novel Study Options:Truce The Day Soldiers Stopped Fighting

Visible Thinking Strategy Options: Zoom In, Connect/Extend Concept Map

Social Studies: Students will create a WW1 newspaper highlighting articles, spotlight on people, maps, advice column, etc

Reflections

General Reflections

Looking Back

Jessica Weingart Nov 29, 2021 at 8:11 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.

Erica Pease May 27, 2022 at 10:35 AM

Students effectively understood destructive and constructive forces; students were able to understand that instability in structure causes changes. Students had to remodel/reconstruct. Students worked in groups to design newly reconstructed buildings. We loved this project and the students effectively worked together.

Erica Pease May 27, 2022 at 10:38 AM

Students effectively understood that inventions during the early 1900s lead to inventions today. Students also worked together to understand that the great depression did not just affect the US but globally causes instability in our economic system as well as our government programs.

Erica Pease Feb 1, 2023 at 8:57 AM

Overall the GRASP (constructive/destructive forces) projects were excellent. Students were able to determine what changes were needed to the structures to survive destructive forces.

WW1: Students found connections between the countries involved: identify instability producing changes for the world to survive

Alexsandra Diaz Feb 28, 2024 at 8:04 AM

We learned the vocabulary and familiarized ourselves with what regions some of these natural disasters occurred for the students to reconstruct a building or structure damaged by a natural disaster. The students focused on the central idea of instability producing change and they had to come up with 3 ways to restructure their building or structure to withstand another natural disaster of that nature. It was a group project and students had to present their findings and their new blueprint for their restructured building.

Rachel Bailey May 16, 2024 at 8:46 AM

Students engaged in critical thinking and problem-solving in designing or recreating a structure affected by deconstructive forces. They had to consider factors such as the type of deconstructive force involved (e.g., earthquake, hurricane, erosion), the structural integrity of the building materials, and potential mitigation strategies. Through this process, students could apply their scientific knowledge in a real-world context and develop practical solutions to complex problems.

Team Members Present: All Team Members

Looking Forward

Jessica Weingart Nov 30, 2021 at 3:48 PM

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

Whitney Niles May 27, 2022 at 10:42 AM

We discovered the causes of WWI and who/what was responsible. Next steps included conducting research about the historical impacts of the first world war. To further strengthen the transdisciplinary connections, we can continue to incorporate writing and language arts into various performance assessments. We can innovate future teaching and learning by advocating for students to publish some of their newspapers.

Erica Pease Feb 1, 2023 at 8:57 AM

Project: Go across all classes vs just sticking with their team. This allows the students to get comfortable working with peers in other classes.

Alexsandra Diaz Feb 28, 2024 at 8:05 AM

We learned that providing an example for the groups was helpful to get an understanding of what was expected of them in the project. We also learned that giving the students choice on the presentation platform is helpful as well and lets the students demonstrate their creativity.

Rachel Bailey May 16, 2024 at 8:47 AM

We learned that participating in project-based learning experiences allows us to apply our knowledge and skills to solve real-world problems. By working on projects that are meaningful and relevant to our lives, we can deepen our understanding and develop critical thinking and problem-solving skills.

Team Members Present: All Team Members

Stream & Resources

Resources

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

Discovery Education, High Touch High Tech, BrainPop, AIMS materials, YouTube videos, TED-ED