Water Works
Lesson Plan

Morgan's Wonderland Lesson Plans
Water Works (Science)

TEKS:

Physical science skills. The student learns to explore properties of materials, positions, and motion of objects through investigations which allow him or her to notice the attributes (Pre-K.VI.A).

Force, motion, and energy. The student knows that force, motion and energy are related and are a part of everyday life (K.6; 1.6). The student knows that forces cause change and that energy exists in many forms (2.6; 3.6). The student knows that energy exists in many forms and can be observed in cycles, patterns, and systems (4.6). The student knows that energy occurs in many forms and can be observed in cycles, patterns, and systems (5.6). The student knows force and motion are related to potential and kinetic energy (6.8). The student knows that there is a relationship among force, motion, and energy (7.7). The student knows that there is a relationship between force, motion, and energy (8.6).

Objective: While visiting the Water Works area at Morgan's Wonderland, the student will be able to describe the motion of objects being placed in water and observe the direction of the flow of water using instruments within Water Works area.

Complete objectives may be found in the TEKS Verticle Alignment for STAAR Alternate: http://www.tea.state.tx.us/student.assessment/special-ed/staaralt/vertalign/

Resources:

5E's	Suggested Activity	Teacher will do:	Student will do:
Engage:	Before visiting the Water Works area at Morgan's Wonderland, have the class brainstorm words they think of when they hear the words motion and/or movement. Create several more paths filled with "obstacles" and have class describe the paths they took. Explain to students that at the Water Works area today they will see water that is in motion. They will use observation skills to detect a variety of objects in motion. *Accommodations: Give picture or word cards to students that have words or pictures describing motion.*	-Create a concept web on the board using all of the words the students brainstormed. Explain to the students that they are going to participate in an activity involving movement and the words from the concept web. Have students line up in classroom. Have students walk in a straight line and ask, "What direction did you walk?" -Now have students describe the path the students walked.	-Respond to questions from teacher: Possible answers could be: forward, straight, across the room, etc. Have some students stand in the way of this line moving forward so the line will now have to walk around the "obstacle". -Possible answers could be: around, to the right/left.
Explore:	Once at the Water Works area, encourage the students to explore and interact with all sections of the water area. Gather students around the section of the water area that encompasses the boards that can be moved to change the flow of water. *Accommodation: Assist student if necessary, have student take turns moving boards within the water area. Using the same pictures used in engagement, ask student if any of these words or pictures can be used to describe the motion of the water.*	-Ask students to describe the motion of the water and then have different students take turns moving the boards around. Ask what difference they see in the motion of the water. -Ask what will happen when different objects are put in the water (examples could be small rubber duck, toy boat, ball, etc.). -Have students compare and contrast the difference in the motion of this water compared to the area where they moved boards and floated objects.	-Students change the flow of water and introduce different objects that float. -Have students observe all the objects put in the water while different students are moving the boards to change the flow of the water. Students will move to the area where they can use instruments to move and squirt the water. Students will use compare and contrast language (may us e Bloom's chart to ask questions)
Explain:	Have students get into cooperative learning groups and provide each group with construction paper or large writing paper and pencils. *Accommodation: Provide assistance so student can actively participate in group discussion. The student can use the actual pictures they have been using during engagement and exploration.*	Have each group draw the direction of motion for each of the objects placed within the water.	Students will draw and use descriptive words under each drawing to describe movement (straight, zigzag, forward, round and round, up/down, rolling, spinning, etc.)
Extend:	Once back in the classroom, create another concept web on the board. Have students brainstorm words they now know are associated with motion. Have students get in cooperative groups and assign each group an object or instrument that was used in the water area (rubber duck, ball, fixed moving and	Have students brainstorm words they now know are associated with motion. Have students get in cooperative groups and assign each group an object or instrument that was used in the water area (rubber duck, ball, fixed	The students will choose one of the following: draw a picture, act out, or create a 3D model that demonstrates the directional flow of their object in the water.

Materials for Course/Packet:
*Brainstorm Chart/web.
*Writing utensils (markers, crayons, pens, pencils, etc.)
*Objects or pictures
*

Other ideas:

~ we could utilize iPads/apps to make the course more technologically interactive.
For example:

** symbol boards with photos to load into speaking program to express ideas*
**different "hot spots" where students can view short videos to extend understanding using apps (aurasma)*

If this is something you are interested in, we can troubleshoot how to get these tools in place.

Ideas for sentence stems using Bloom's Taxonomy

Make a Prediction

- I predict that …
- What if …
- I bet that …
- I think that …
- I expect …
- Since [fill in the detail] happened, then I believe the next thing that is going to happen is …
- Reading this part makes me think [fill in the detail] is about to happen…
- A possible solution to …
- A better solution to …
- I believe a new and unusual use for [fill in the detail] would be [fill in the detail]…

Note: Predictions should be connected to and based directly on the text you have just read.

Ask a Question

- Why did … ?
- Who did … ?
- What does [fill in the detail] mean … ?
- What would happen if … ?
- Is there a better solution to… ?
- How many ways can you… ?
- How effective are… ?
- What would result … ?
- What is the relationship between … ?
- Which is more important …?
- How would you test … ?
- What fallacies or inconsistencies did you find in … ?

Note: Your questions should be connected to and based directly on the text you have just read.

Make a Connection

- This reminds me of …
- This part is like …
- This character [fill in name] is like [fill in the name] because …
- This is similar to …
- Some differences are …
- I also [name something in the text that has also happened to you] …
- I never [name something in the text that has never happened to you] …
- This character makes me think of …
- This setting reminds me of …

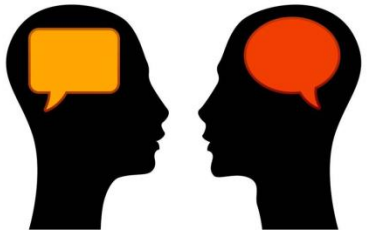
Reflect and Record

- Draw someone, something, or some place described in the text.
- Draw a symbol for the text.
- Draw a picture of how the character felt at the beginning, middle, end of the text.
- Write your feelings in relation to ….
- Construct a chart to distinguish between fact and inferences.
- Design a book, magazine, or jacket cover for …
- Compose a rhyme or put new words to a know melody.
- Write a letter to [fill in the detail] advising changes needed.
- Create a different ending to the text.
- Using symbols, formulate a new scheme for classifying objects.
- Show how an idea or a product might be changed.
- Construct a table or graph representing …
- Design a flow chart to show critical stages.
- Propose an alternative to …

Clarify Something

- Oh, I get it …
- Now I understand …
- This makes sense now …
- I think this means …
- I agree with you. This probably means …
- At first I thought [fill in the detail], but now I think …
- What seems likely is …
- The facts are …
- The opinion is …
- An alternative to [fill in the detail] is …
- Another solution is …

Make a Comment



- This is good because …
- This is hard because …
- This is confusing because …
- What if …
- I like the part where …
- My favorite part so far is …
- I think that …
- When you compare [fill in the detail] with [fill in the detail], you …
- Another point of view is …
- Another important thought is …