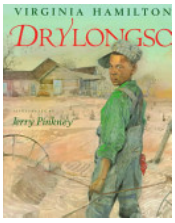
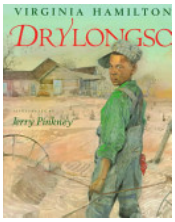



# Drylongso & the Water Cycle
# Common Core Module Student Checklist

| Selection/Task | Score |
|---|---|
| 1 Drylongso (RL3.2, AR 1.0 pt) | |
| ☐ Section 1 (Pgs. 1-11) | |
| ☐ Section 2 (Pgs. 12 – 22) | |
| ☐ Section 3 (Pgs. 23-33) | |
| ☐ Section 4 (Pgs. 34-44) | |
| ☐ Section 5 (Pgs. 45-54) | |
| ☐ 2 Water Resources | |
| ☐ 3 The Water Cycle | |
| ☐ 4 Where Drinking Water Comes From | |
| ☐ 5 A Drop of Water (RL5.8, AR .5 pt) | |
| ☐ 6 The Drop in My Drink (RL4.9, AR .5 pt) | |
| ☐ 7 Erosion (RL4.4, AR .5 pt) | |
| ☐ 8 Landslides, Slumps, & Creep (RL6.8, AR 1.0 pt) | |
| ☐ 9 Water (RL5.6, AR .5 pt) | |
| ☐ 10. Projects/Extended Learning | |

# ***Drylongso***




**Genre Study: Folktales**

"Genre" is the name used to identify the category or type of literature. The most well-known literary genres include realistic fiction, science fiction, fantasy, folktales and fairy tales, poetry, drama, and non-fiction. ***Drylongso*** is a modern folktale which describes how one African American family worked to save their farm from a severe drought west of the Mississippi River during the 1970's. This story describes a family on the edge of hopelessness which is saved by a mythical boy named Drylongso.

A **folktale** is a story that is passed down through generations by word of mouth. Storytellers recount folktales, adding their own personal touches to entertain listeners and to teach a moral, or lesson. Myths, tall tales, legends, fables, and fairy tales are all folktales.

**Setting**: The setting is where the story takes place. It can be a place that exists or an imaginary place.

**Characters and conflict**: Characters in folktales can be people or talking animals who sometimes have exaggerated or magical abilities. The conflicts are usually everyday problems that regular people might have.

**Style**: The style of a folktale is informal and conversational.

**Theme**: The theme of a folktale, or the folktale's moral, is a lesson about human nature from which listeners or readers can learn.

Lindy and her family are suffering through a long drought. Then the mystical Drylongso teaches them the secrets of finding water hidden in the earth. "Drylongso is a hypnotic, joyful story from a distinguished writer--one that, with the help of Jerry Pinkney's beautiful watercolor and pastel pictures, depicts well the dry land, the swirling wind and earth, and an African-American family planting in hope with the help of a wondrous, dusty, divining stickfella."--*The New York Times Book Review*

After reading the author's note on page 55, write a prediction about what you believe this folktale might be about (characters, setting, and plot).

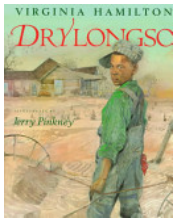
_____

_____

_____

_____

# Academic Vocabulary List

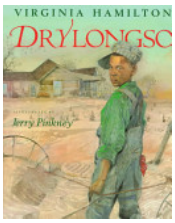



1. mittens
2. dawdling
3. cloudburst
4. murmured
5. creeping
6. squinted
7. porch
8. sprawled
9. seeping
10. drought
11. grit
12. sunflowers
13. reared
14. blizzard
15. topsoil
16. dowsing
17. tremble
18. cultivate
19. soil
20. kin
21. spring
22. trench
23. canal
24. drifts
25. wandered
26. water cycle
27. liquid
28. vapor
29. ice
30. evaporation
31. atmosphere
32. sublimation
33. transpiration
34. condensation
35. precipitation
36. rain
37. sleet
38. snow
39. hail
40. collection
41. aquifer
42. well
43. dew point
44. humidity
45. ground water

## Spelling/Vocabulary Practice Exercises:

(A) Write the words in alphabetical order.
(B) Divide the words into syllables.
(C) Write the words 5 times each.
(D) Create a word search puzzle on graph paper and give it to a friend to solve.
(E) Categorize and sort your words into groups. (You decide on the organizing structure. For example you could sort them based on syllables, or based on topic, or based on beginning letter, or based on parts of speech, etc.)
(F) Make up a code. Write your words in your code and give it to a friend to solve.
(G) Make Spelling Pyramids
(H) Write each word in a sentence or story.
(I) Write each word, its definition, and a corresponding picture on a flashcard.
(J) Develop your own activity.

# Drylongso




Student _____ Date_____

## Section 1: Pgs. 1-11

1. Book Title

## Word Analysis

2. Select a word and find its synonym.

3. Select a word and find its antonym.

4. Select a word with an affix or Greek or Latin root.

5. Locate and copy the definition of the following vocabulary/spelling words.

| | |
|---|---|
| mittens (pg. 1) | |
| dawdling (pg. 2) | |
| cloudburst (pg. 4) | |
| murmured (pg. 6) | |
| creeping (pg. 10) | |

6. Select and copy a sentence with an example of figurative language. Is it simile, metaphor, personification, idiom, or hyperbole? (Circle one.)

## Literary Response and Analysis

7. Identify the setting.

8. List the main characters.

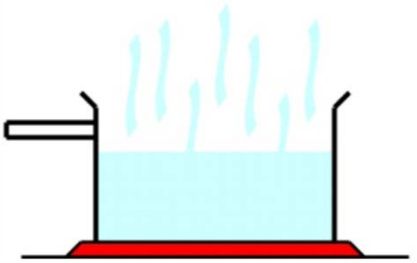
9. Page 10 ends by saying, "There was a wall moving toward them from the north." What do you predict the "wall" might be? Why?

10. Summarize this portion of the text.

11. On page 7, Lindy asks her dad, “Is there always rain in a cloud?” Her dad didn’t really answer her question. Using evidence from your science book, what is the correct answer to Lindy’s question?

**Math and Science Connection: Recording and Graphing Evaporation Rates**

From the moment Drylongso begins, it seems clear that the land is dry and devoid of water. A ***drought*** seems to have taken hold of the region. Water is scarce and precious in these ***arid*** conditions. What little water there is will quickly evaporate into the ***atmosphere***. Scientists can measure ***evaporation rate***, which is the rate at which a liquid changes to a vapor at room temperature. In locations that have dry air and high temperatures, the evaporation rate can be extreme. For example, the infamous Death Valley, California has one of the highest evaporation rates on Earth; 128 inches annually. This means that a swimming pool which is filled to a depth of 10 feet, could be completely dried up within a year!



What is the evaporation rate of water in your region? Choose a container and fill it with water. Either a beaker or graduated cylinder with measurement lines running up the side would be a great choice. Create a table, such as the one below, to record the initial water level. Measure and record how much water is lost to evaporation each day for at least a week.

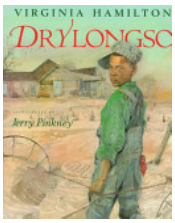
| Evaporation Rate of Water Data Table | | | | |
|---|---|---|---|---|
| | Initial $H_2O$ Level | Time of Reading | Daily Evaporation Rate | Cumulative Evaporation Rate |
| Day 1 | | | 0 | |
| Day 2 | | | | |
| Day 3 | | | | |
| Day 4 | | | | |
| Day 5 | | | | |
| Day 6 | | | | |
| Day 7 | | | | |

Choose an appropriate graph to visually represent your data. You may need to use your math book to research the various types of graphs if you aren't sure which type of graph would be best to use.

Which type of graph will you use to represent your data? _____

Now, use either graph paper, poster paper, or a computer to create a graph to represent your data. Be ready to present your evaporation rate graph to your class. Do you notice any trends which could allow you to predict future evaporation rates?

# Drylongso




Student _____ Date_____

## Section 2: Pgs. 12-22

1. Book Title

## Word Analysis

2. Select a word and find its synonym.

3. Select a word and find its antonym.

4. Select a word with an affix or Greek or Latin root.

5. Locate and copy the definition of the following vocabulary/spelling words.

| | |
|---|---|
| squinted (pg. 12) | |
| porch (pg. 16) | |
| sprawled (pg. 18) | |
| seeping (pg. 20) | |
| drought (pg. 22) | |

6. Select and copy a sentence with an example of figurative language. Is it simile, metaphor, personification, idiom, or hyperbole? (Circle one.)

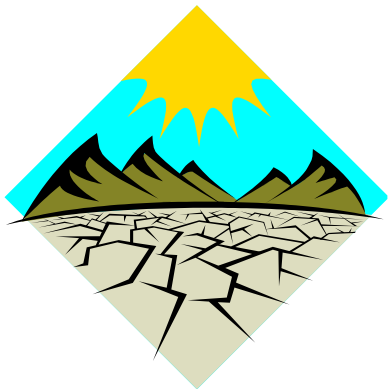
## Literary Response and Analysis

7. Identify the setting.

8. List the main characters.

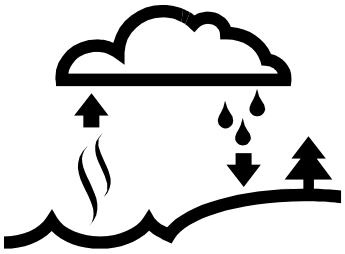
9. Summarize this portion of the text.

10. On page 22, we are introduced to the character Drylongso, who speaks of a drought. How is his name related to the concept of drought? If needed, use your science book to research droughts.



# The Water Cycle

1 Have you ever wondered where the water you use comes from? Actually, the water you pour into your glass right now has been around since the earth has been around. Water is not created or destroyed. However, it is always going through a process of changing states from ***liquid***, to ***vapor***, to ***ice***, and back again. This process is known as the ***water cycle***, and all life on earth depends on it.

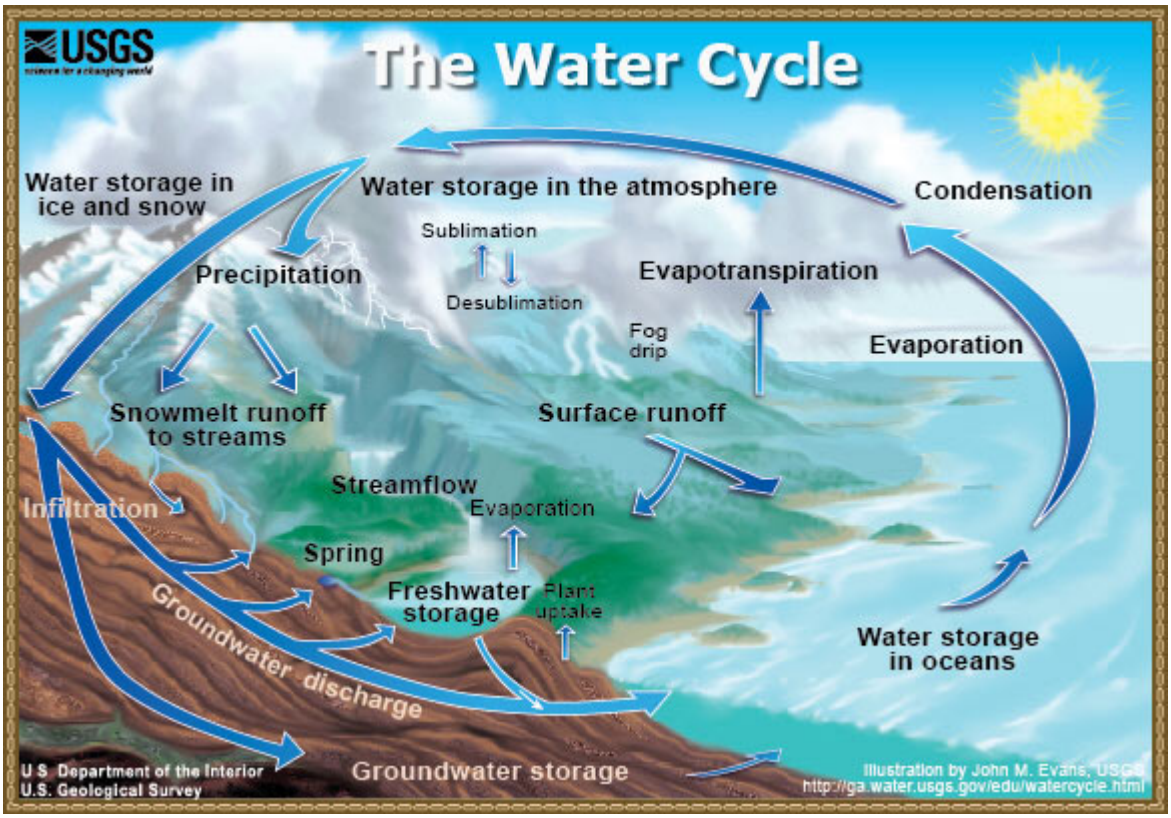


2 The first step of the water cycle is known as ***evaporation***. The sun is the driving force of the water cycle. It heats water and causes it to change into a vapor. Most of the earth's water is in the oceans. This ocean water, along with surface water on land, is continually evaporating into the ***atmosphere***. Even ice and snow can change into water vapor through a process known as ***sublimation***. The air is full of water vapor. Clouds are a visible form of water vapor, but even clear air contains water particles.

3 Soon, water vapor in the air will go through a process known as ***condensation***. Condensation occurs as the water vapors rise in the atmosphere and begin to cool. As the water vapor cools, it changes from a gas back to a liquid. This step of the water cycle is important because condensation is the process that forms clouds. Clouds grow in size as air currents blow them around the globe.

4 The next step of the water cycle occurs when water falls out of the clouds. When water falls out of the sky, it is called ***precipitation***. There are four main types of precipitation: ***rain***, ***sleet***, ***snow***, and ***hail***. Most precipitation falls as rain. For precipitation to happen, first tiny water droplets must condense on even tinier dust, salt, or smoke particles, which act as a nucleus. Millions of cloud droplets are needed to form a single drop of rain.

5 The final step of the water cycle is known as ***collection***. As water falls back to land, it may take a variety of paths. It may fall as snow where it will remain until it thaws and runs off the land into streams and rivers. Rain that falls on land will either soak into underground ***aquifers*** or run off into rivers and lakes and eventually back into the ocean. Most rain falls back into the ocean. The water cycle begins all over again when the collected water is once again evaporated.




11 **What is the *last* step in the water cycle before it repeats all over again?**

Ⓐ evaporation
Ⓑ condensation
Ⓒ precipitation
Ⓓ collection

12 **When does water vapor go through the process of condensation?**

Ⓐ after precipitation falls to the ground as rain, sleet, snow, or hail.

Ⓑ when water vapor rises in the atmosphere and begins to cool.

Ⓒ while water runs off into streams, rivers, or and lakes.

Ⓓ before the sun causes it to evaporate into the atmosphere.

13 **Based on the passage, which statement most accurately summarizes evaporation?**

Ⓐ It happens after collection.

Ⓑ It happens during precipitation.

Ⓒ It happens between condensation and collection.

Ⓓ It happens between precipitation and collection.

---

14 **How did the author organize this passage?**

Ⓐ He stated a main idea and provided supporting details.

Ⓑ He related events of a process in chronological order.

Ⓒ He outlined a problem and then gave possible solutions.

Ⓓ He explained a cause and then listed several effects.

---

15 **If the author would have described the water cycle in reverse order, he would have initially explained**

Ⓐ the process of evaporation.
Ⓑ the process of condensation.
Ⓒ the process of precipitation.
Ⓓ the process of collection.

---

# $H_2O$ Cycle Vocabulary/Spelling

Scientists use the following words to describe elements of the water cycle. Knowing the meaning of these words will help you gain a deeper understanding of the processes involved in the cycle. Use a reference source such as your science book or a dictionary to locate the definition of each of these words.

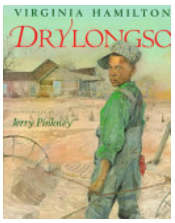
| | Language of the Discipline | Definition |
|---|---|---|
| 1 | **water cycle** | |
| 2 | **liquid** | |
| 3 | **vapor** | |
| 4 | **ice** | |
| 5 | **evaporation** | |
| 6 | **atmosphere** | |
| 7 | **sublimation** | |
| 8 | **transpiration** | |
| 9 | **condensation** | |
| 10 | **precipitation** | |

Continued on next page

# $H_2O$ Cycle Vocabulary/Spelling

| | Language of the Discipline | Definition |
|---|---|---|
| 11 | rain | |
| 12 | sleet | |
| 13 | snow | |
| 14 | hail | |
| 15 | collection | |
| 16 | aquifer | |
| 17 | spring | |
| 18 | dew point | |
| 19 | humidity | |
| 20 | groundwater | |

# Drylongso




Student _____ Date_____

## Section 3: Pgs. 23-33

1. Book Title

## Word Analysis

2. Select a word and find its synonym.

3. Select a word and find its antonym.

4. Select a word with an affix or Greek or Latin root.

5. Locate and copy the definition of the following vocabulary/spelling words.

| | |
|---|---|
| grit (pg. 23) | |
| sunflowers (pg. 24) | |
| reared (pg. 24) | |
| blizzard (pg. 26) | |
| topsoil (pg. 32) | |

6. Select and copy a sentence with an example of figurative language. Is it simile, metaphor, personification, idiom, or hyperbole? (Circle one.)

## Literary Response and Analysis

7. Identify the setting.

8. List the main characters.

9. On page 24, Drylongso says that droughts occur in 20 year cycles. The pattern begins in 1890. Complete the next five numbers in the sequence?

1890, 1910, 1930, 1950, _____, _____, _____, _____, _____

10. Summarize this portion of the text.

11. On page 23, Drylongso commented, “Pa says that if folks would stop plowing where they shouldn’t, the dust would settle down.” On page 24, he adds, “Earth’s not made to heave up so, but to lie down. The ground stands up to teach folks not to plow the grasslands.”

A. How might plowing up too much grasslands contribute to dust storms?

_____

_____

_____

_____

_____

_____

B. What solution does Drylongso offer in order to help hold down the soil? Do you think it’s a good idea?

Why or why not?_____

_____

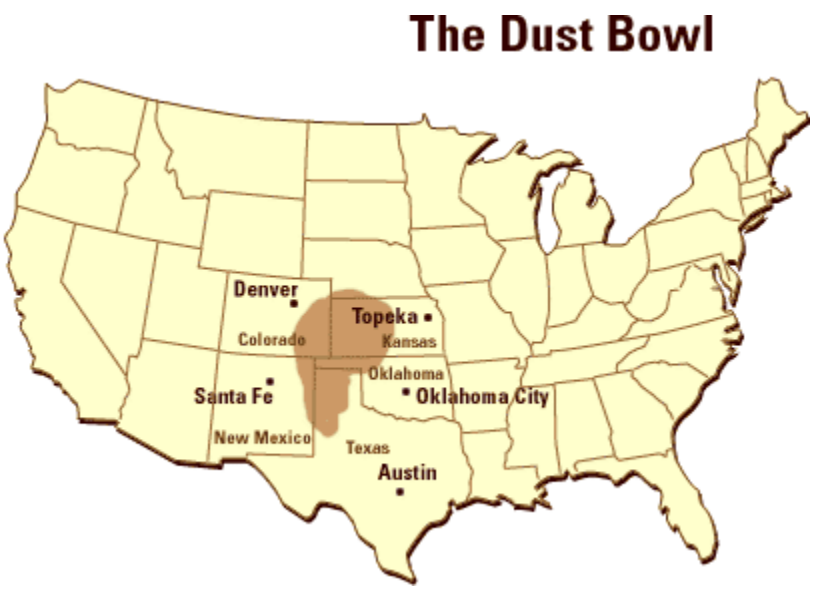
_____

_____

_____

12. **Social Studies Connection: "The Dust Bowl"**

During the 1930s, not only was America in the midst of the Great Depression, but it was also suffering a terrible drought. The Dust Bowl was the name given to the Great Plains region which had been particularly devastated by the drought. The 150,000 square-mile area included the states of Kansas, Colorado, Oklahoma, Texas, and New Mexico. The destructive combination of high winds, little rainfall, and light soil created severe dust clouds, called "black blizzards." The winds were able to easily pick up the loose topsoil and swirl it into dense dust clouds because the soil lacked the strong root system of the native grass as an anchor. Much of the grasslands had been plowed up by farmers. From 1934-1937, frequent dust storms wreaked havoc, choking cattle and pasture lands and driving 60 percent of the population from the region.




In response to the Dust Bowl disaster, the federal government created the Soil Conservation Service in 1935 to promote farm rehabilitation. The agency instructed the farmers to plant trees and grass to anchor the soil and to allow portions of farmland to lie fallow each year so the soil could regenerate. The government even used taxpayer money to purchase land to prevent farmers from plowing it up to plant crops.

The following links to PBS and Discovery have videos, activities, and useful information about the Dust Bowl for further investigation:
http://www.pbs.org/kenburns/dustbowl/watch-videos/#2219206510
http://news.discovery.com/videos/earth-legacy-of-the-black-blizzards.html

What comparisons can be made between the challenges faced by Lindy's family in the story Drylongso and the dustbowl region in the 1930s?

_____

_____

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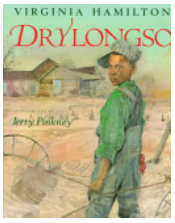
_____

_____

# Drylongso




Student _____ Date_____

## Section 4: Pgs. 34-44

1. Book Title

## Word Analysis

2. Select a word and find its synonym.

3. Select a word and find its antonym.

4. Select a word with an affix or Greek or Latin root.

5. Locate and copy the definition of the following vocabulary/spelling words.

| | |
|---|---|
| dowsing (pg. 36) | |
| tremble (pg. 37) | |
| cultivate (pg. 40) | |
| soil (pg. 43) | |
| kin (pg. 43) | |

6. Select and copy a sentence with an example of figurative language. Is it simile, metaphor, personification, idiom, or hyperbole? (Circle one.)

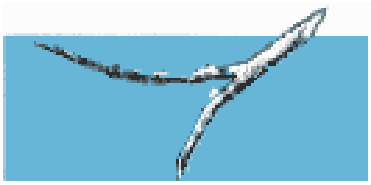
## Literary Response and Analysis

7. Identify the setting.

8. List the main characters.

9. Summarize this portion of the text.

10. In this section, we read that Drylongso is attempting to locate underground water by using a Y-shaped stick called a dowser or divining rod. Which story details in this section of our reading would support the prediction that Drylongso's efforts to find underground water will succeed?



The following scientific article about dowsing was written by Dr. Mike Strobel, Deputy Director of the USGS Nevada Water Science Center.

# Let's Talk Water – Dowsing or Water Witching
# by Dr. Mike Strobel

Dowsing, or water witching, refers to searching for ground water using divining rods or other such tools. This practice has been around for centuries and many people firmly believe in its validity. Most ground-water hydrologists and other scientists completely dismiss it as a hoax and a scam. I feel it's worth exploring both the facts and fiction associated with dowsing.

The practice of dowsing usually involves the use of divining rods, which typically are two wooden sticks or metal rods bent in some fashion and held in close proximity to one another. Dowsers are also known to use pendulums for locating buried objects and ground water. The idea is that the diving rods or pendulum will be charged with static electricity from the user's body, and when an object of high electrical conductance is crossed, the rods or pendulum will react by pulling downward, crisscrossing each other, or in the case of the pendulum, begin rotating in a circular path.

Different dowsers believe certain objects work better than others, and this seems to depend on the individual. Some prefer wires, others like rods or pipes, some use only willow or other wooden instruments, and some like the pendulum method. Not everybody seems to have the ability to be a dowser, whether it's because of different electrostatic energy in some people or because some are more sensitive to these signals.

So, does it actually work? That is a matter of opinion and, to a certain degree, faith. There is strong evidence that humans can detect changes in an electromagnetic field. The human body generates electric pulses (our nervous system) and we seem to be cognizant of changes in electric current around us. We have all observed the ability for a person to generate static electricity (just walk across a carpeted floor in your socks and touch something metal to experience this). But how this energy and sensitivity can be harnessed to detect ground water may be a difficult bridge to cross.

Most ground water occurs in pore spaces in between sediments or in rock. The top of an aquifer or the water table generally is a relatively flat, broad surface. To walk across a field and say that one place is better for finding water than another is unrealistic when the water underlies an entire area. The issue here is not so much where to drill, but rather how deep.

Many people have this idea of underground rivers and lakes. This really is not a valid concept except for areas of karst (caves), and even then not very common. Maybe some of the misconception comes from the reference to ground-water reservoirs, which really refer to aquifers (and again, these are usually saturated sediments and rocks). So, if someone feels they can tap into an underground river, in most cases they are quite mistaken. However, ground water does tend to occur in fractures in bedrock. Sometimes, if the bedrock is very tight, such as a granite or basalt, unless you drill into fractures, you probably won't get much water, if any. However, the fractures can provide variable amounts of water to wells that intersect the fractures. This might be where people get the idea of underground rivers, because wells that don't intersect fractures might be dry whereas other wells adjacent to these dry wells might intersect fractures and produce water. People sometimes envision this as "hitting an underground river."

The question is whether dowsers can detect fractures or karst at depth. Various studies have demonstrated that some dowsers (I say "some" because like any profession, you have individuals that are successful and some that aren't) can detect buried pipelines, septic tanks, cables, and other such shallow objects. Some people would argue that this is because of the electromagnetic energy (conductivity) of the buried objects being felt by the dowser. Others would argue that any buried object lies below a surface that has been disturbed in the past (when the object was buried) and the dowser is just sensitive to small undulations or changes in the land surface above the object. I can't say for certain which accounts for the documented successes, but maybe it depends on the dowser.

Deeper variations in the geology, such as fractures or karst occurring hundreds (or more) feet below the surface is a different story. Most scientific equipment with very sensitive capabilities have difficulty identifying fractures and small amounts of karst at depth, and this becomes more difficult with increasing depths. Scientists use techniques such as seismic reflection and ground-penetrating radar to search for such features. The accuracy (and success for identifying smaller features) is limited and usually depends on the energy source applied (such as seismic waves or radar). These energy sources are much larger than the static electricity produced by a human body. And arguably, the capability for these sensitive instruments to detect and identify variations in the subsurface exceeds the capabilities of human senses.

Many people feel that human senses are actually keener than we have measured and that there may be many aspects of the human mind and perceptions that we don't understand. Whether this transfers to an ability to detect variations in deep subsurface, I guess that remains debatable.

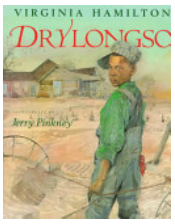
In summary, the validity of dowsing depends on the viewpoint of the individual. As I pointed out, there may be some evidence to support dowsing in shallow conditions, but it's highly questionable as to the accuracy for deeper features. In most places, ground water occurs as a planar surface and it makes no difference if one drills in one location verses 100 feet away. In the case of fractures and karst, most precise scientific instruments have difficulty identifying specific features at great depths, so it is questionable how much better human senses might be in locating these conditions. So, most scientists do not believe dowsing is valid. But there is much we don't understand about the world and about the human body (if we understood it all, us scientists would be out of jobs), so to discount dowsing entirely at this point would be premature and additional research would help answer many questions. I guess what one believes is a personal choice and a matter of faith in one system or the other.

If you have questions about water, please write to me in care of the Ely Times or at mstrobel@usgs.gov.

The following links were written by Dr. Strobel and contain more valuable information on the topic of water:
http://nevada.usgs.gov/barcass/articles/Ely15.pdf
http://nevada.usgs.gov/barcass/strobel_articles.htm

11. Clean water is a vital resource. Some people claim that they can find hidden underground water by dowsing. Based on your reading, do you believe that people really can use sticks or wire to locate underground aquifers? Make sure to support your opinion with clear reasons and information. Refer to the prior passages on the topic of underground water and dowsing.

# Drylongso




Student _____ Date_____

## Section 5: Pgs. 45-54

1. Book Title

## Word Analysis

2. Select a word and find its synonym.

3. Select a word and find its antonym.

4. Select a word with an affix or Greek or Latin root.

5. Locate and copy the definition of the following vocabulary/spelling words.

| | |
|---|---|
| spring (pg. 46) | |
| trench (pg. 46) | |
| canal (pg. 46) | |
| drifts (pg. 49) | |
| wandered (pg. 52) | |

6. Select and copy a sentence with an example of figurative language. Is it simile, metaphor, personification, idiom, or hyperbole? (Circle one.)

## Literary Response and Analysis

7. Identify the setting.

8. List the main characters.

9. Summarize this portion of the text.

10. Award winning illustrator, Jerry Pinkney, helps bring Drylongso to life through his vibrant watercolor pictures. You can learn more about him by viewing the short interview at the following link: http://www.readingrockets.org/books/interviews/pinkneyj/. Choose a part of Drylongso that stands out to you and try to bring it to life with your own illustration. Make sure to be original and do not simply copy one of the existing pictures.

## Extended Learning Opportunities / Performance Tasks

**"PowerPoint Summary of the Folktale"**

1 **Create a PowerPoint presentation to share with the class which summarizes the story Drylongso. Make sure to include the following components of a good summary:**

- **setting**
- **characters**
- **plot (problem, climax, resolution)**
- **what is the theme or author's message**

**The PowerPoint should have a minimum of 10 slides, and it should be both informative and visually appealing for the audience.**

**"Illustrator & Artistic Genre Study"**

2 **The illustrator of Drylongso, Jerry Pinkney, used watercolors to bring the scenes to life. Create a watercolor poster which illustrates one of the scenes from the folktale. Make sure to be creative, original, and integrate artistic elements such as perspective. Then read another story which was illustrated by Pinkney, such as Black Cowboy, Wild Horses. Write an essay which describes the artistic similarities you see between the illustrations in Drylongso and the illustrations in Pinkney's other works? What do you like most about his illustrations?**

**"How the Water Cycle can Save your Life"**

3 **Drylongso was able to save Lindy and her family by locating underground water. Similarly, the United States military trains its soldiers how to obtain fresh drinking water from the air and ground by creating a solar still. In fact, the U.S. Air Force makes sure that its pilots have the necessary materials to build a solar still in case they crash and have to survive on their own. Use a reference source or the internet to research solar stills. Prepare a written report about solar stills which contains at least the following elements:**

- **purpose of a solar still**
- **required materials**
- **the construction process**
- **images and diagrams**

**"Desert Farming"**

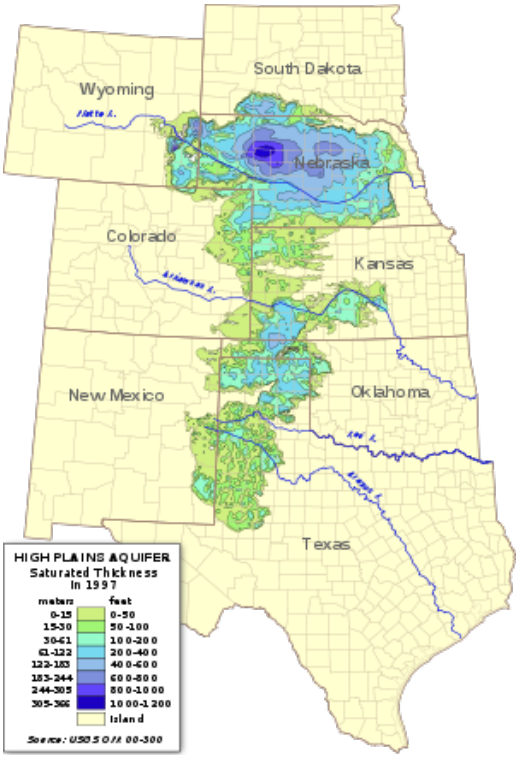
4 **Lindy and her family were able to save their crops by creating a canal for irrigation. Similarly, the Imperial Valley is located in the harsh California low desert, yet it has a thriving farming industry. This is only possible because of the All American Canal, which brings fresh water to the farmers' fields. Use reference sources and the internet to research how farming in the Imperial Valley is made possible by the All American Canal. Be sure to include:**

- **description and map of location and geographical features of the Imperial Valley and the All American Canal**
- **list of crops that are grown there**
- **the size of the farming industry in this region**
- **the All American Canal (when was it built, where does it get water from, etc.)**
- **controversial issues surrounding Imperial Valley farming and the All American Canal**
- **your opinion about whether farming in this region is a good idea or not**

**Current Issues Connection: "Nebraska Farming and the Ogallala Aquifer"**

5 **One of the largest bodies of water in America is actually an underground aquifer, named the Ogallala Aquifer. Nebraska is one of America's most important farming states, and it relies heavily on water that is pumped from the Ogallala. This is especially true during times of drought. The following link has a video which will help you see how farmers rely on this aquifer:**
http://www.iptv.org/mtom/story.cfm/feature/9706/mtom_20120720_3747_feature/video
**After researching the topic, write a short report with at least the following elements:**

- **complete description of the Ogallala Aquifer**
- **the primary crops that are grown in Nebraska and the impact of Nebraska farming on America and the world**
- **current issues or trends related to pumping water out of the Ogallala**
- **steps being taken to make sure the aquifer isn't pumped dry**
- **a map which shows the states that are impacted by the Ogallala**




**"Water Cycle"**

6 **Create a mural, poster, or diorama which includes the elements of the water cycle. Make sure to label each step. Make sure to be accurate, be complete, and be creative.**

**Field Trip Opportunity: "Big Morongo Canyon Preserve"**

**The Big Morongo Canyon Preserve is located in California's Mojave Desert, near Joshua Tree National Park. The unique geography has created a desert oasis. Underground water is forced to the surface, thereby creating a riparian environment. The area is managed by the Bureau of Land Management (BLM), and admission is free. More information can be obtained by looking at their homepage at www.bigmorongo.org.**