1. What is our purpose?

1a) To inquire into the following:
- transdisciplinary theme: Sharing the Planet
- central idea: Life Depends on Water

Class/grade: 4
Age group: 10-11
School: Wildwood
School code: 2068
Title: Water: The Element of Life
Teacher(s): Mathis/Wiedegreen
Date: April/May 2016
Proposed duration: 5 weeks

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?

**Content:** Water Chapter Test (Science Book) - scoring guide

**Product:** Inquiry/Design Cycle personal project and Weebly website. Action and Choice – Class Created Rubric – Teacher and self-assess. Ending with an Open House for parents and other students.

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?

- **Connection** – students will investigate water maps and geographical availability of water and usable water around the world, especially focusing on our novel’s setting Sudan vs. U.S.

- **Function** – Students will learn locations near large bodies of fresh water, problems, causes and effects of usable and non-usable water, water scarcity and illnesses.

- **Responsibility** – Students will learn that it is every person’s responsibility to conserve water and that the water crisis will be of concern for all in the future. They will think of possible solutions and take action at home and at school to conserve and get their families to conserve.

What lines of inquiry will define the scope of the inquiry into the central idea?
- Where our water comes from and what its made of (function)
- The distribution and availability of usable water (connection)
- Our responsibility for water conservation and quality (responsibility)
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?

- Introduce the unit with an Inquiry activity to spark curiosity by posting pictures around the room for students to do a graffiti wall (What I see, think, wonder).

- Have students generate questions/inquiries about water and create a mind/concept map on BrainPop that they fill out during the entire unit.

- Students will participate in discussion about how they conserve water and what else they can be doing to conserve water.

- A Venn Diagram chart will be displayed and used throughout the unit to compare the perspectives of both characters in our novel “A Long Walk to Water” which is a true story.

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

1. Students can demonstrate that they learned where our water comes from through quizzes, and by rewriting sections of the Science textbook in their own words.

2. Students can demonstrate the understanding of the distribution of usable water by analyzing data and world maps, as well as, by referencing the novel “A Long Walk to Water”.

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?

Frontloading: Students will explore the classroom PYP library on water, water conservation, etc. Students will review and research various websites using laptops in order for them to decide what they want to focus on for their final project/website/inquiry fair.

Learning Activities:

- Readworks articles for comprehension and background knowledge:
  - The Water Cycle, Think About What You Drink, Watercolor (art integration)

- Achieve3000 articles/activities/writing
  - Which Water is Better?, Water, Water Everywhere, We Need More Water, Water on Mars

- Big Universe Books for book club discussion and CCSS speaking and listening

- “A Long Walk to Water” novel study/Chapter activities and questions

- Personalized Literacy Binder menu

- Science Lab mini-lessons and experiments (Badal)

- Strange States of Water: Solid, Liquid, Gas

- Science book chapters – new chapters written by the students
3. Students will be asked to carry around a water jug to simulate conserving water, in order for them to demonstrate that they have a responsibility to conserve water. Also, students will be making Weebly water conservation websites that they will publish for all to see to raise awareness.

- Water Poems
- Water jug activity
- Presentation/project: Water Conservation: Raising Awareness – Rubric AND ARGUMENTATIVE EVIDENCE BASED WRITING (for or against bottled water).
- A Small Drop of Water from the Comprehension Tookit
- Water Conservation presentation by 6th grade science teacher.
- Science lab experiments by science teacher (Badal)

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

**Reflective:** Students are reflective while they are thinking about ways they are conserving water and how they can take action and get others and sometimes themselves, to conserve water.

**Balanced:** Students investigate and discover the balance of water cycle and the distribution of usable water. They learn that water is balanced and anything interfering with that balance has consequences that need solutions.

**Respect:** Students learn to respect the usage of water in order to contribute to something bigger than themselves.

**Appreciation:** Students will appreciate the availability of water they have and discover that others aren’t so fortunate. They also discover that water is essential to life and appreciate its impact on the Earth.

**Thinking Skills and Communication Skills:**

- Acquisition of Knowledge: Students will learn and realize the challenges others face when resources are limited. Action ideas to take to raise awareness about water conservation and for their Weebly websites.
- Planning and Gathering Data: Students will use data centered around water to understand its scarcity. Planning action and finding ways to support and execute and creating website to communicate.
- Presenting: Students will communicate water conservation through various forms of presenting. (Raising Awareness: social skills, persuasion for action using their Weebly website and at inquiry fair). Working with the Community: social skills and accepting help and tips, interviewing professionals during the project and creation of their websites. Share Inquiry Cycle and websites with
5. What resources need to be gathered?
What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available?

5. Teacher’s Guide to “Long Walk to Water” and novels
7. [https://thewaterproject.org/resources/](https://thewaterproject.org/resources/)
8. [http://www.waterforsouthsudan.org/a-long-walk-to-water-faq/](http://www.waterforsouthsudan.org/a-long-walk-to-water-faq/)
9. Brain Pop Videos with reflections

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

1. Resources are displayed around the room. Books and student created projects, such as water cycles and informational boards, are up for all to learn from.
2. Student made water cycles
3. Student made water conservation awareness posters and ads in classroom and around school.
4. Pictures around the room depicting water and water scarcity
5. Final project student Weebly website published for public and families to see. Students will also peer assess each other’s websites and reflect upon them.
## Reflecting on the inquiry

<table>
<thead>
<tr>
<th>6. To what extent did we achieve our purpose?</th>
<th>7. To what extent did we include the elements of the PYP?</th>
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<tbody>
<tr>
<td>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.</td>
<td>What were the learning experiences that enabled students to:</td>
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<td></td>
<td>● develop an understanding of the concepts identified in “What do we want to learn?”</td>
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<td>● demonstrate the learning and application of particular transdisciplinary skills?</td>
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<td>● develop particular attributes of the learner profile and/or attitudes?</td>
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<td>In each case, explain your selection.</td>
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<td>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.</td>
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<td>What was the evidence that connections were made between the central idea and the transdisciplinary theme?</td>
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Reflecting on the inquiry

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<th>8. What student-initiated inquiries arose from the learning?</th>
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<td>Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning.</td>
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*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.*

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<th>9. Teacher notes</th>
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<td>Plan field trip to the water plant. I need a contact for this and parent help.</td>
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<th>What student-initiated actions arose from the learning?</th>
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<tr>
<td>Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act.</td>
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