



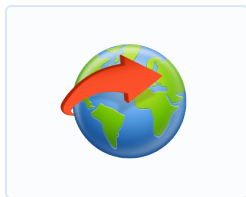
Summary

How the World Works

| Subject | Year | Start date | Duration |
|-------------------------|--------------|---------------|----------|
| English, Social Studies | Fourth Grade | Week 3, April | 5 weeks |

Inquiry

Transdisciplinary Theme



How the world works

- An inquiry into the natural world and its laws
- How humans use their understanding of scientific principles
- The impact of scientific and technological advances on society and on the environment

The Central Idea

Structure Promotes Function

Lines of Inquiry

- Society and cultural function
- Barriers Hinder Function
- Balance Affects Function
- structure of an object promotes how it functions with various forces
- how forces are changed by the structure and function of a simple machine

Teacher questions

- Function – How do the simple machines work?
- Causation – What impact did the new technology have on society and economics?
- Change - How did the new inventions change life, production, and communication?

Learning Goals

Connections: Transdisciplinary and Past

Weeks 1-3:

- 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"**



Key_Concepts_Converstaion_Bingo_Board.pdf Jun 1, 2022

Standards and benchmarks

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.

- a. Utilize multiple approaches to plan works of art incorporating imaginative ideas, universal themes, and symbolic images.
- b. Apply available resources, tools, and technologies to investigate personal ideas through the process of making works of art.
- 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).

VA4.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 4)

VA4.CN.2 Integrate information from other disciplines to enhance the understanding and production of works of art.

- b. Apply art skills and knowledge to improve understanding in other disciplines.

VA4.CN.3 Develop life skills through the study and production of art (e.g. collaboration, creativity, critical thinking, communication).

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communication).

Georgia State Standards: GSE: Physical Education (2018)
Fitness (Grade 4)

PE4.3 The physically educated student demonstrates knowledge and skills to help achieve and maintain a health-enhancing level of physical activity and fitness.

- a. Identifies physical activities which contribute to fitness.
- b. Demonstrates warm-up and cool-down activities as they relate to cardiorespiratory fitness assessment.
- c. Identifies the components of health-related fitness.
- d. Demonstrates the proper protocol and identifies form breaks for the Georgia fitness assessment components.
- e. Identifies what the Health Fitness Zones are and connects their significance as a piece of the Georgia Fitness Assessment.
- f. Participates in the Georgia Fitness Assessment Program with teacher supervision and determines if he/she is within the healthy fitness zone.
- g. Identifies areas to improve based on Georgia Fitness Assessment results.
- h. Compares opportunities for participating in physical activity outside of physical education class.
- i. Independently engages in physical education class.
- j. Discusses the importance of hydration related to physical activity.

Georgia State Standards: GSE: Science (2016)
Physical Science (Grade 4)

S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.

- a. Plan and carry out an investigation on the effects of balanced and unbalanced forces on an object and communicate the results.
- b. Construct an argument to support the claim that gravitational force affects the motion of an object.
- c. Ask questions to identify and explain the uses of simple machines (lever, pulley, wedge, inclined plane, wheel and axle, and screw) and how forces are changed when simple machines are used to complete tasks.

Georgia State Standards: GSE: Social Studies (2016)
Historical Understandings (Grade 4)

SS4H6 Analyze the effects of Reconstruction on American life.

- a. Describe the purpose of the 13th, 14th, and 15th Amendments.
- b. Explain the work of the Bureau of Refugees, Freedmen, and Abandoned Lands (Freedmen's Bureau).
- c. Explain how slavery was replaced by sharecropping and how freed African Americans or Blacks were prevented from exercising their newly won rights.
- d. Describe the effects of Jim Crow laws and practices.

Economic Understandings (Grade 4)

SS4E2 Identify the elements of a personal budget (income, expenditures, and saving) and explain why personal spending and saving decisions are important.



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Key and Related Concepts

Key Concepts

Key Concepts

Key questions and definition



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.



Change

How is it transforming?

The understanding that change is the process of movement from one state to another. It is universal and inevitable.



Developing IB Learners

Learner Profile



Reflective



Risk-takers (Courageous)

Description

Transdisciplinary skills: Research: formulating ideas and drawing conclusions; Social: cooperating in groups

Learner profile: Inquirers: asking questions and researching information



ATL Skills

Approaches to Learning



Research Skills

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

Data gathering and recording



Gather information from a variety of primary and secondary sources.

Use all senses to find and notice relevant details.

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.

Present information in a variety of formats and platforms.

Understand the significance of academic integrity and intellectual property rights.

Create references and citations, use footnotes/endnotes and construct a bibliography according to recognized conventions.



Self-management Skills

- States of mind - Using strategies that manage state of mind

Perseverance

Demonstrate persistence.

Use strategies to remove barriers.

Action

Student-initiated Action

After this unit was finished, students began to draw connections to current political situations.



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?

Culminating Activity: Interest-based peer groups will select a knowledge product from the attached choice board:

Summative Assessment Choice Board and Rubric How we organize ourselves

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"

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

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.

Social Studies

- 6) The Blue And The Gray (1 Week)
- 7) End Of The Civil War (1 Week)
- 1) Reconstruction (1 Week)
- 2) Jim Crow Laws And Continuing Racism (1 Week)
- 4) [Week 32 Personal Budgets 5/8-5/12](#)

Dream Vacation Project

Science

Order Of Units:

- 1) Force and Motion (2 Weeks)
- 2) Simple Machines (3 Weeks)

Make a Rube Goldberg Machine Challenge

Gifted, enrichment activities



[G4 How We Organize Ourselves](#)
May 11, 2022



Music Class Instruction:

- Learn and sing patriotic songs.
- Discuss systems put in place to ensure an ensemble runs smoothly
- Students will create laws/rules to help establish a band.

PE Class Instruction:

- Identify systems to help establish goals (focus on Fitness Gram)
- Play games that require goal setting.

Art Class Instruction:

- Students will work with tints and shades.
- Students will learn about contrast through Complimentary Color

Spanish -

- Students will learn the names of revolutions and governing documents from other countries - forms of government
- Students will hear the national anthems of other countries and see flags from Spanish speaking countries
- Students will see the dates of revolutions in other countries and compare them on a timeline to the American revolution

Science Lab:

Key Concepts: Form, Function Causation

- Students will view the teacher pulling a table cloth off a table without disturbing the items on the cloth (or view Steve Spangler Science), play tug-of-war with a string (balanced/unbalanced forces), observe and try the egg drop into glass of water activity, then experiment with FOSS balanced/unbalanced pieces, and finally view Generation Genius video about balanced and unbalanced forces. Students will use these experiences to communicate results and to formulate and argument to support the claim that gravitational forces affects the motion of an object, using CSQ (Claim Support Question) format.
- Students will prove how forces change when simple machines are used to complete tasks, by utilizing various simple machine parts to create a "simple-machine" museum and demonstration.
- Students will culminate knowledge of forces, motion, and simple machines to complete the Rube Goldberg Design Challenge where the create a Rube Goldberg machine with at least 3 simple machines then record on Flipgrid.

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



Niyka James May 17, 2023 at 2:14 PM

Looking back, we were able to finish the unit with students engaging in conversations and providing feedback related to the key talking points of this project. Students were able to reflect on where we started in terms of organization and putting written rules and procedures in place via local and national legislation with the supporting documents such as the Articles of Confederation, the Bill of Rights, and the US Constitution. Students were also able to contemplate and reflect on scenarios involving the removal or absence of any of the supporting documents are legislation that has helped our nation adjust to being autonomous from the royal family.

What would be great is for students to create a narrative of what our nation would be like without the frameworks that have been established to organize ourselves.

Stream & Resources

Resources



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

Textbooks, www.brainpop.com, United Streaming, Promethean board software, "We the Kids" book, TeacherVision.com, constitutionfacts.com, Enchanted Learning, Constitution Day.com