



## 1. What is our purpose?

### To inquire into the following:

- **transdisciplinary theme**

**How We Share the Planet:** An inquiry into rights and responsibilities; the struggle to share finite resources with other people and with other living things; communities and the relationships within and between them; access to equal opportunities; peace and conflict resolution.

- **central idea**

Patterns in the natural world show and develop interdependence.

### 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?

- Formative Assessment 3.3 Life Cycles: Students will place in order pictures of plants and animals life cycles.
- Sequencing charts of life cycles
- Science journal entries-energy, life cycles, living/non-living, seasons

### Summative Assessment:

Students reflect on what they learn about the how animals live and grow in their environment. In doing so, they prove their knowledge on the central idea, "Patterns in the natural world show and develop interdependence."

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Class/grade: 1st

Age group: 6-7

School: S. Rodriguez Elem.

School code: 049633

Title: How We Share the Planet

Teacher(s): 1<sup>st</sup> grade teachers

Date: Feb. (last week)-April

## 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?

### Responsibility and Functions

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

- Patterns in Life Cycles
- Energy transfers and food chains
- Conservation of Natural Resources

What teacher questions/provocations will drive these inquiries?

- What are some natural resources and their use?
- Give evidence of interdependence among organisms.
- How can we differentiate living and non-living organisms?
- How are different forms of energy important in everyday lives?
- How time affects our lives?

### Provocations

- Videos, books, sequence cards on life cycle/food chains
- Yarn Food Chain Activity

### 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?

- Web of water resources
- KWL-Food Chains
- T-chart-living/non-living

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

- KWL-posted in classroom
- Ongoing observations during whole/small group
- End product of web/t-chart
- Post test of living things and their needs
- Journal entries

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

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

- United Streaming: natural resources
- Materials from ECOS Science kit
- Seeds, soil, cups, paper plates, radishes, lima beans, Worms, gummy worms
- AIMS teacher guide: Primary Physics
- Science Journals
- Books: Lily la ruidosa, Huracanes, El autobus magico, La oruga y el renacuajo, Como crece un pollito, Como crecen las mariposas, Los huevos de Dora, Soy una hoja

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

Garden field trip

Science lab

Field trip to Children's museum

### 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 teacher provides the context for inquiry**

**To introduce the theme we will show and discuss a video about Earth Day**

- Set up Aims hands-on activities for students to explore different forms energy
- Set up ECOS hands-on activities for students to explore living things and their needs
- Whole group time: KWL, t-chart, web
- Involve students in conversations and dialogues about living things and their needs

**Leading and facilitating student inquiry**

**After teacher introduces theme students will create a poster/collage to represent Sharing the Planet.**

- Students will be able to grow/observe their own garden
- Students will discuss how energy is important to everyday life
- Students observe how organisms are interdependent during the science lab and outside observations
- Students will go to the Children Museum to learn about how technology changes communication, transportation and recreation, life cycles, how people meet their needs in other countries ( See Lines of Inquiry)

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

**Transdisciplinary skills**

**Social Skills**

- Cooperating: Sharing the planet
- Resolving conflict: how we share finite resources

**Thinking Skills**

- Acquisition of knowledge: through observations of living things

**Self-Management Skills**

- Codes of Behavior: Students learn to use and reuse natural resources properly

**Research Skills**

- Observing: plants, natural resources,
- Collecting and Recording Data: Changes in their garden

**Learner Profile**

Caring: part of a group, share finite resources

Thinkers: use what they know about energy and apply it to new knowledge

**Attitudes:**

- Enthusiasm
- Independence

#### 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.

By focusing on basic needs of plants and animals, using hands-on science activities, the students gained a greater understanding of the interdependence of all living things. They learned that the basic needs were met in their habitats.

Through investigations into life cycles, which students became aware of the many patterns that exist in the natural world.

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.

Compare and contrast different habitats and their animals by using a venn diagram.

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

Students made the following connections:

Student were able to discover how things affect one another such as pollution affects water and land. Student were surprised how much responsibilities we have in order to keep our planet clean.

Students had to compare and contrast male crickets to female crickets. They realized that the female cricket is the one with the ovipositor and in is the one that lays eggs.

Students realized how earthworms help us by eating dead plants and animals in the terrariums.

Students used art crafts to label the parts of plants. They connected it to the lab experiences in which they studied each part and its function.

Students observed the life cycles in the class terrariums and aquariums and realized the interdependence among the living organisms.

Students compared different food chains with different plants and animals.

#### 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?"
- demonstrate the learning and application of particular transdisciplinary skills?
- develop particular attributes of the learner profile and/or attitudes?

In each case, explain your selection.

Students observed the cycle of the butterfly starting from the stage of the caterpillar.

At school we create terrariums and aquariums for each group in our rooms in order for the students to feed and see the behaviors of the organisms

Students are able to use their IB attitude of caring, curiosity, cooperation, respect, and enthusiasm by observing the crickets, fish and worms.

Students develop learner profiles including caring, communication and thinker.

Some students connected to real life experiences and collected earthworms after a heavy rain to put in the terrariums. They were excited because they knew that having the earthworms would help the environment and create a healthier soil.

Students experienced how a culture in Africa meet their needs in the Children's museum. They also saw living and nonliving things. Water resources were demonstrated and how water is conserved.

### 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.

Students were able to post questions on the wonder wall such as:

What does an earthworm eat?

How do earthworm move if they don't have legs?

How does a caterpillar know when it is time to start changing into?

What is the ovipositor used for?

Why the cricket it's abdominal by their shoulders and ours is in our stomach?

Why do crickets make that sound?

What is the red liquid out of the pupa?

Why can't the butterflies fly right away?

Why is the female cricket bigger than the male?

How and why do ocean animals get trapped in plastic?

*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.

Students demonstrate how much they care for animals by being gentle and making sure they were taken care of in the class terrariums and aquariums.

Students took their initiative to conserve water at home and at school.

Students are more cautious not to waste paper and start recycling paper and water bottles.

Students were able to observe most stages of the butterfly cycle and were able to set them free in the school garden. Their reaction was priceless.

### 9. Teacher notes

#### Math Connection:

Math fact families addition and subtraction, shapes contributes, fractions with figures, how a triangle with hexagon, vocabulary for operations (less than, more than)

Continents around the world was implemented in class GT expo.

