Planning the inquiry

1. What is our purpose?

To inquire into the following:

- **transdisciplinary theme: (subjects: Social Studies, ELA, Science)**

How the World Works: an inquiry into the ***natural world and its laws***; the interaction between the natural world (physical and biological) and human societies; how humans use their understandings of scientific and technology advances on society and on the environment.

- **central idea**

Living things go through cycles and depend on adaptations for survival.

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?

Task:	Scholars will complete a "Super Animal Project" where they are responsible for designing an animal who is able to survive in a given environment (artic, rainforest) Scholar will pick from a bag-1animal and 1 habitat and adapt that animal to the habitat they have chosen.
Criteria:	Scholars must choose 4 adaptations that would allow their super animal to survive in an environment. Scholars will also reflect on the importance of changing based on where you live in order to survive. Scholars will create on 12/16
Assessment Tool:	Teacher developed rubric-scholars will draw an illustration of the animal and give 4 adaptations and why. Scholars must write in complete sentences.

Class/grade: 3rd Age group: 8-9 years old

School: Uplift Summit School code: 006713

Title: How We Change Over Time

Teacher(s): Monica Pulis, Alexandra Hollander, Shannon Wright, Briana Martinez

Date: November 2, 2015-December 18, 2015

Proposed duration: ~70 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?

Key Concepts: Causation, Change, Connection

Related Concepts: Cycles, transformation, similarities and differences, classification

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

- How living things change over their lifetime
- How living things adapt to the environments in which they live
- Factors that influence each stage of a life cycle
- Traits we are born with and learn

What teacher questions/provocations will drive these inquiries?
Teacher Questions:

- How do living things change over time?
- How can people, animals, or plants change based on where they live?
- What causes living things to change?

Provocation(s): 11/3 Show pictures of plant and animal adaptations along with a YouTube clip of animals in different habitats. Scholars will give connections about those animals, habitats, and why they have those adaptations.

© International Baccalaureate Organization 2007

Planning the inquiry

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 Chart on living things that change over their lifetime
- Bubble Chart over Adaptations
- Sticky Notes on Wonder Wall of Connections throughout the lessons

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

- Scholars will complete a timeline of their own life and how they have changed to get to this point, and how adapting is necessary for those changes
- Scholars will have a class discussion what causes living things to change?
- Scholars will read a passage over desert habitats and answer questions based on that habitat and animals they will find there.
- Scholars will give examples of plant and animal adaptations.
- Scholars will give examples of inherited and learned traits they have.
- Scholars will give examples of inherited and learned traits animals have.
- Scholars will complete BP Jr. Plant Adaptations quiz and exit ticket giving examples of adaptations.
- Scholars will fill out a worksheet where they complete the parts of a plant the function of each part and discussed the needs of plants.
- Scholars will create a timeline and write events that have happened to them in their lifetimes and how they have changed over time.

5. What resources need to be gathered?

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

- Read alouds, Brain Pop, journal entries, National Geographic, Planet Earth as needed, YouTube clips, books from the library about animals and habitats as needed

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

- Real photos from scholars' families,
- Nonfiction read alouds

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?

Facilitating student inquiry:

- Brain Pop Jr.
- Planet Earth DVDs
- Bill Nye Clips
- Magic Tree House Clips
- Interview themselves/others about their life and events that would go on a timeline
- Scholars will read the story "The Science Fair" which is realistic fiction and assesses the skill of story structure and how scientists use data and research to answer questions about the world, living things, and animals. (ELAR)
- Scholars will read "Yonder Mountain" during the week of 11/30-12/4 and compare and contrast how humans have had to adapt to their environment and respond in a paragraph comparing life now to life back then. (ELAR)

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

Transdisciplinary Skills: Research, Thinking

Learner Profile attributes: Inquirer, Thinker, Reflective

Attitudes: Creativity, Curiosity, Independence

11/2 Related Concepts (Transformation)

Scholars will see that plants change over time and have special parts to help them grown and transform no matter where they are.

11/3 Key Concepts (Connection)

Scholars will make connections between parts of a plant lesson and plant adaptations. The parts of a plant can be an adaptation.

11/5 Lines of Inquiry (How living things change over their lifetime)

Scholars will see that adaptations can change over time because animals may move or their needs may change just like humans.

11/13 Key Concepts (Connection)

As scholars have learned about adaptations that plants and animals have in order to survive in their environment, so do people for very similar reasons.

11/1 7 Key Concepts (Change)

Scholars know that they change over their lifetime. But do they know how? Ask them questions based around how they have changed over their life.

© International Baccalaureate Organization 2007

Reflecting on the inquiry

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.

-Summative project showed that scholars got basic aspect and understanding of what adaptations are.
-Scholars inherently made connections about their families and their traits they have learned and inherited.

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.

- The scholars had misconceptions about adaptations-they thought eating and shelter were adaptations but they are needs.
- Next year we will make sure to have an example made so they can know exactly what we mean for the project.

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

- (MP) 11/3: scholar brought in plant and explained its adaptations (on his own-Chris)
- (MP): 11/4: scholar brought cactus because we learned about adaptations the lesson before on 11/3
- (MP): 11/5: scholars brought cactus and aloe vera plant to show how adaptations can help people
- (SW) 11/30: scholars made connection comparing each stage of lady bug life cycle to that of a human (ie: baby, egg)
- (SW) 11/12: scholar identified how character inherited traits from a grandparent (Elijah)
- (SW) 11/18: scholar identified how a willow plant has adaptation after watching video clip and identified that plant has adaptations because of where it lives(Helena)
- (AH) 12/1: scholar said "when people eat all the natural resources, they need to plant more, because if they don't they will run out of that resources, if we eat and kill animals they cannot reproduce and go through the life cycle." (Alexis)
- (AH) 11/13: scholars made connection that the news warns you about the adaptations you need to make prior to a big event happening, and help you prevent and stay safe (class connection)
- (AH) 11/13: scholar said "communities must rebuild or migrate when earthquakes occur" (Ahmed)
- (BM) 12/2: scholars were reading about "Trail of Tears" scholar made connection that Indians had to adapt due to living in Oklahoma (Frankie)
- (BM) 12/7: scholar said Earth has to adapt when there is a forest fire because animals leave when they don't have needs met but come back

© International Baccalaureate Organization 2007

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.

Key Concepts	Transdisciplinary Skills	Learner Profile/Attitudes
Key Concepts focus: *connection*	Trans. Skills focus: *thinking*	LP/Attitudes focus: *inquirer*
Connection-scholars were able to make connections about what they see every day and why things are the way they are.	Thinking-scholars had to think of their own connections about inherited and learned traits-they were able to ask their parents and siblings about why they look the way they look. They were asking questions about their own lives.	Inquirer- Scholars were in the driver's seat of their own learning and asking their own questions about their own families. They inquired about plants, animals, and adaptations, traits. Etc.

Commented [MP1]: #6.
-Scholars had questions on CA #2 about adaptations and life cycles and did really good on making the connections from the content and the assessment.
-Scholars made connections between how humans adapt to weather, new places, etc.

Commented [MP2R1]:

Reflecting on the inquiry

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.

-asked questions about specific animals and plants and where those were located and how they came to fruition

-scholars asked questions like do humans have life cycles? Why are they important? Does every living thing have a life cycle? Why is the life cycle of a reptile different than an insect?

*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.

-(MP) my scholars brought their own plants to show plants they have at home with adaptations

-(MP) Chris brought a rock when we learned about landforms to show the class that volcanoes can form crystals and rocks

-(all) scholars created landforms with play dough and were able to identify landforms and animals that live there

9. Teacher notes

Teachers: Monica Pulis, Shannon Wright, Briana Martinez, Alexandra Hollander

Specials Teachers: N/A

Technology Integrated: Brain Pop Jr. videos, YouTube clips, Pebble Go, articles and RAZ books

Overall Reflections: create a student example of the super animal summative assessment so scholars can understand more deeply about the assessment and content covered

© International Baccalaureate Organization 2007