

 J. Black Vocabulary Activity

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| Created by: IRRC | Time Required: 1 hour |
| Subject: English/ Science | Grade Level: 3+ (adaptable) |

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| Overview | Students will take a vocabulary pretest, watch a video clip about a specific area of rangeland in Idaho, take notes on a KWL worksheet, play a vocabulary game, then take a vocabulary posttest. |
| Goal(s) & Objective(s) | Students will use context to identify the meanings of unfamiliar words |
| Materials: | * Classroom computers (per student or in partners)
* Copies of pretest/posttest
* Copies of KWL worksheet (or students may copy onto their own paper from a projector or teacher example)
* Copies of vocabulary puzzle (optional)
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| Teaching Activities:*Instructional Approaches/Strategies* | Introduction:1. Give students the online vocabulary quiz- Joseph Black and Sons: <http://www.quia.com/quiz/3179221.html>
2. Watch video of range story posted on “Life on the Range” website: <http://www.lifeontherange.org/range-stories/joseph-black-and-sons.asp>

 Procedures:1. Hand out the KWL (what you know, want to know, and learned) worksheet to students or have students copy the table into their notebook from an overhead or computer projection. Give an example of how a KWL chart works (i.e. grass (a word they know) Riparian (a word they want to know) they will fill out the “learned” column at the end of this lesson.
2. Present vocabulary words to students; tell them they will use these words to fill out the KWL chart. You may have to watch the movie more than once.
3. Have students listen to the video clip from “Life on the Range” for the KWL vocabulary. Fill out the chart with students with the words that they learned/heard from the movie clip.
4. If desired, have students check their definitions with classroom dictionaries or online (students will be able to see correct definitions in the practice activities)

Have students complete one or both of the following:1. Hand out the Crossword Puzzle that corresponds with the vocabulary in the KWL chart & movie clip.
2. Have students go to the website below to play the concentration game, use the flashcards, or play the matching game:

 Joseph Black and Sons: <http://www.quia.com/jg/2223294.html>1. (**Grades 4 +)** Have students complete movie worksheet
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| Assessment: | Check student understanding by taking/correcting the vocabulary posttest. Have students compare with their pretest. |

**Attachments:**

Crossword Puzzle

Vocabulary Pretest & Test with Key

Video Questions

**Extensions:**

1. Follow up Erosion Activity (grades 6+) posted on website.

# Joseph Black and Sons Vocabulary Puzzle

Name

**Across**

2. a level area of land raised above its surroundings

6. living things and their environment

7. (two words) located on the bank of a river, stream, or lake

8. returning to a previous healthier condition

9. made of many different species of living things

**Down**

1. food, shelter, water, and space animals need to survive

3. careful, responsible management

4. emphasizing a complete system instead of its parts

5. (two words) active and continuously changing

**Word Bank**

Holistic Biodiversity

Ecosystem Plateau

Riparian Area Habitat

Dynamic System Stewardship Restoration

# Joseph Black and Sons Vocabulary KWL

Name

Word List: Holistic, Biodiversity, Ecosystem, Plateau, Riparian Area, Habitat, Dynamic system, Stewardship, Restoration

|  |  |  |
| --- | --- | --- |
| K | W | L |
| Which words are you pretty sure you KNOW the definitions for? Write them here, with a definition of what you think they mean. | 1. Which words do you WANT (need) to know? Leave some space after each word so you will have space to line it up with its definition in the last column.
 | 1. Which words did you LEARN the meaning of by watching the video and reading the article? Write the meaning of each word here.
 |

# Joseph Black and Sons Vocabulary Pretest

Name

1. Restoration a. Living on or located on the bank of a river, stream, or lake

 b. Looking at a complete system instead of its parts

1. Riparian c. The careful and responsible management of something
2. Biodiversity entrusted to one’s care
3. Holistic d. Active and continuously changing
4. Ecosystem f. A land area with a level surface raised above nearby land
5. Plateau g. Bringing back to a former condition
6. Stewardship h. Composed of many different species of living things
7. Dynamic i. The way a group of living things and their environment work

as a unit

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as a unit

# Joseph Black and Sons Vocabulary Pretest Key -

Name

1. Restoration g a. Living on or located on the bank of a river, stream, or lake

 b. Looking at a complete system instead of its parts

1. Riparian a c. The careful and responsible management of something
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 work as a unit

# Joseph Black and Sons Key - Test

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1. Dynamic g a. Composed of many different species of living things

 b. Looking at a complete system instead of its parts

1. Riparian h c. The careful and responsible management of something
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work as a unit.

# Joseph Black and Sons Video Questions

1. What did Chris Black want to prove?
2. What management technique did he use?
3. Which of the following is a good description of holistic management?
	1. Managing how deep people dig holes for water
	2. Managing cattle in Africa
	3. Management tool that gets the most out of the land when grazing cattle
	4. Management tool that uses grazing to increase biodiversity and ecosystem health
4. Where has Chris Black used holistic management?
5. Holistic management is used to manage
	1. Cows
	2. Wildlife
	3. The whole ecosystem
	4. Digging
6. Give an example from the video of an active management technique
7. How does Chris Black measure range health?
8. Based on the video, what do you think “riparian” means?
9. Why do you think it’s important to have different ages and species of plants along a stream?

**After watching the video, read the following:**

During a tour of the Pole Creek area off of Mud Flat Road, Black showed how his grazing management has al­lowed Pole Creek to recover into a thriving ecosystem. In the early 1990s, Pole Creek was grazed year-round, **and it had turned into a gravel bed with deeply incised banks and not much vegetation**. He changed the timing to grazing the area in the spring when the cattle are being herded toward Dickshooter Ridge, and then it is rested all summer to allow the plants to grow back, and then he grazes it again in the fall on the way home.

"As long as you're in there for a short time, graze that plant off and get out and provide the recovery period it needs, then the plants will be invigorated and come to their full biological potential," he says.

"This is kind of a perfect riparian scenario," Black says as he shows the diversity of plant life growing next to Pole Creek. "You have a pool of water and overhanging banks with sedges ... it makes for good habitat for fish and other animals. You've got diversity in the age group of willows, and seeing a dynamic system of different species .... Diversity." Black's management techniques have paid off in solid weight gains for his cattle, which means higher income, and he received a national stewardship award from the BLM in 2008.

1. Look up the definition of “incised” and write it here:
2. What natural process caused the “deeply incised banks”
3. Sunlight
4. Volcanic uplift
5. Erosion
6. Geothermal pressure
7. What did Chris do to improve the conditions on Pole Creek?
	1. Keep cattle from grazing near it
	2. Changed the grazing to short times in spring and fall only
	3. Installed fences
	4. Planted shrubs every year in spring and fall
8. Why did the changes Chris made have a positive effect on Pole Creek?
	1. They allowed the plants to grow all year without being grazed
	2. They reduced the amount of gravel in the creek
	3. They provided chemical fertilizer for the plants
	4. They provided plants with a recovery period
9. Look up and define the word “riparian” in the space below: