

## Planning the inquiry

### 1. What is our purpose?

#### To inquire into the following:

- **Transdisciplinary theme: How the World Works**
  - An inquiry into the natural world and its laws; the interaction between the natural world (physical and biological) and human society; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.
- **Central idea :**
  - **Interdependence is necessary for systems to function.**

#### 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?

Summatives PSA

Formative- District CFA

Students will present their understanding of the unit by selecting a final product from the product list.

Their expectations are:

- Student writes a reflection piece in response to the central idea:
  - **Interdependence is necessary for systems to function.**

-Students write the central idea -

What does this mean?

How do you know that's true?

Pick a system and explain how it works?

Are you part of a system? Explain your function in that system?

Class/grade: 3rd

Age group: 8-9

School: Briscoe Elementary

School code: 924366

Title: Systems

Teacher(s): S. Christal, A. Franco, J. Mata, C. Rodriguez

Date: 9-25-2017

Proposed duration: number of hours over 6 weeks

### 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?

Function and Connection

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

Function - **Why do communities create a government?**

(To help meet their needs, security, education, communication and transportation systems, and recreational opportunities).

**How do ecosystems function?**

(Interaction among living and nonliving and the impact of environmental changes)

Connection - **What changes do organisms and their offspring go through during their lifetime?**

(Organism go through a series of predictable changes in their lives which repeats as a cycle with their offspring).

What teacher questions/provocations will drive these inquiries?

Function -

- How do communities meet their needs? DOK1; 3.2B-C
- **Compare and contrast how the local, state, and national governments are structured and function.** (SS);DOK2; 3.9A-D;
- **Explain what it means to be civically responsible.** (SS); 3.12A;

- Prove or disprove if someone is being civically minded. Provide justifications for your response or perspective. DOK4 3.11A
  - Analyze a problematic society, and develop a solution based on your knowledge of civic responsibility. Justify your solution with evidence of how and why your solution would work. DOK 4 3.11C
- Create a two step word problem that uses the relationship between addition and subtraction. DOK4 3.1A, 3.4A
- Using the relationship between addition and subtraction, show at least three different ways to find the solution. DOK4 (3.4A)
- Analyze a mathematical representation (including arrays, area model, equal groups, properties of operation) and formulate a strategic solution and justify your of thinking. DOK 3 3.1B, 3.4D, 3.4E

Connection -

- In what ways do organisms change as they go through their life cycles? (S) DOK 2 3.2B
- How do living things interact? 3.9A DOK 2
- How do living things get energy 3.9B DOK 1
- Describe and construct a model (illustration) sequencing the changes organisms go through in their life cycles.(S) DOK 2 (3.10C)
- Compare and contrast the stages of plant and animal life cycles. DOK 2 (3.10C)
- Identify the missing plant or animal life cycle. DOK 1 (3.10C)
- Explain and provided justifications of the functions that allow plants and animals to survive in their specified environment. DOK 2 (3.10B)

### 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?

KWL: First and Final Thoughts Strategy.

SURVEY: How Certain Are You Strategy.

<http://www.brilliant-insane.com/2015/04/10-creative-pre-assessment-ideas-you-may-not-know.html>

What are the possible ways of assessing student learning in the context of the lines of inquiry? What evidence will we look for?

Journal Entries - Across subject areas showing student understanding

Exit Tickets - Varied

Response boards - Students demonstrate understanding of systems and component functions within a system across subject areas.

Formative assessments-see Eduphoria

WEEK 2 FORMATIVE

Reading TEKS :

RCP: [3.Fig19A](#) , [3.Fig19B](#) , [3.Fig19C](#) , [3.Fig19D](#) , [3.Fig19E](#)

CONTENT: [3.13D](#) : Text Features

WEEK 4 FORMATIVE

RCP: [3.Fig19A](#) , [3.Fig19B](#) , [3.Fig19C](#) , [3.Fig19D](#) , [3.Fig19E](#)

CONTENT

WEEK 6 SUMMATIVE

RESEARCH [3.25A](#) , [3.25B](#) ,

WRITING PROCESS: [3.17A](#) , [3.17B](#) , [3.17C](#) , [3.17D](#) , [3.17E](#) , [3.3A](#) , , [3.30A](#) ,

[3.2A](#) , [3.2B](#) , [3.2C](#) , [3.11A](#) , [3.20C](#) , [3.4A](#) , [3.4B](#) , [3.4C](#) , [3.4D](#) , [3.4E](#)

### 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?

1. To create a project that demonstrates the correct order of the lifecycle and explanations of each stage. (
2. Analyze a mathematical representation (including arrays, area model, equal groups, properties of operation) and formulate a strategic solution and justify your thinking. (Thinkers)
3. Mock jury- Go to trail about how an ecosystem is being to be destroyed and endangered species populations are being affected by the development-Link is a resource for how to implement trial in classroom-<https://www.kidsdiscover.com/teacherresources/mock-trial/> or <http://busyteacher.org/11497-court-classroom-mock-trial-get-students-talking.html> or <http://www.justiceducation.ca/programs/mock-trial-program> (Reflective, Enthusiasm)
4. Mock trial timeline-events leading up to the event, then event and predicted future events because of the event. (Reflective)
5. Mock election for class presidents (Inquirer, Integrity, Confidence)
6. Interactive notebook-food changes and life cycles (self-management)
7. Main idea round robin using the ecosystem passages (Communicator)
8. Text feature mapping using Nat Geo articles (Thinkers)
9. Text feature collage using magazines- students will have to explain the function of the text feature and what info is learned from it. (Creative)
10. Who would win debate- students research animals and debate which would win in a fight. (Enthusiasm)
11. Biome 3D cubes using research (Thinker)

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

#### Transdisciplinary Skills

- Self-management
- Thinking

#### Learner Profile

- Thinkers  
Attitude: Creativity
- Inquirer  
Attitude: Curiosity

Process: [3.2A](#) , [3.2B](#) , [3.2C](#) , [3.4B](#) , [3.12A](#) , [3.13A](#) , [3.13B](#) , [3.3A](#) , [3.11A](#)

Summative assessments-box 1

New Summative project- Students create a Briscoe Geographic using research and their knowledge of text structures and text features.

- Reflective
- Attitude: Independence and Confidence

### 5. What resources need to be gathered?

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

Powerpoints, social studies texts, science texts, science lab, classroom presentations, real life insects and plants, community leaders.

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

Field trips (S.M.A.R.T & SAMA), visitors, outdoors for observing life cycles and/or chains (walk to the river).

Mock trial script-<http://lawlessons.ca/teaching-resources/mock-trial-scripts>

Mock Trial resource- <https://njsbf.org/school-based-programs/mock-trial/law-fair-competition-for-grades-3-to-6/>

Ecosystem books for student research and access to iPads for internet research

Use magazine template have students to draft out their outline their ideas



## 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.

\*/ Students understand that there is an interdependence within an ecosystem and that all the parts have to function together for it to work.

\*/ Understood that there is an interdependence of living and nonliving with in ecosystems.

\*/ Students understood that there is an interdependence between their civic duty to protect their environment and how their actions affect their environment.

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.

/@/ added rubrics as a way to assess

/@/ write reflections on their understanding of summative projects, and include what they thought of the project, what they would change and if it was enjoyable.

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

(\*) The evidence is the Public Service Announcement where the students researched an ecosystem, the negative impacts, characteristics, problem and solution, and civic duties to protect our environment. Students created a PSA and presented their research.

## 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?"

\* & \* We connected all TEKs to the key concepts across subjects.

- demonstrate the learning and application of particular transdisciplinary skills?

\* & \* Group collaborate projects that allowed students to utilize their self-management and thinking skills.

- develop particular attributes of the learner profile and/or attitudes?

In each case, explain your selection.

{!} Collaborative group projects allowed students opportunities to display attributes of learner profiles and attitudes. While working on their collaborative PSA and Briscoe Geographic, students exercised their creativity, curiosity, inquisitiveness and independence.

### 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.

.\$: What is a swamp?

.\$: I wonder if we could make people stop driving because that is hurting our environment.

.\$: student generated research questions

.\$: What is the difference between a Deciduous forest and Taiga Forest?

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.

.\$: Topics for the Public Service Announcement

.\$: applying the profiles to read alouds.

### 9. Teacher notes

/??/ Mock trial was moved to PYP planner “How We Express Ourselves.” The trial integrates better in this unit because drama is introduced and it will be executed accordingly.