



<p>1. What is our purpose?</p> <p>1a) To inquire into the following:</p> <ul style="list-style-type: none">● transdisciplinary theme <p>Who we are</p> <p>An inquiry into the nature of the self; beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities, and cultures; rights and responsibilities; what it means to be human.</p> <ul style="list-style-type: none">● central idea <p>Systems shape our world.</p>	<p>Class/grade: 4th Age group: 9-10</p> <p>School: Poe Elementary School code:49497</p> <p>Title: Systems Shape our Lives.</p> <p>Teacher(s): Lauren Baldwin, Elizabeth Finch, Laura Gonzalez, Troy Hall, Mary Haden Harris, Emily Hartzog</p> <p>Date: 1/5/2021- 2/26/2021</p> <p>Proposed duration: 8 weeks</p>
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1b) Summative assessment task(s):

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

Students will create a representation, for example, drawing, song, powerpoint, etc that demonstrates at least 1 system and how it has affected their lives. The systems can range from community systems to worldly systems.

- What is your system?
- How do the parts of a system work together?
- What happens if a part of the system is broken or missing?
- What happens to the other parts when the one part is broken or missing?
- How does a particular system change the world?

DESCRIPTION	Point Value
At least one system	20
Explanation of the system: Who does it benefit? What are it's functions? Are there more than one of this type of system? When do you use it? Where can it be found?	25
How does this system benefit you? What changes would you make to improve it?	15
How does this shape the world?	10
Visual Representation	10
Neatness	10
Grammar	10
Total	100

2. What do we want to learn?

What are the key concepts (form, function, causation, change, connection, perspective, responsibility, reflection) to be emphasized within this inquiry?

Key Concepts: Function, Connection, Responsibility

Related Concepts: Role, interdependence, system

What lines of inquiry will define the scope of the inquiry into the central idea?

- **Reasons for systems**
- **The nature of humans**
 - **societal and environmental changes over time.**
- **Relationships that may affect systems**

What teacher questions/provocations will drive these inquiries?

Write the word "systems" on the board. On stickies students will write examples, definitions, etc. Discuss how they affect the community/world. Or if virtual, PowerPoint with peardeck- students name systems, jamboard. Use student videos that describe what systems are.

What kind of systems are there in our world?

What would happen if there were no systems?

Which systems affect you? Your family? Your community? Our country? Our world?

Guide students to social, natural, and mechanical systems.

3. How might we know what we have learned?

This column should be used in conjunction with “How best might we learn?”

What are the possible ways of assessing students' prior knowledge and skills?

What evidence will we look for?

Student's prior knowledge will be assessed through K-W-L of the function and parts of types of systems. Teacher will use PearDeck to gain information on student's prior knowledge.

4. How best might we learn?

What are the learning experiences suggested by the teacher and/or students to encourage the students to engage with the inquiries and address the driving questions?

The students will organize and categorize the stickie notes or parts of PowerPoint from the provocation into the possible groups below (students will generate):

- Scientific
- Educational
- Governmental
- Economic
- Behavioral

Governmental Systems:

Types of government around the world powerpoint- Use this to help review previous taught concepts and make connections with how governments are types of systems. Students will identify the leaders of the Texas government. Discuss how strong leaders affect the balance of the community (system). Think/pair/share. We will compare Texas Government to other parts of the world.

Lesson on representative democracy and dictatorship.

Students compare dictatorship to representative democracy. What are the parts of both. How does each maintain its system? Students draw a symbol for a representative democracy and a symbol for a dictatorship. Each part of the system needs to be incorporated into the symbol.

School systems:

Students learn about 3 different school systems: Germany, Japan, and Finland. Students compare and contrast. Students take survey-Which school system appealed to them and why? Students compare Texas School Systems to Germany, Finland, and Japan School Systems.

Students design a school system. What parts are necessary in order to function?

Historical Systems that changed society:

Go to the article

https://www.ducksters.com/history/civil_war/underground_railroad.php

(or other resource) that describes and has information for students concerning the Underground Railroad. Use information from the site to help students examine and discuss the economic and social differences between the North and the South before and after the civil war. Use the interactive graphic, or print out the information, to point out the following comparative facts about the North and South. Encourage students to discuss why the differences in population, manufacturing, and railroads proved to be important: (LO12)

Debate on railroads and barbed wire- which is a more valuable inventions. How did these inventions change society.

Everyday systems:

Writing- how is writing a system? Expository? Narrative?

Research current events concerning worldly conflicts.

Conflict/ changes within Systems:

Facilitate a guided discussion in which students differentiate between the Northern and Southern points of view about slavery, sectionalism, and states' rights, and discuss how those differences could lead to conflict.

Project Based Learning—students will research current events concerning unrest in the U.S.. How was the system disrupted? How can the system repair itself?

Students write a summary of the three broad causes of the Civil War. Each "main idea" should be one of the causes of the Civil War, and students should provide sufficient detail. The opening and concluding paragraphs should address how these ideological/economic differences could lead to such a devastating war.

Scientific:

List the parts of a solar oven. What would happen if parts were taken away? Would the system still be the same?

Given simple circuit components, students will demonstrate that electricity travels in a closed path by creating a closed electrical circuit. Give students an opportunity to work in groups and try to turn on a light bulb by using one light bulb, two short wires, and a battery.

What opportunities will occur for transdisciplinary skills development and for the development of the attributes of the learner profile?

Principled, Balanced, Open-Minded

Research skills were developed as the students research important people that have contributed to our communities and world.

Self-Management (Time Management) Throughout the various activities, student were expected to use time wisely and organize the information collected in order to carry out the activities effectively.

As we discuss important people we will look at how they were principled, balanced, and open minded... or how they were not.

5. What resources need to be gathered?

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

Additional Electrical Circuit Investigations and Activities

- [Scouting for circuits activity](#) (easy to implement)
- [Electricity](#)

Have students view the following videos from Discovery Education

- [Real World Science: Electricity](#)
- [Hot Line: All About Electricity](#)
- [Rocks are Different Sizes](#)
- [Clay](#)
- [Soil Properties and Types](#)

[The Living Soil](#)

Brainpop.com (username: **hisd***yourschoolname* password: **hisd**)

- [Electricity](#)
- [Circuits](#)
- [Soil](#)
- Famous scientists
- Underground railroad
- Government
- School systems
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Science Fusion reading: Use [Unit 5 Lesson 2 What Are Electric Circuits, Conductors, and Insulators? TE and SE p. 227–240](#) and online resources to help students understand electrical circuits. [It's Shocking \(insulators and conductors\) TE/SE pp. 228–229](#).

- [A Path to Follow \(open and closed circuits\) TE/SE pp. 230–231](#)
- [Who Needs a Map? \(series and parallel circuits\) TE/SE pp. 232–233](#)
- [Lesson 2 Review TE/SE pp. 236–240](#)
- [Make Connections TE p. 240A](#) provides ide on how to extend this lesson into other subject areas

Soil map of world.

Globalsoilmap.net

Governments:

<https://web-japan.org/kidsweb/>

[Education System in Germany](#)

[School Lunch in Japan: it's not just about eating!](#)

[Education in Finland](#)

School System Survey

Learning Style Survey

Biographies:

This PBS interactive digital lesson [Benjamin Franklin: How Shocking](#) provides information on Benjamin Franklin and his electrical explorations.

MyOn; Ducksters.com;

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

The computer/ library will be used to assist with research skills.

Students may create a drama, PowerPoint, a model of how a system works.

Students will design a symbol for representative democracy and dictatorship. Students will include parts of each system in their design.

Students will create an ideal school lesson for their learning style.

6. To what extent did we achieve our purpose?

Assess the outcome of the inquiry by providing evidence of students' understanding of the central idea. The reflections of all teachers involved in the planning and teaching of the inquiry should be included.

The students gave evidence of understanding the central idea by the following:

Students thrived on working with circuits and naming the parts. This was quite successful. Students also were able to identify parts of a system.

Students used their interest in voting and political parties from previous planner and compared those systems and what happened when a part was missing.

Class council led students in understanding social systems and shared ways to improve friendships. One presentation was on bullying.

Students also studied different government systems and what a society would be like without rules or laws.

Students learned more about school systems around the world. Students shared experiences and brainstormed ways to improve our own school system based upon what they learned.

The students were clearly able to explain what a simple system was and identify the parts. Most students picked simple objects like pencils/ staplers/ books. Some students went more complex with the human body/ electrical systems.

Students were also able to make a connections between cultures and communities as a system in relationships to Texas independence/ civil war USA.

The students were able to explain why systems are important and How you could improve on the assessment task(s) so that you would have a more accurate picture of each student's understanding of the central idea. Along with the criteria for the summative assessment the students will describe the type of government for their fictitious country, and how the laws/rules are in line with that selected government.

What was the evidence that connections were made between the central idea and

7. To what extent did we include the elements of the PYP?

What were the learning experiences that enabled students to:

- develop an understanding of the concepts identified in "What do we want to learn?"

Function: Students were able to share what society would be like without laws or rules. Students also learned that many school systems differ even though they still have similar purposes.

Connection: Based on students' knowledge of games they were able to understand the function and need for rules in order to make the game fair and fun.

Connection/Responsibility Students connected to the different ways schools operated and discerned which type of system would work best for them.

- demonstrate the learning and application of particular transdisciplinary skills?
Research, communication, social skills,
Research: While researching the students were able to have an awareness of different types of systems as well as compare and contrasts those systems.

Communication/Social Skills: During lessons, students communicated orally and via PearDeck thoughts on types of school systems they preferred and why. Also, students presented their PowerPoints to the class.

- develop particular attributes of the learner profile and/or attitudes?
In each case, explain your selection.

Principled: Follow the rules maintains fairness in society.

Balanced: How the balance of power is distributed effects the type of government. The students noticed the relationships between the learner profile "balanced" and a balanced form of government. What happens when the power is not balanced.

the transdisciplinary theme?

The students understood that we are who we are due to the societal systems in place. Therefore the government systems shape our behavior in daily life. Some systems are designed to be restrictive while others promote more freedom. In a perfect world, all people would have the freedom to choose the government and school system.

Cooperation: If you want a balanced government you have to work together. In school systems, students and teachers need to work together to provide an environment for learning.

8. What student-initiated inquiries arose from the learning?

Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning.

Who decides how governments are formed?

Why do some schools have more space and cool activities than others?

How are schools designed? Who makes the decisions for subjects?

Why can't students learn in a way that's easier for them?

Why would anyone want to live in a dictatorship?

Why don't people leave countries that don't suit their needs?

Bullying presentations by several Class Council members. Student participation and brainstorming on how to solve.

Student review of voting and political parties as systems. Discussion on ways to improve. Voting brochures and Political party brochures were created in 4.2 and shared with families.

What do you do when you do when someone is not being fair during a game?

What do you do when someone won't stop bothering you?

What if a group of citizens choose not to participate?

What happens if you don't vote?

At this point teachers should go back to box 2 "What do we want to learn?" and highlight the teacher questions/provocations that were most effective in driving the inquiries.

What student-initiated actions arose from the learning?

Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act.

9. Teacher notes

We want to move from a social studies focus to a science focus during this time. Might need to rewrite and move around POIs.

Students were able to clearly identify systems. Summative assessment papers were great addition into their portfolios. Many students chose this piece to share with their families at the student lead conferences.

Possible short read alouds (Reading Street Level Readers)

Newspaper clippings that are not graphic and are current events that exhibit how different systems work around the world.

Water cycle would be a good addition. We can use MyOn to assign related reading material.

A discussion was started on why rules are different for some people.

Students wanted to learn more about how they best learn and create space for learning that suited them.

Students created a new game (Shadow Tag) with rules that would be appropriate during times when social distancing is required. Students wrote the rules and shared with the P.E. teacher.

Students have taken an active interest in history, especially governments and schools.