

CHAPTER 5 - LAND RECLAMATION - PRIMARY

Title: Land Reclamation

Level: Primary, Intermediate

Time: 1-2 Days

KERA Goals: 2.5

Objective: Students will be able to identify benefits of land reclamation while reviewing math and language skills.

Materials: Duplicated worksheets from the following info

Background Information: What is land reclamation? Reclamation is returning the land to the way it was before mining. After the coal has been removed by surface mining the reclamation process begins. The overburden is returned to the same place from which the coal was taken. A bulldozer smoothes the land. The topsoil is replaced and the area is replanted.

Some examples of reclamation projects include using the land for ball diamonds, parks, campgrounds, wildlife preserves, lakes, trails, golf courses, pasture and farmland. Driving past these places, you often would not be able to tell the reclaimed land from land that had never been mined.

VOCABULARY:

reclaim

reclamation

overburden

Activities

1. COAL=SUM DIFFERENCE

Reclamation

2. ANIMAL ENERGY PHRASE

Land is put back into good shape after the mining of the coal is all done.

3. COAL PHRASE-OUT

After reclamation of mined land is completely finished, people are not able to see any evidence that mining activity ever took place there.

1. A Math Magic Word Puzzle

COAL = SUM DIFFERENCE

U 15	I 16	N 17	M 18	L 19	N 20	E 21	L 22
O 23	T 24	R 25	C 26	D 27	E 28	I 29	N 30
D	G	O	R	E	A	O	T

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31	32	33	34	35	36	37	38
I	R	A	O	U	R	C	D
39	40	41	42	43	44	45	46
P	N	D	E	T	L	T	U
47	48	49	50	51	52	53	54
N	U	S	C	R	C	I	A
55	56	57	58	59	60	61	62

14	36	41	47	22	36	19	37	44	51	62
+11	+14	+17	-28	+19	-18	+17	+16	-28	-18	-14

DIRECTIONS: Add or subtract the problems and then find the answers in the letter code. Put the letters in the blanks. For example, an answer of 25 has the letter R in the letter code. Write a sentence correctly using the word spelled by your answers.

Answer to Coal = Sum Difference
RECLAMATION.

14	36	41	47	22	36	19	37	44	51	62
+11	+14	+17	-28	+19	-18	+17	+16	-28	-18	-14
25	50	58	19	41	18	36	53	16	33	48

2. "Animal Find" Word Phrase

ANIMAL ENERGY PHRASE

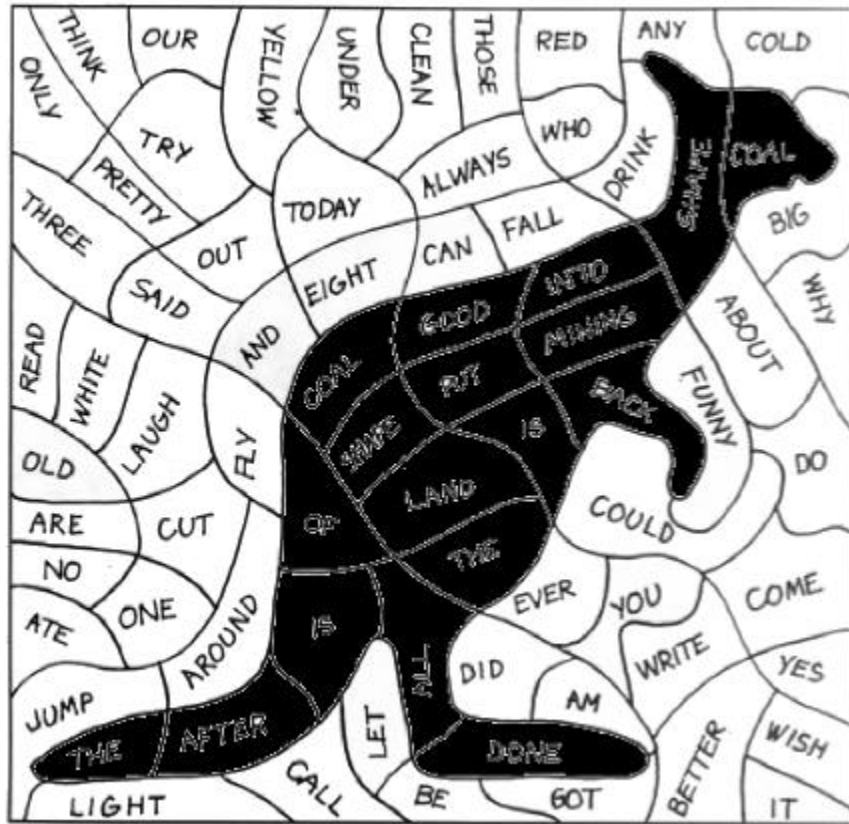
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LAND IS PUT BACK INTO GOOD SHAPE AFTER THE MINING OF THE COAL IS ALL DONE.

DIRECTIONS: Color all the shapes in the puzzle which have words that are in the sentence and discover what animal is in the puzzle. Some words appear more than once.

Answer to Animal Energy Phrase:



3. A Phrase Out Word Puzzle

COAL PHRASE-OUT

DIRECTIONS: Search for all the words in the energy sentence. You will find them across, down or slantwise. Four of the words have already been found. As you find each word in the puzzle, cross it out in the sentence. All of the spaces not used for words in the sentence will spell the word ENERGY. There is also an additional energy word in the puzzle that is not in the sentence. Can you find the word BITUMINOUS?

Challenge: Find out what information about bituminous coal and write a report.

E	N	E	A	R	E	R	S	R	G	Y	E	N	E
R	G	Y	E	L	N	E	E	R	A	G	Y	E	
N	T	E	P	R	E	V	I	D	E	N	C	E	G
Y	E	O	N	E	E	R	G	Y	O	Y	N	Y	N
E	E	M	O	E	F	I	N	I	S	H	E	D	Y
P	N	I	R	K	L	G	T	Y	D	E	N	R	Y
G	Y	N	E	N	E	A	R	E	G	Y	E	T	N

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E	B	I	T	U	M	I	N	O	U	S	I	E	O
E	N	N	C	A	Y	I	O	D	G	V	S	A	R
P	R	G	L	N	M	E	T	Y	I	R	E	F	G
N	L	C	O	M	P	L	E	T	E	L	Y	T	Y
E	E	A	F	E	N	E	C	R	B	R	A	E	E
R	E	R	C	G	Y	A	N	A	E	H	N	R	Y
R	G	T	H	E	R	E	Y	E	T	N	E	R	G

AFTER RECLAMATION OF MINED LAND IS COMPLETELY FINISHED, PEOPLE ARE NOT ABLE TO SEE ANY EVIDENCE THAT MINING ACTIVITY EVER TOOK PLACE THERE.

Answer for Coal Phrase-Out

E	N	E	A	R	E	R	S	R	G	Y	E	N	E
R	G	Y	E	L	N	E	E	R	A	G	Y	E	
N	T	E	P	R	E	V	I	D	E	N	C	E	G
Y	E	O	N	E	E	R	G	Y	O	Y	N	Y	N
E	E	M	O	E	F	I	N	I	S	H	E	D	Y
P	N	I	R	K	L	G	T	Y	D	E	N	R	Y
G	Y	N	E	N	E	A	R	E	G	Y	E	T	N
E	B	I	T	U	M	I	N	O	U	S	I	E	O
E	N	N	C	A	Y	I	O	D	G	V	S	A	R
P	R	G	L	N	M	E	T	Y	I	R	E	F	G
N	L	C	O	M	P	L	E	T	E	L	Y	T	Y
E	E	A	F	E	N	E	C	R	B	R	A	E	E
R	E	R	C	G	Y	A	N	A	E	H	N	R	Y
R	G	T	H	E	R	E	Y	E	T	N	E	R	G

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