Planning the inquiry

1. What is our purpose?

1a) To inquire into the following:

**How the World Works**
- **transdisciplinary theme**
  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 understanding of scientific principles; and the impact of scientific and technological advances on society and on the environment.
- **central idea**
  People build things to meet a need.

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?

**Giants/I Build I Create/Things That Move**
Design a city. What buildings are in your city? What moving parts are in your city? Each group will be responsible for one of the following:
- Places to go for entertainment
- Places to go for work
- Places to go for learning
- Places to meet our needs

Students work in teams and plan a blueprint. What need is being meet with this building? What movement occurs in your community? This includes transportation or people coming and going in the community. What needs are meet with the different transportation items?

Goal-Students will be able to create/build structures and identify why its needed.

Role-Builders, Creators, Architects, Planners, Presenters, Advocates

Audience-Peers, Teachers, Other grade levels

Situation-Design a city and the buildings within it

Product/Performance-Product

Class/grade: Pre-K

Age group: 4-5 years

School: Kramer Elem IB World School

School code: 051613

Teacher(s): Chavez, Fisher, Karam, Farrisee, Trevino, Martinez

Date: January 8 - March 8, 2019

Proposed duration: 9-10 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?

**Form and Function**

Related Concepts: Structure and Impact

What lines of inquiry will define the scope of the inquiry into the central idea?
- Geometry and measurement when building or creating
- Connection of buildings as giants
- Modes of transportation
- Building things to meet a need

What teacher questions/provocations will drive these inquiries?
- What materials or tools are needed to build something?
- Why do we build or create things?
- Why do we need certain buildings?
- What skills do you need to build or create? What do you need to know?
- How do people travel to meet a need?

Provocation:

Teacher will sit and create a structure during class time. Students will be able to ask questions if they are curious. Students need to be guided to the idea that buildings are created to meet a need. Structures have a purpose.
### Standards
- Measurement, shapes, spatial reasoning, writing and labeling, needs and wants, roles and responsibilities, community workers, voting, geography and mapping skills, personal safety, position and motion of objects, properties of common objects, measuring devices.

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**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?

Class discussion: What does this building remind you of? Connection to the giants’ unit.

Assess their understanding of colors, shapes, sizes and position words so that they can use those terms in their creations.

Graphic organizer of items needed to build a home. Add as the unit progresses.

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

Read alouds connect to shapes. How can those shapes be used in our creations?

Create a graphic organizer about ways we travel.

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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?

Brainstorm ideas of what is needed to create a house or building.

Discuss the purpose of the materials we used to create a blueprint and building. Have students create a blueprint of their buildings. The blueprint and pencil are part of the process. What tools are needed to build?

Go for a walk around the neighborhood. What materials are used to make the houses? Create a list for the class.

Videos, pictures, books shared about materials that are needed to build a building.

Center on what construction workers need and wear. What are the safety precautions that they have to take-Bob the Builder or Handy Manny examples. Make a connection to community workers.

Travelsort Game (airplane, train, boat, helicopter, car, bike). What is the form of transportation and how do we categorize them (land, air, ocean, space).

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

**Learner Profile:**

- Open-minded (working with others, compromise, respect values and ideas of others)
- Thinker (Traded with Communicator in “How We Express Ourselves”)
- Inquirer (Asking questions about new tools, materials, buildings, ways of traveling)
5. What resources need to be gathered?
What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available?

- Need boxes, Lego sets, tape, tools-kitchen tools, items found in toolboxes, materials

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

- Community walk-Observe materials needed to make houses

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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.

How you could improve on the assessment tasks so that you would have a more accurate picture of each student’s understanding of the central idea?

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

Students’ Understanding of Central Idea:

- Went well. They really understood it because of their output on the summative. Looking at the other examples of buildings helped them see the connection.
- Need to dig deeper on the why… Why do we need these things? What is important about the needs met in the different buildings?
- They could see the difference between what they need and what they want (Farrisee/Martinez example).

Improve the Assessment:

- Update the summative so that ALL components are included in each classroom. It would be less confusing to see only buildings that are for fun.

Connection from Central Idea to the Theme:

- Need to reinforce the why… Why do we need these things? Why do these places provide it? Connections will be made in the last unit with wants/needs and food webs/cycles. Connect to the people and roles they play in the Who We Are Unit.

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.

Lines of Inquiry:

- Buildings and giants were understood. We had lots of examples to share and they made connections.
- Simple machines-Students struggled with this. They continued to construct towers. Connect to making the machine complete a task. Have a simple machine museum where students bring items from home to share.
- Purpose of tools-need more tools that are kid friendly, tools don’t have to be so complicated (use school tools-pencil, ladder, manipulatives, markers). Also do a task where they don’t have the tools to meet a need or complete a task. Let them decide what tools are needed.

Learner Profile:

- Open-minded (working with others, compromise, respect ideas of others)
- Communicator (decision making, working with others, explaining your thinking)
- Inquirer (Asking questions about new tools, materials, buildings, ways of traveling)

Transdisciplinary Skills:

- Social Skills-Cooperating, Group Roles, Compromise, Accepting responsibility
- Communication Skills: Justifying your thinking and reasoning in the summative
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.

- Questions about the frame—What is it? Is it like a picture frame?
- Questions about vocabulary
- Wondered how houseboats float.
- Questions about simple machines—What are they called? What do they do?

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.

- Building blocks area is changing a lot—Collaboration, building things together.
- Bakery—Writing with the center (having to put in your order, student writing notes to each other with their baked goods)
- Increased writing in the classroom with data collection (Writing the names of machines and which students preferred them)
- Discussion about what ways would you like to travel.

9. Teacher notes

Keep the connection with the visit by the architect and Legoland field trip

Expand on different cultures and the types of homes they use for survival and shelter.

Train ride or DART to the field trip as a connection to transportation and other types of buildings

Give them some context with buildings that they DON’T know about (ski lodge, hotels, buildings outside of their understanding)

Field trips? What exposure can we give them? Legoland was used this year but was more entertaining than informative.

Keep the blueprint activity!