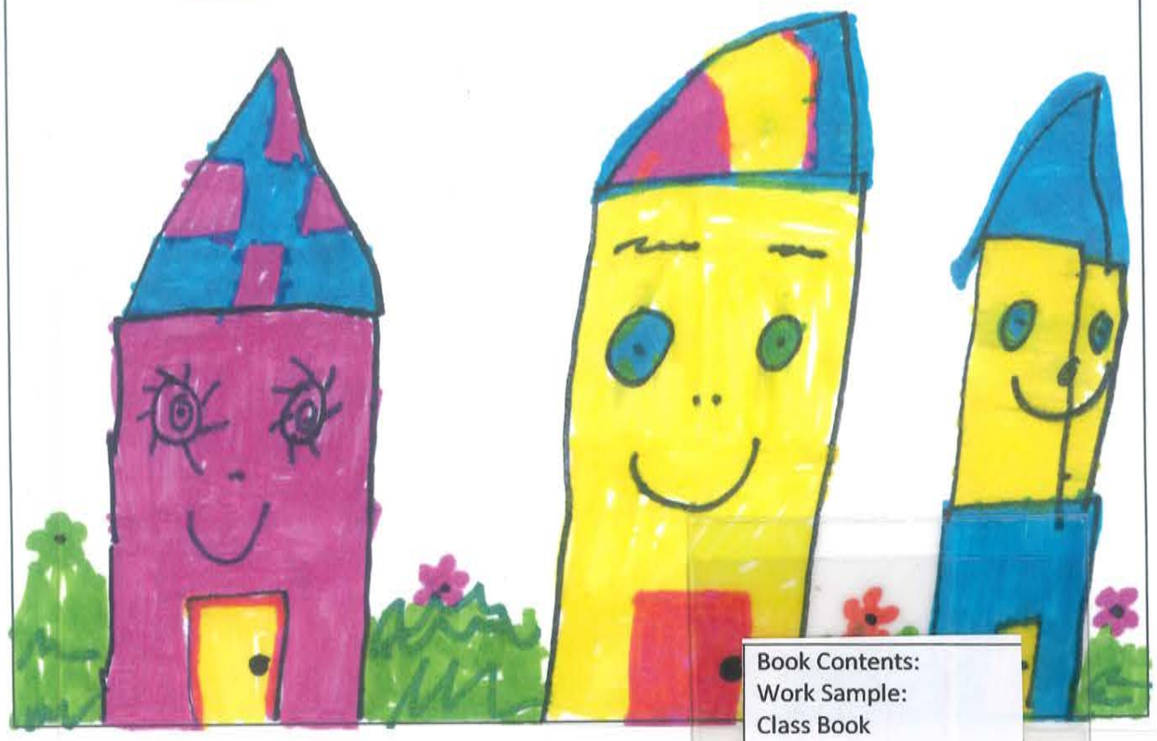
01-10-17

Fueling A Brighter Tomorrow

01-10-17

The Little Coal Town That Could...



Book Contents:
Work Sample:
Class Book

01-10-17

22

The Little Coal Town That could...

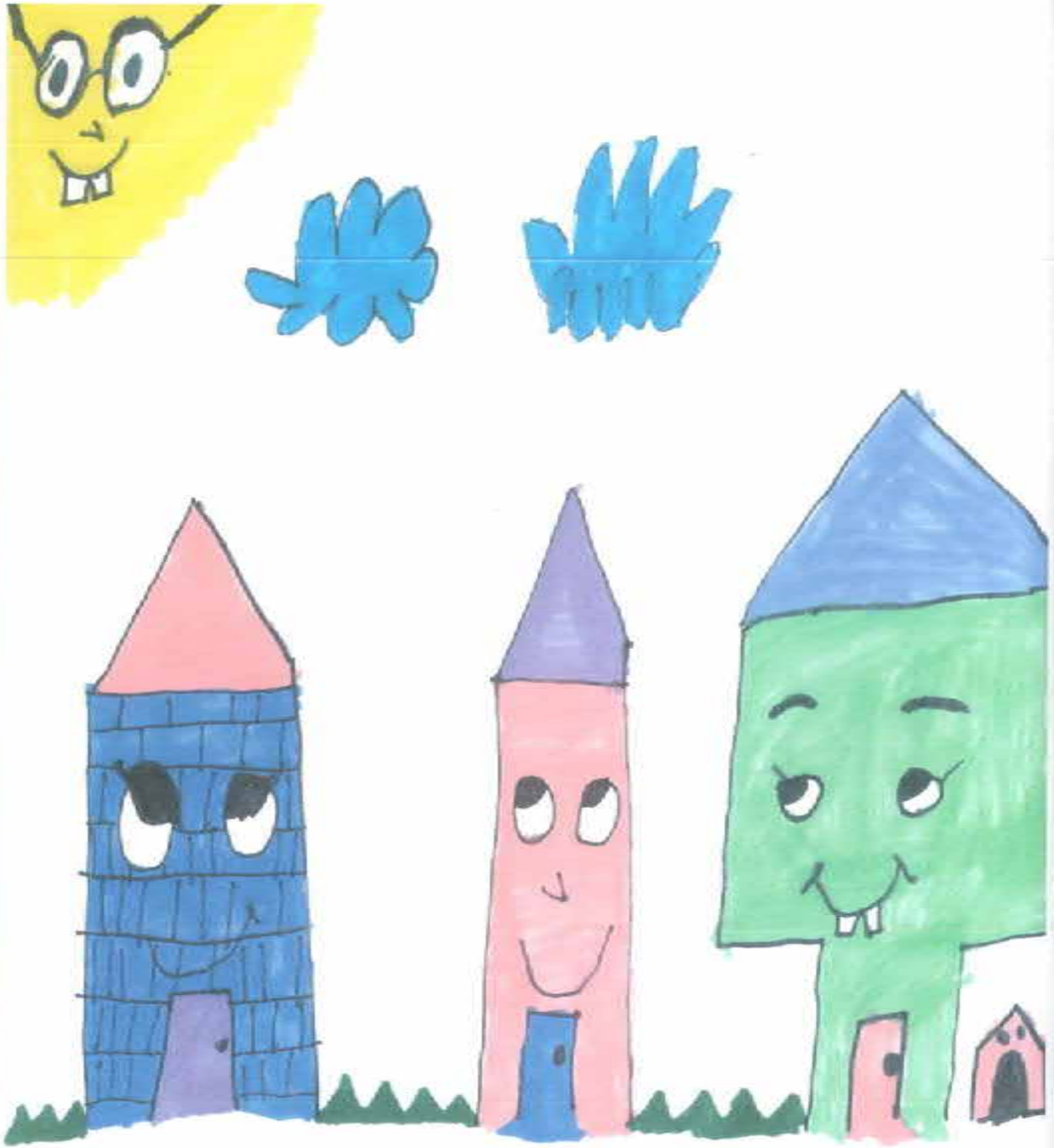
BY

Inspired by a class favorite:
The Little Engine That Could
by Watty Piper

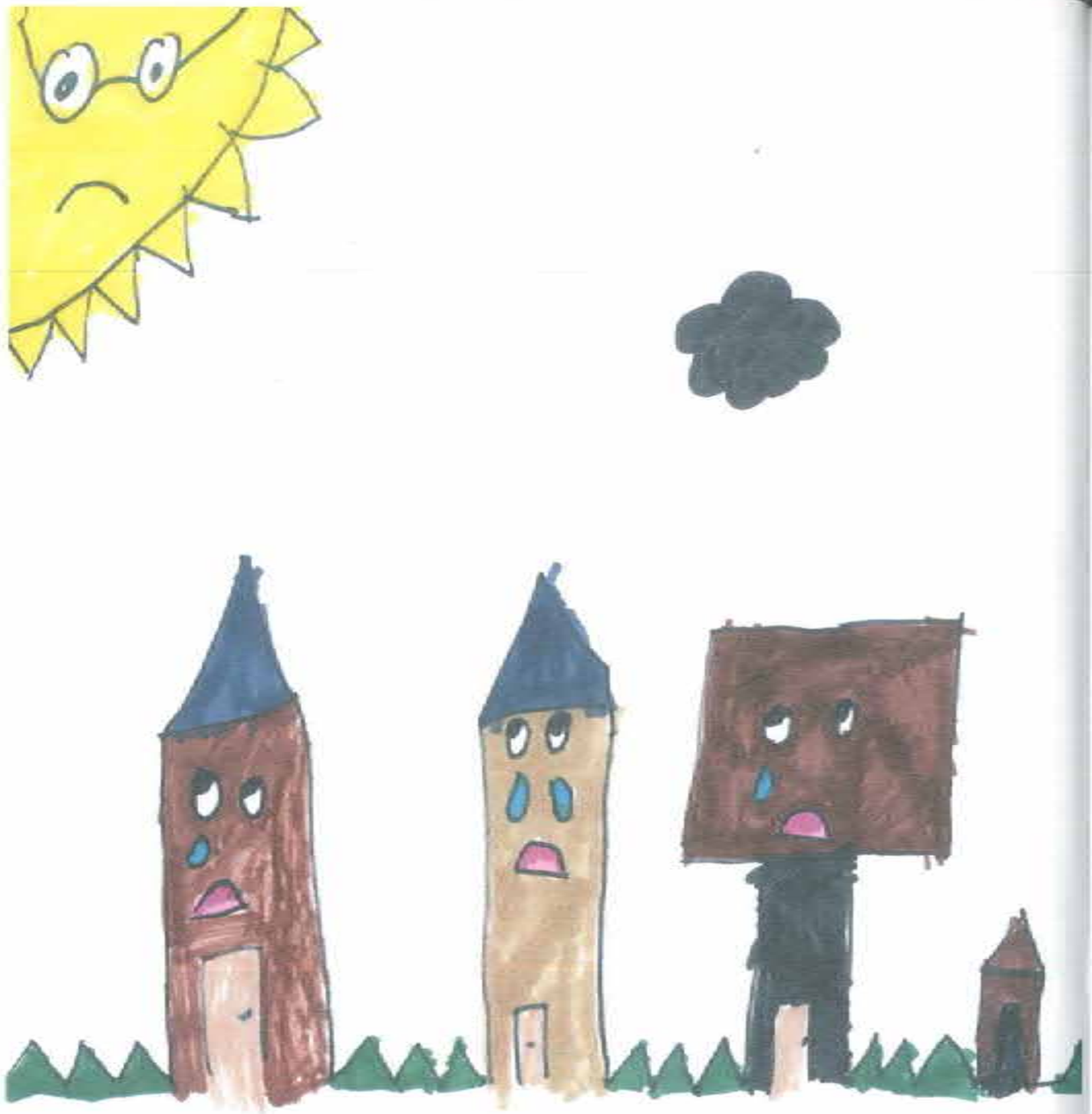
DEDICATED TO

Future residents of Our Little Coal Town

Studentreasures
PUBLISHING
1345 SW 42nd Street
Topeka, KS 66609
Studentreasures.com



Once upon a time nestled in the mountains, there was a little coal town. It was a happy little town with roots that ran as deep as an underground mine. For many years ago, the little town came to life when people realized that it was richly stocked with an abundance of black gold. The little town was quickly established, as coal camps were built and families moved in. The little town was happy as it prospered and grew. Businesses were opened, schools were built, and the economy boomed. The residents of the town made it their own by bringing in their talents, interest, and strengths. The little town was known for coal. The townsfolk worked together to assure that the little coal town was a happy place where everyone looked out for one another. For it was a place called home, and they wanted it to stay that way for many generations to come.



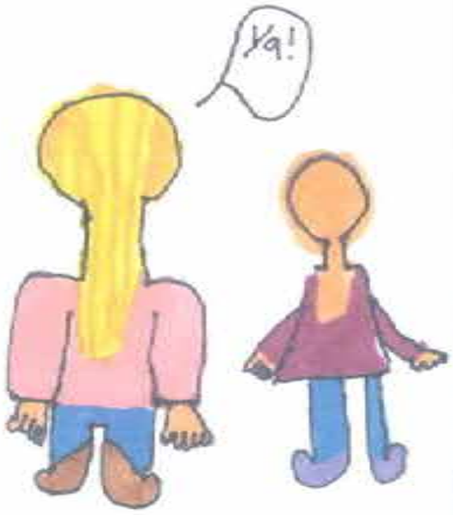
Days turned to months and months to years. The sun would come up and go down over the coal town. Black gold rolled from the mountains. A railway was built, as was highways and roads. All of which helped to make the coal town stronger and stronger. The little coal town not only supplied for it's folk but for other towns, States, and even countries. Technology advanced and assisted the little coal town in becoming connected with the world. The little coal town continued to prosper. It provided coal for electricity as well as other resources and it couldn't imagine life any other way.

Time went on and new technologies brought ideas of alternative energy sources. Coal became harder to mine. Many of the mines within the little coal town couldn't withstand all that was brought their way. One by one they began closing. Townsfolk were moving to find work. Buisnesses were being shut down. A lot of changes were going on in the little coal town and this made the town really sad.

President Office

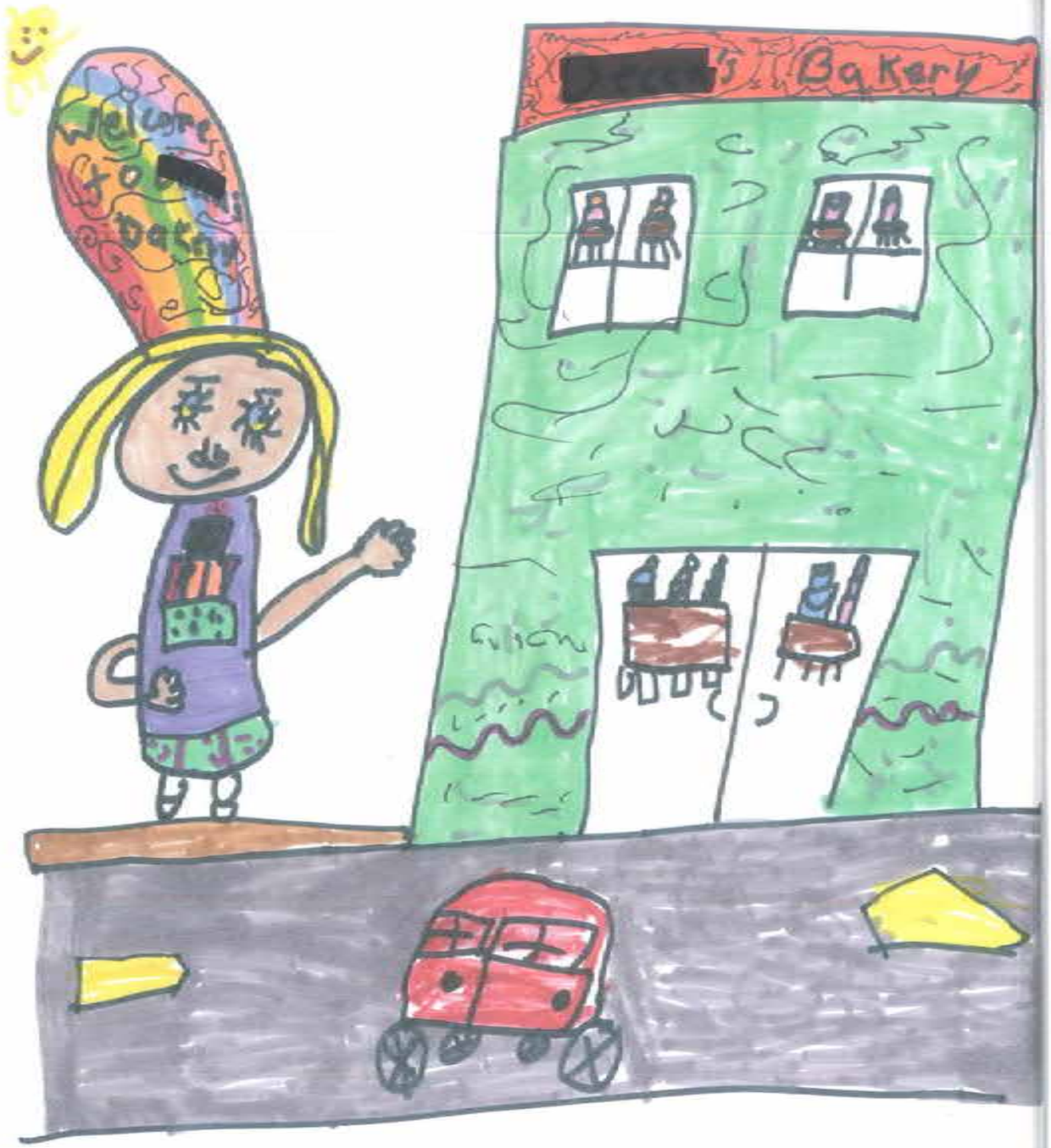
The children who lived in the little coal town realized that something needed to be done. The little coal town was built on much more than coal but on family values, morals, and traditions. The children disliked seeing the little coal town so sad. They knew that they were the future of the little coal town. They knew that their talents, interest, and strengths along with assets from the coal town could build up their economy and make their town happy again.

I will help you little coal town. I will be the president of the United States of America. I will put coal mines back in buisness and help make coal cheaper to mine. This will help you little coal town.



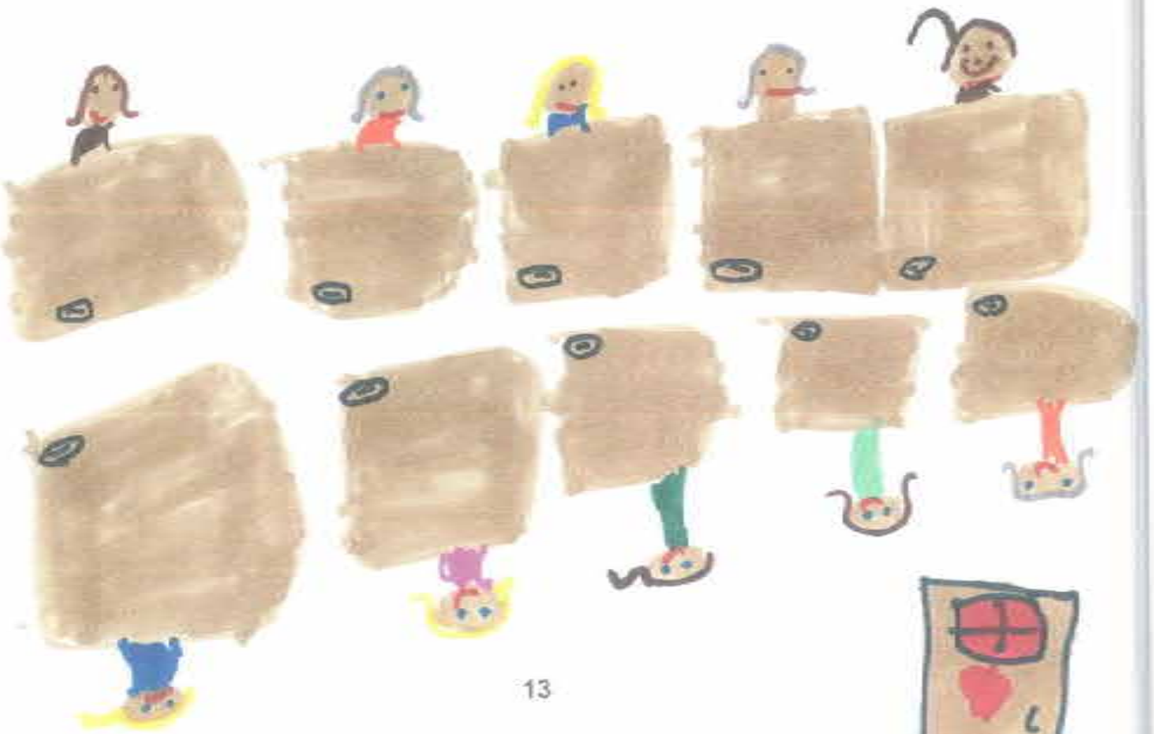
I will help you little coal town.
I will be Vice President of
the USA. I will help you by
making the president make coal
cheaper. Together we will put
coal mines back in business. We
will make the USA great again.
I will help to give permits
to make old mines become
new businesses. This will bring
new jobs into our area. It will
bring lots of money to our state.
This will help you little coal town.

I will help you little coal town. I will be a teacher. I will help by teaching My Students' more about coal. I can teach them how to use their talents and resources from coal like old land to bring new jobs to our community. I can teach them how important that coal is. This will help you little coal town.



I will help you little coal town. I will be a baker. I will help you by selling the world's best sweets and selling them in my bakery. My bakery will need power and water. Coal makes the power for my bakery. Coal is a really good resource for my bakery. I will help to conserve the energy by turning off the lights and ovens when I am not using them. This will make our coal supply last longer for our community. This will help you little coal town.

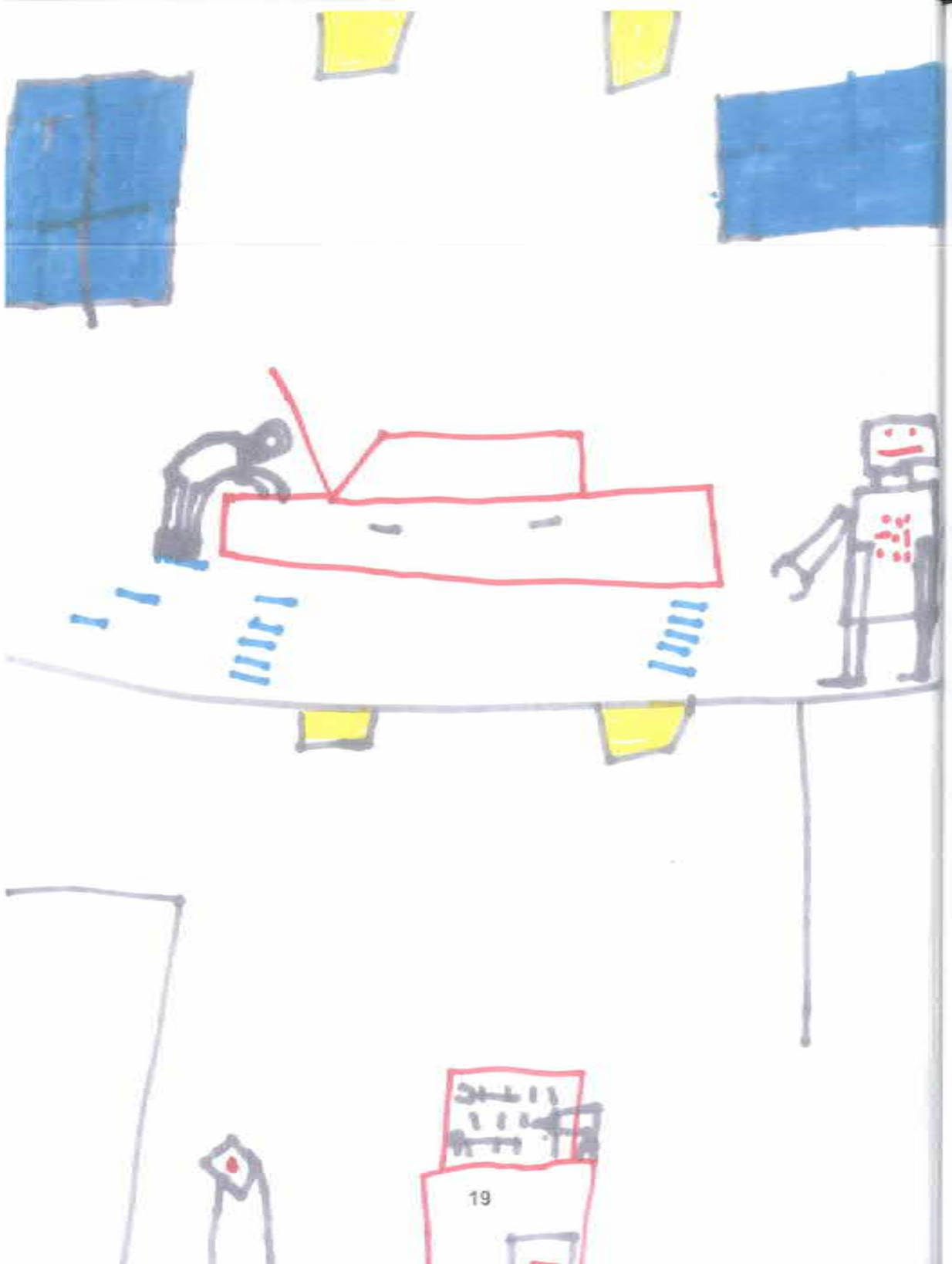
1 2 3 4



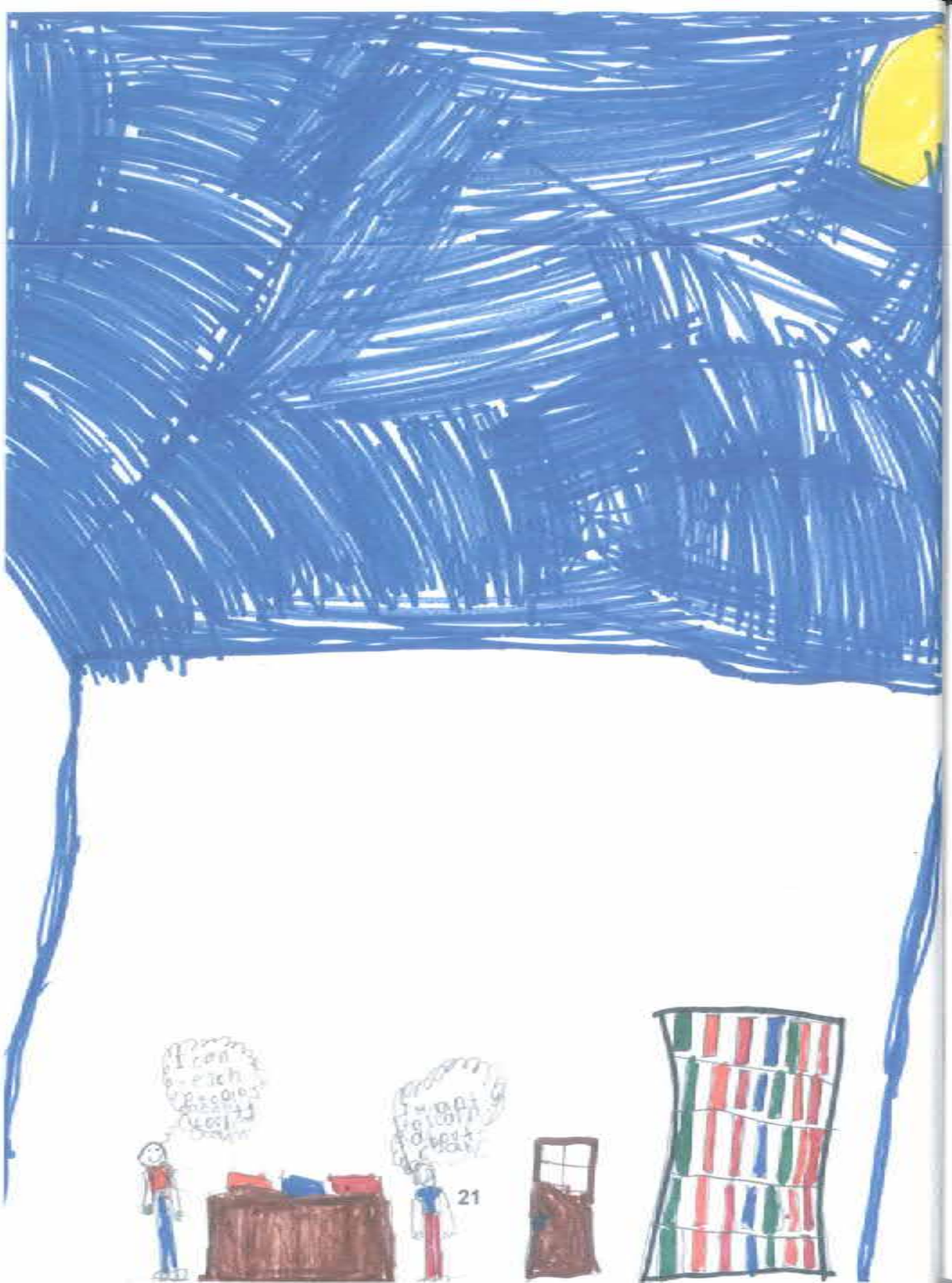
I will help you little coal town. I will be a teacher. I will help you by teaching kids more about coal. I will teach the kids that once you use coal it is not able to be used again. It is important to teach kids how to save electricity so that we can save more coal. I can also teach kids other uses of coal. This will help you little coal town by bringing more people to live here and make more jobs.

I will help you little coal town.
I will be a coal miner.
I will help you by mining
coal. This will help to make
electricity and make more jobs
for our community. The jobs
can make more money for
our community. The money
could help repair all the
broken things in our city.
Old mining land can be
turned into businesses and
houses. This would help to
give us more fun things to do.

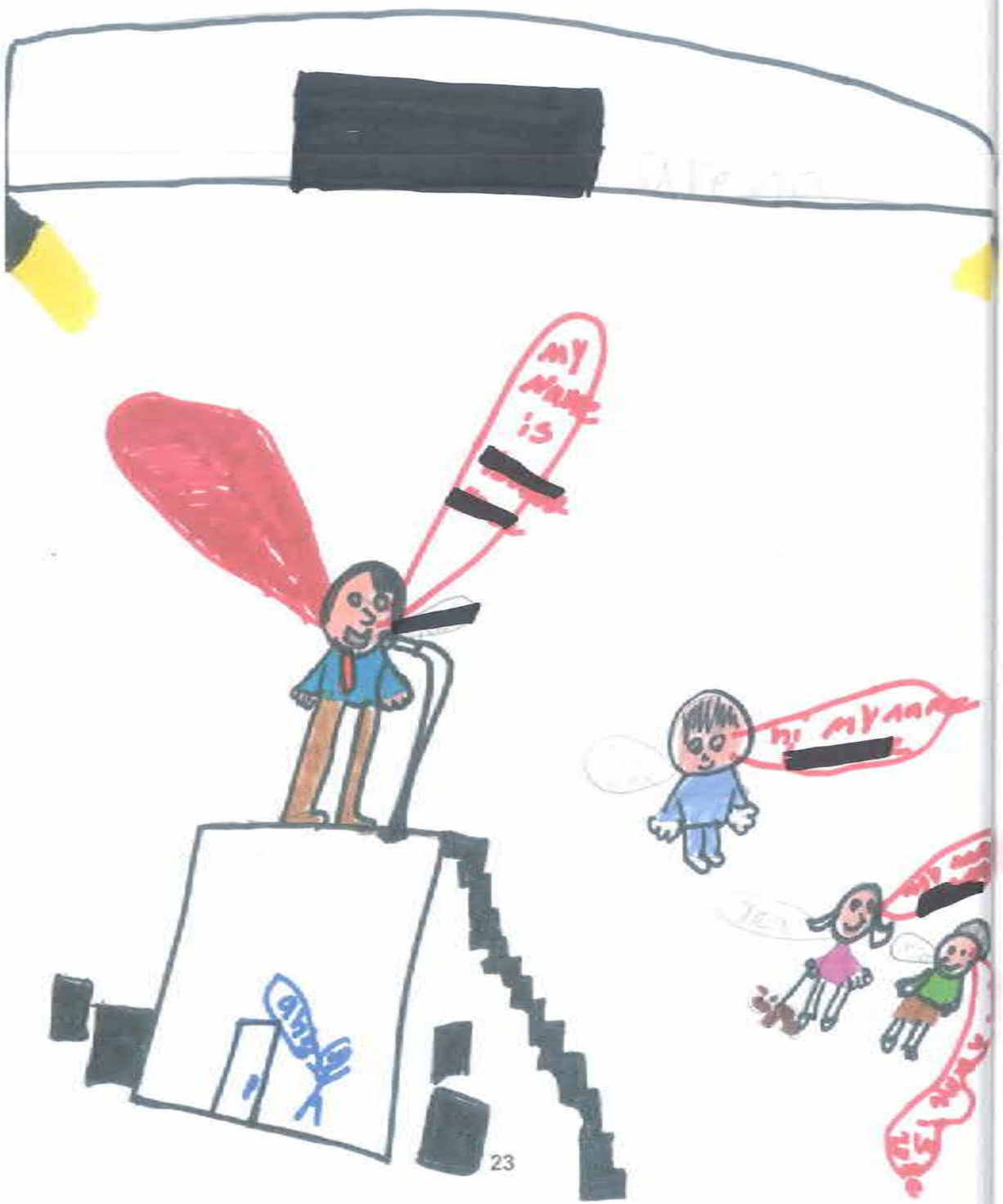
I Will help you little Coal town. I will be an artist. I will help you by painting pictures about coal. The pictures will tell people that coal is important to our community. The pictures I paint will show that coal helps people's home by providing electricity to cook food, provide light, and give heat. I will teach people that coal helps the world. Without coal we would have to find other sources of energy and it would cost more money. This will help you little coal town.



I will help you little coal town. I will be an inventor. I will help you by inventing new technologies. They will help make coal cheaper and easier to mine. I will invent a hover drill. It will mine coal itself. This would make hard to get to coal easier, faster, and safer to mine. The coal would not cost as much to mine. This would mean more profit. This will help you little coal town.



I will help you little coal town.
I will be a famous singer.
I will help you by singing
When I grow up. I will be
a music designer. I will write
lovely songs about coal. I
will also teach kids to sing.
People will travel to our little
town to hear me sing. This
will help boost our economy.
I will also be an author.
I will publish books about
coal. These books will teach
people the uses of coal. This
will help you little coal town.



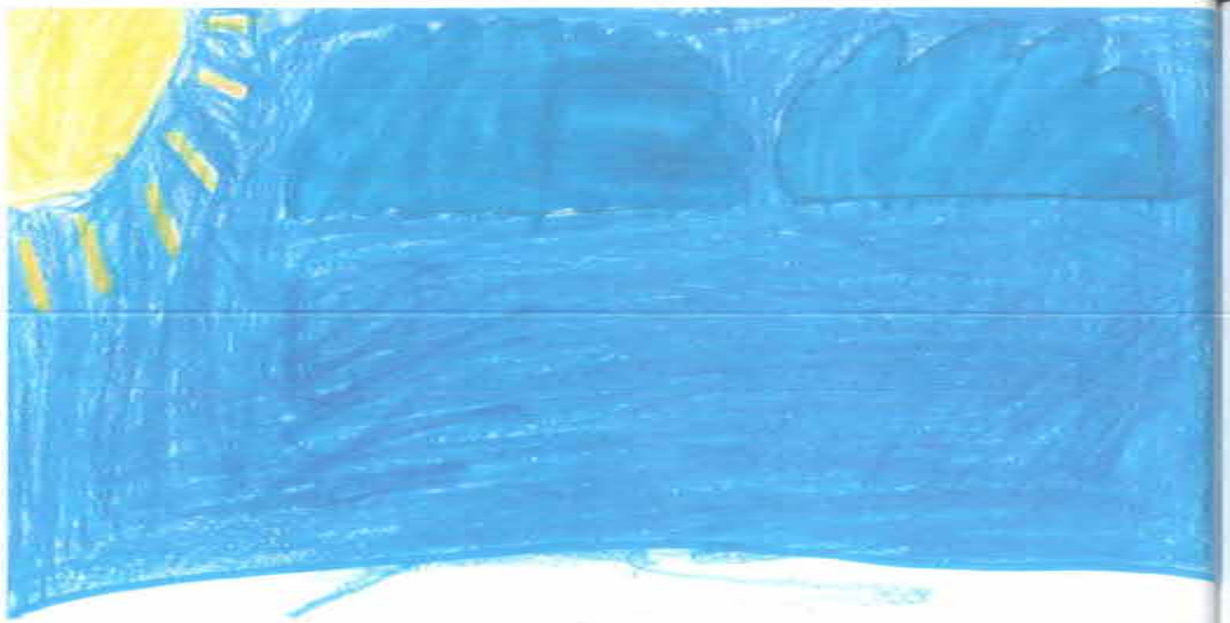
I will help you little coal town. I will be a singer. My songs will be about how good that coal is. My songs will make the people of my community want to stay and enjoy what coal has gave our town. My songs will give people ideas on how to build our community back up and make it better. This will help you little coal town.

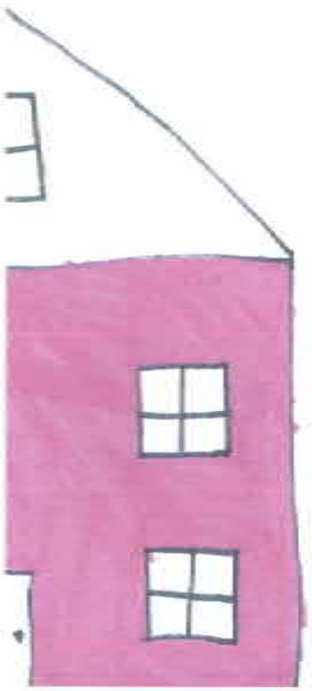
I will help you little coal town. I will be a farmer. I will help you by planting crops on reclaimed land. I will grow corn, green beans, and peas. I will harvest and sell my crops to stores like Wal-mart and Food City. By selling my crops it will bring money to the community. I will offer cheaper produce for the town. This will help you little coal town.

I will help you little coal town. I will be a builder. I will build houses and buildings on reclaimed mine land. I will plant trees and grass on the land that I build on. This will give the community new space to use. People will want to move into the community because there will be a lot of land for their families to do stuff on. This will help you little coal town.

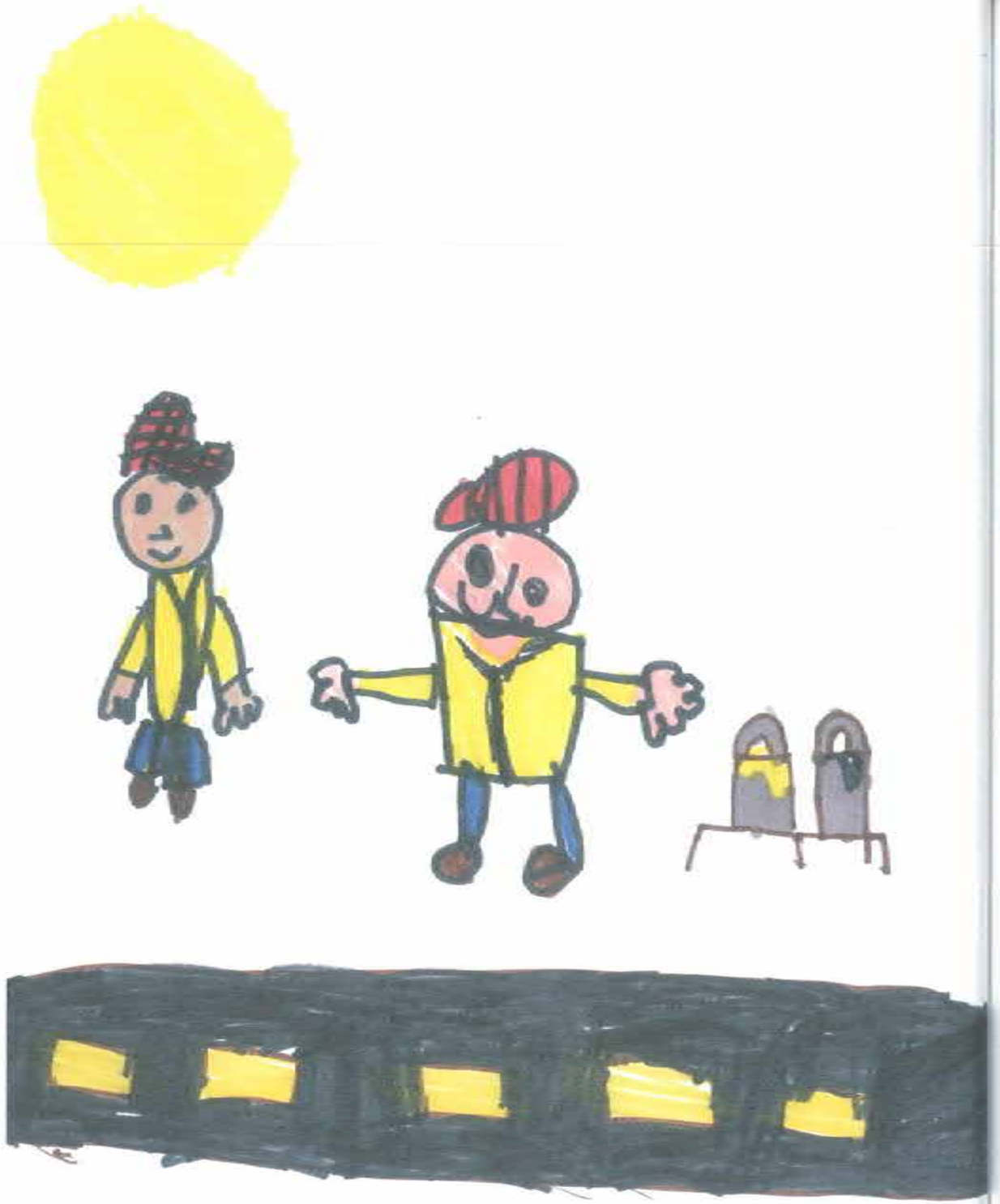
I will help you little coal town.
I will be a car salesman.
I will help you by selling
vehicles. I will provide
cars and trucks for people
to ride to work. People will
come to my car lot and
spend money. It will boost
the economy. It will help
you little coal town.

I will help you little coal town.
I will be a Navy Seal.
I will help you by protecting
our country. I will protect
all of the mines that have
closed. I will also protect the
mines that are still open.
I will be proud to serve
my country and everything it
stands for. I will protect
everything that coal has
gave our community. This
will help you little coal town.

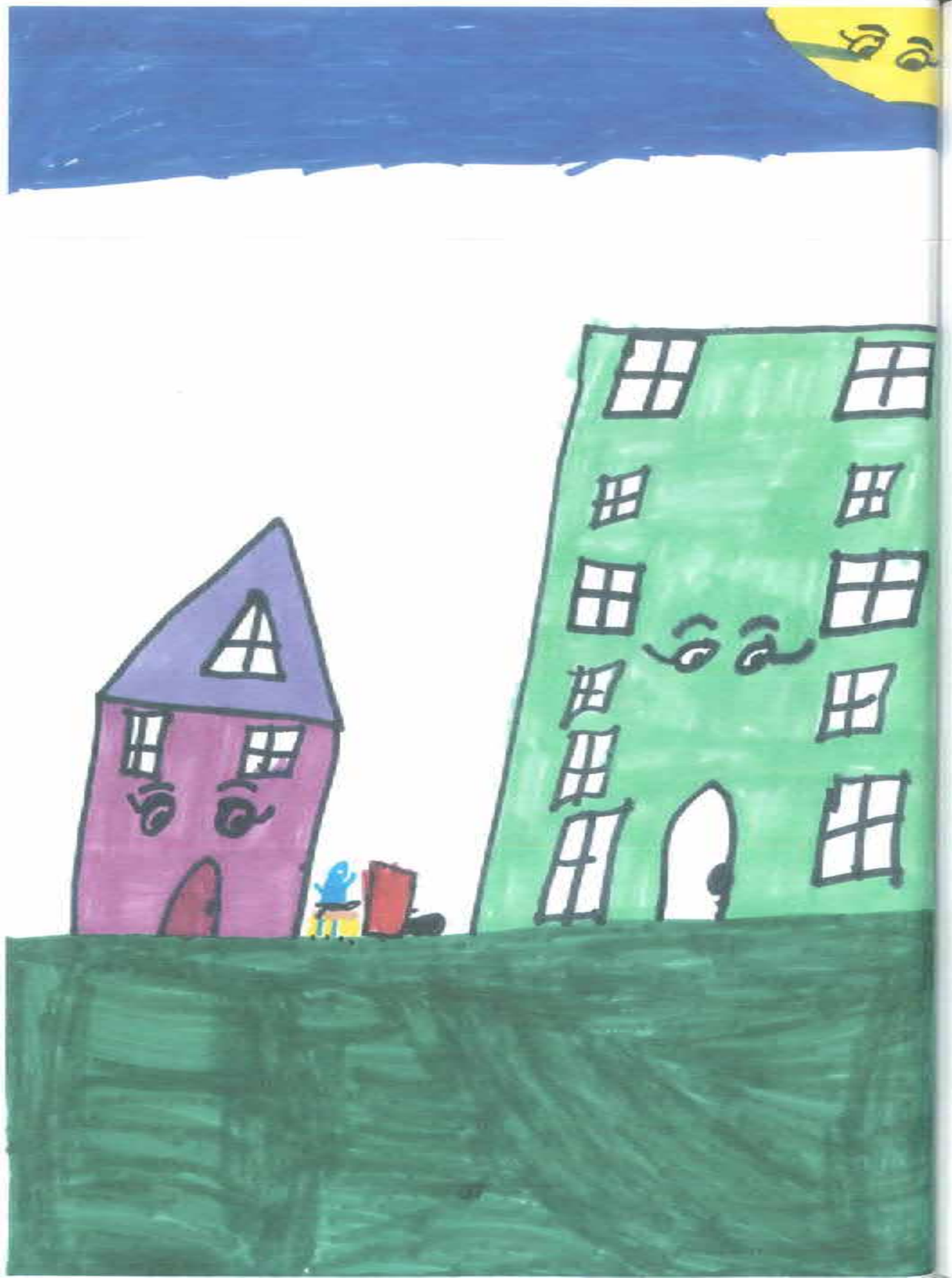




I will help you little coal town.
I will be a cleaner. I will help by keeping the coal town clean. I will help people to get clean oxygen and not get sick. This will help people to be healthy so they can go to their jobs and make money. This will help you little coal town.

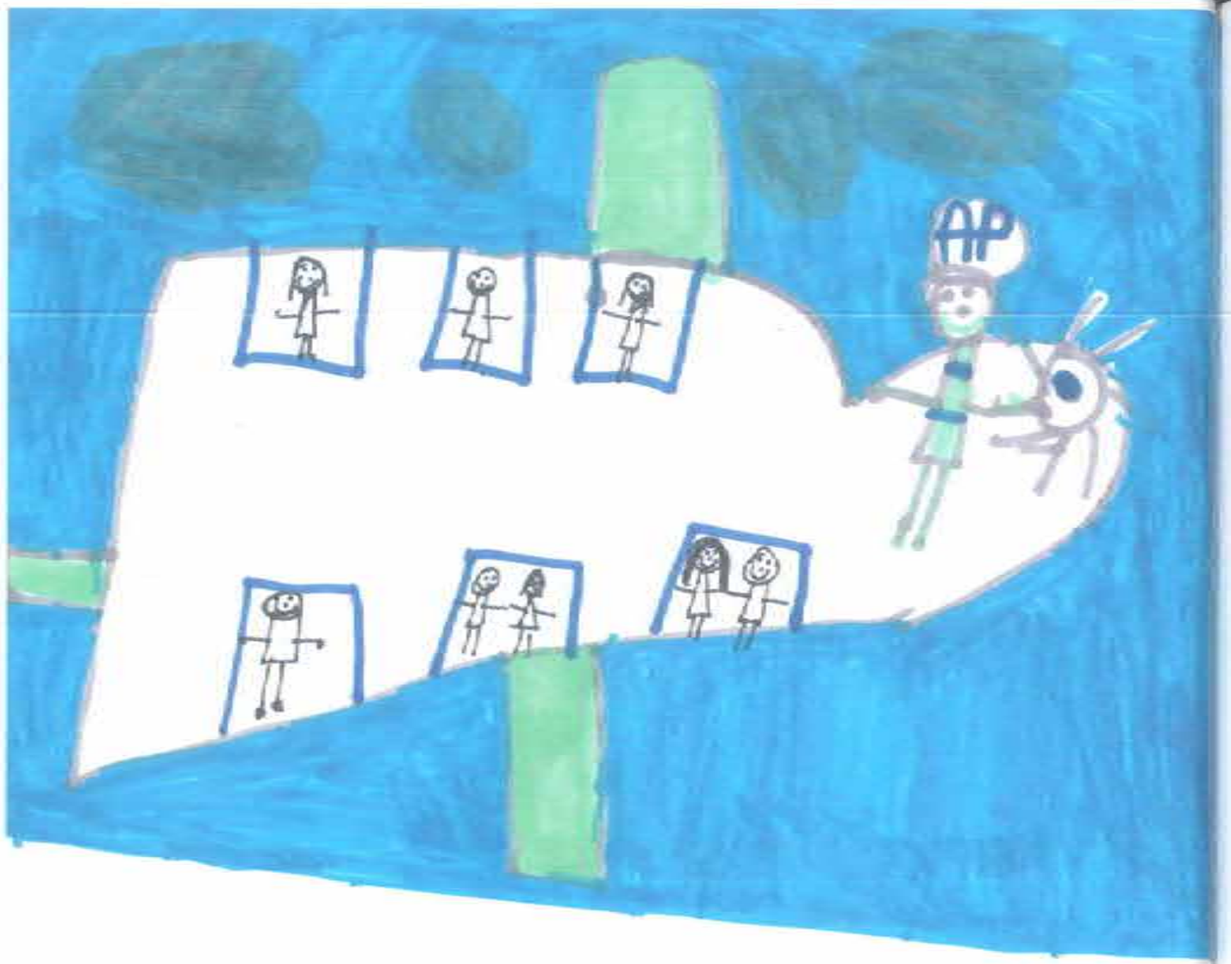


I will help you little coal town.
I will be a Construction worker.
I will make the town have
good roads for the people to
drive on. The roads will be
used for trucks to haul the
coal on. The roads will
connect our town to other
parts of the world. People
will drive on the roads to
visit our town. This will
help you little coal town.

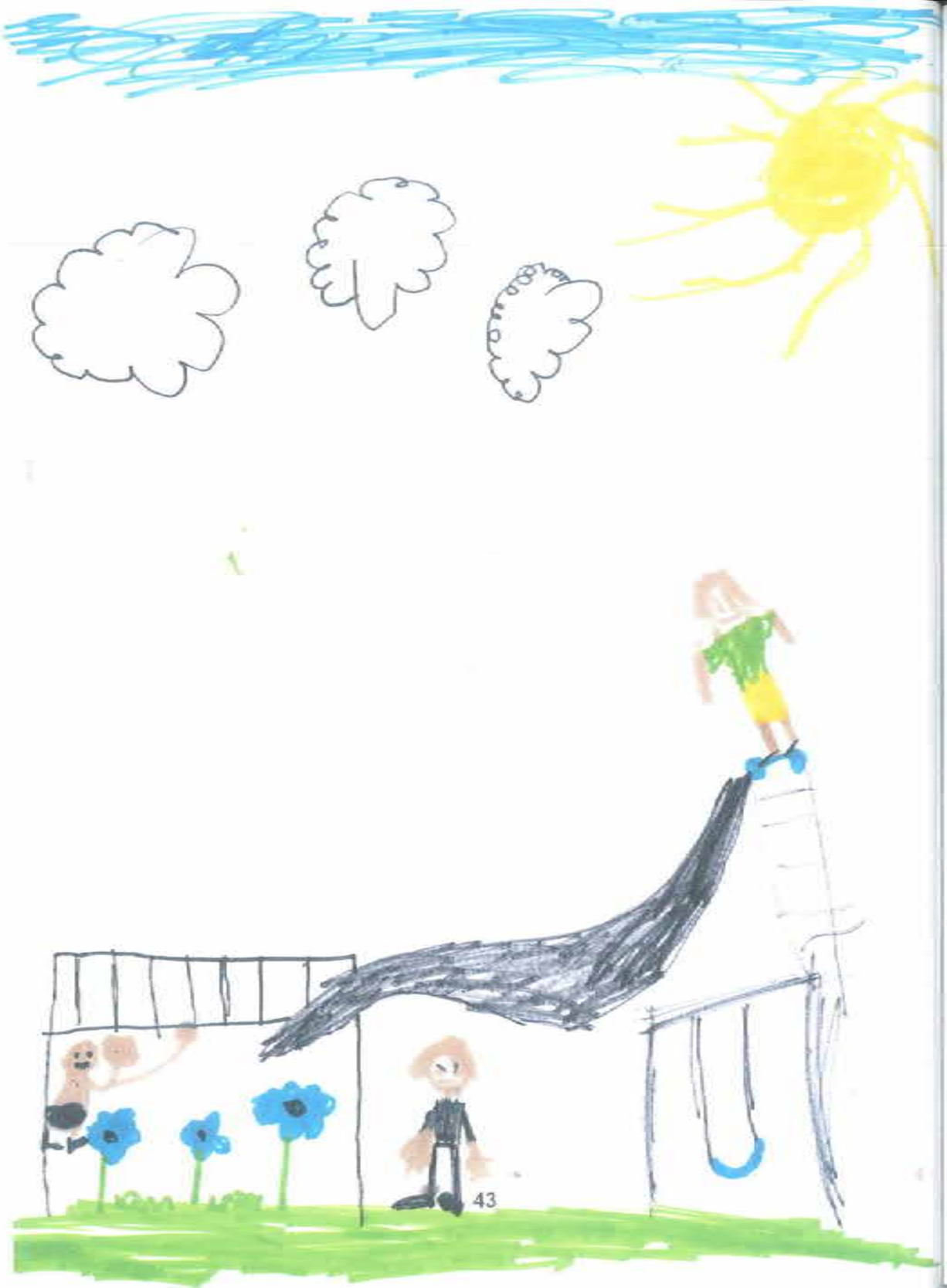


I will help you little coal town.
I will be a nurse. I will help you by taking care of the new babies born in our community. I will take care of sick kids and coal miners. I will keep them healthy so they can do their jobs and won't have to miss work.
I will need electricity to keep the lights and machines on. I will help to conserve the energy by turning the lights and machines off when no one is in the room. This will help save power and make the coal supply last longer. This will help you little coal town.

I will help you little coal town. I will be a banker. I will help you by helping people in our community to get loans. This will help the coal town by opening more stores. New stores will help bring more people into the little coal town. The people will spend lots of money in our town. This money can be used to upgrade houses and stores. The people will like to live in the coal town. This will help you little coal town.



I will help you little coal town.
I will be an airplane pilot.
I will fly people into the
little coal town. They will buy
things and spend money in
our town. I will be the wings
that connect our little
town to the biggest cities
in the world. I will fly
members of our community to
meet with people who want
to buy coal. I will fly in
people to tour old mines and
teach them the history of
our wonderful little town.
This will help you little coal
town.



We will help you little coal town. We will work together to turn old mine land into useful land. We will plant trees and flowers. We will build buildings and bring new things to our area. We will build you up little coal town. We will make you strong.

We will help you little coal town. We will use old mines for new things like underground storage for files and computer systems. We will turn old mines into tour sites so that people from all around the world can see where their energy comes from. People will traver to see. This will boost our economy. This will give old mines a new purpose. This will help you little coal town.

We will help you little coal town. We will help laid off miners find new jobs. We will teach them to use their skills in new ways. Workers that once wired things underground may now wire things in factories. We will find new uses for coal. We could make plans to use dual energy where coal will be used with another source such as solar energy. They will work together and help to conserve coal supply by using alternative energy when possible. We can use the heat from burning coal to heat panels and create energy. This will help you little coal town. This will make you happy.

The little coal town was hopeful. It was not giving up, for he knew all that was invested within him. The little coal town had valuable land to be reclaimed. The little town also had an abundant supply of coal yet to be mined. One thing was for sure and that was the little town was full of bright students who were capable of building a sustainable economy. The little coal town knew that the little kids could strengthen the town using their interest, talents, and abilities. "I think they can... I think they can... I think they can..." said the little town. I think they can grow up and bring good things to our little town.

Work Samples for Essential Question 1

01-10-17

Essential Question 1:

How can understanding the historical value of coal in my community, assist me in establishing and promoting a brighter tomorrow?

This is a work sample of an article that the students used to find and highlight facts on coal mining history in Kentucky.

→

Back to Kentucky UNBRIDLED SPIRIT

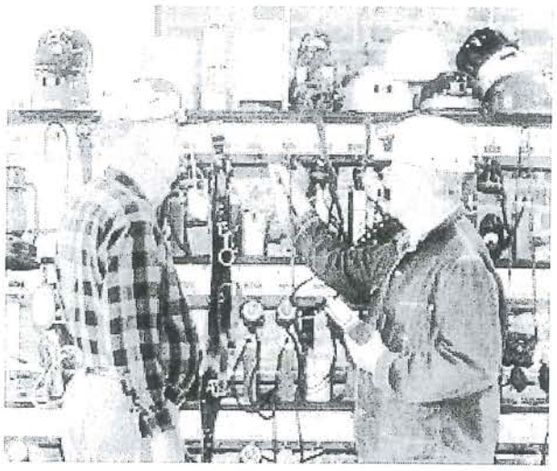
Articles

COAL MINING HISTORY IN KENTUCKY

Kentucky native Loretta Lynn is famous for her song "Coal Miner's Daughter," written about her upbringing in Van Lear, Kentucky. It's a poetic look at the industry that shaped much of 19th- and 20th-century Kentucky, and while the reality was a bit less charming, it deserves a closer look.

The first commercial coal mine in Kentucky opened in 1820 and the industry has taken a lot of interesting turns since then. The coal industry boomed during World War I but stalled in 1929 when the Great Depression hit. Many mines closed and labor strikes brought conflict and violence to the region. World War II brought a

slight resurgence, but things would never be the same as the price of other fuels fell, companies began mechanizing more of the mining process and environmental regulations choked production. While coal is still the lifeblood of some Kentucky communities today, the industry has shrunk considerably.
Today, visitors can explore the history and the impact of coal mining in Kentucky at a wide variety of attractions around the state.



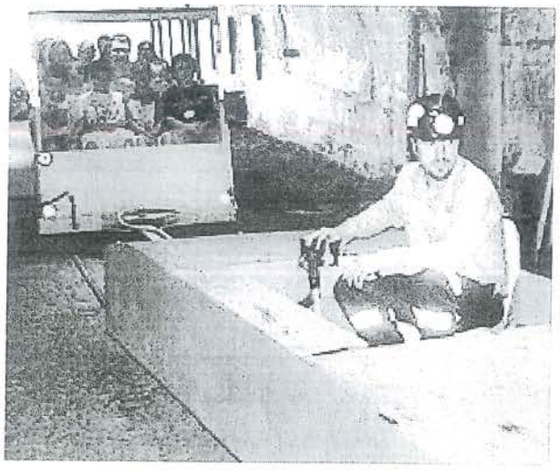
The Coal House and Coal Mine Display in Middlesboro is a museum of coal mining equipment housed in a building that was built entirely of coal in 1926–definitely a unique stop.

The Harlan County Coal Miners Memorial Monument in Harlan, Kentucky is a tribute to all those who have lost their lives mining coal in the area. The men and women who worked (and continue to work) in Kentucky's coal mines are heroes who risk life and limb to bring affordable energy to homes and businesses across America.

There are also several coal mining museums throughout the state. The Coal Miners' Museum in Van Lear, KY has a display of antique coal mining tools and recreations of many of the amenities found in the "company towns" of the day, when coal companies would erect schools, doctor's offices, restaurants and more to serve the mining communities that popped up near the mines.

The Kentucky Coal Museum in Benham features four stories of fascinating exhibits, including a mock mine tour and exhibit centered around Loretta Lynn's famous song, "Coal Miner's Daughter."

One of the most authentic coal mining experiences in the state can be found at Legacy of Coal Tours in Lynch, Kentucky.



The Portal 31 Underground Exhibition Mine takes visitors into an actual coal mine via rail car--you'll even wear the protective gear that miners wear.

The history of coal mining in Kentucky is a fascinating story. Make plans to visit these historic coal sites and get to know the Appalachian fuel that America was built on.

This is a sample reflection about coal's role in one of my student's past and why they think coal history is important to their future.

Page 3 →

Coal's Role During My Life

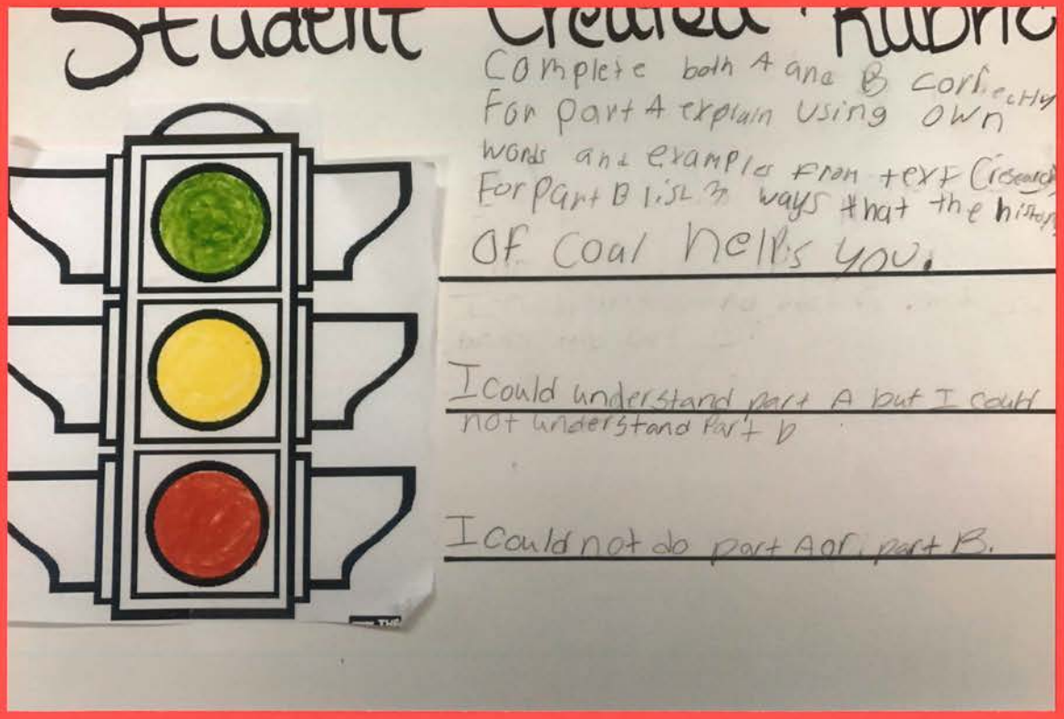
How has researching coal's major events in your state during your life helped to give you a deeper understanding of how coal has made our community what it is today?

By researching Coal's major events in my state during my life it helps me to know what has happened in my life and makes me appreciate it more. coal production in my state has went down so I know it is inpotant to appreciate it and conserve it

Using your research of the events during your life and what you know about coal today make at least two predictions of how you think coal will play a role in your future.

1. coal production will go up
2. We will come up with a new way to use coal in our state besides for electricity.

This is a sample of one student created rubrics for the Open response for EQ 1. Students decided to use green, red, Yellow which is a formative assessment strategy we use in the room.

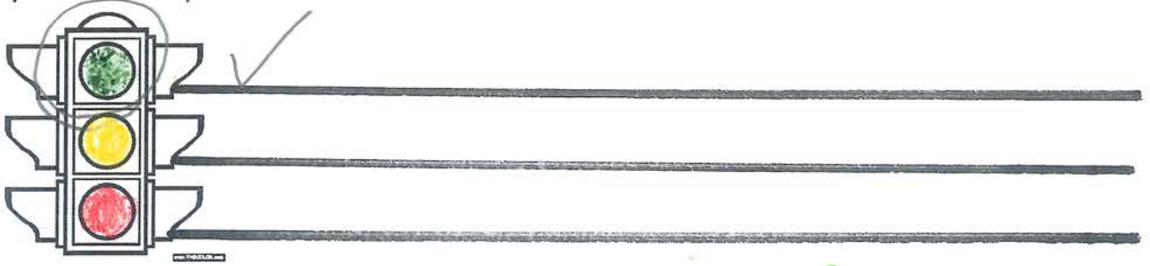


Open Response For Essential Question 1:

A. Explain in your own words what does a sustainable economy mean to you?
B. List three ways that understanding the historical value of coal in your community could help you to establish and promote a future sustainable economy?

A. I think Sustainable economy means our community where you don't have to worry about getting laid off. a community that uses recorses from coal such as reclaimed land to make new businesses or to have outher energy
B. sourses such as sowler and wind farm
1. By knowint the history of coal and knowing the problems that our economy has had helps us to find sdutions to help build a stronger economy for the futurre.
2. iknowing the history letme see where my community come from and how inportant it is to take care of it and make it stronger.
3. Seeing how much coal was mined in the past and seeing less coal mined now makes me see thats coal is not going to last forever, We need to save it by useing outher types of energy when we can.

My Rubric:



Fact Swap is an active engagement activity where students research a topic and write facts on index cards. They then place their facts on our fact swap chart and "swap" with their classmates. This is a sample of a completed Fact Swap sheet. ⟶

NAME: ______________________ DATE: __________ HOUR: ______

FACT SWAP

DIRECTIONS: Write 3 facts related to what you have learned; then, find six more facts by trading one of your facts for one of your classmate's facts. Remember, you need 9 different facts!

MY FACTS:

The first commecoil coal mine in ky opened 1820 and the insastery has taken alot of turns

The harlon county coal miners memeral monment in horlan ky is a tridvte to all Those Who have lost Thier liver mineing coal

one of The most Athantic coal minding experiences in the state's can be found at lact of coal towr's Lynch ky.

FACTS FROM MY CLASSMATES:

The kentucky coal museum in benham features favr stories of facinating exhibits

these coal Jit's and get to know The appalachian fuel That usa Was built on.

The coal industry boomed during world I but stalled 1920 When the great depression hit

kentucky native Loraitta lynn is famous for her song coal miners daughter.

While coal is still The lifeblood of some kentucky comunities today.

today vistors explore The history and The impact of coal mines in kentucky ata wid variety of attractions around The state

This is a copy of a Thank You Card that the students created for our guest speakers.

Thank

You ...

For sharing
your time and
knowledge to
us in our class
this history of

This is a sample of the activity we completed to link coal's history with our future + present life.

LINKING Coal's Past to Our Future...

BLUE, Purple, Or Green paper :Write one way that coal has helped our community to have a brighter tomorrow.
Pink, Orange, Coral, or Yellow paper: Write one way that your strengths, talents and interest can help you to partner with coal's resources to build a sustainable economy.

History Lesson on Wheels

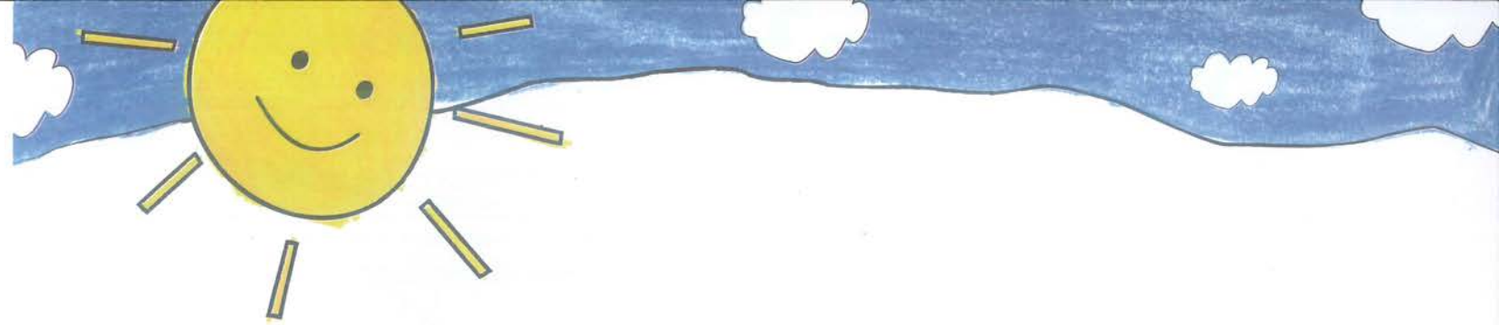
List evidence of coal in our community:

There is a lot of coal in our community here is some of the places prior to coal Coal Camp houses, Coal mines, and Coal markets for the Coal miners.

How has coal shaped our community?

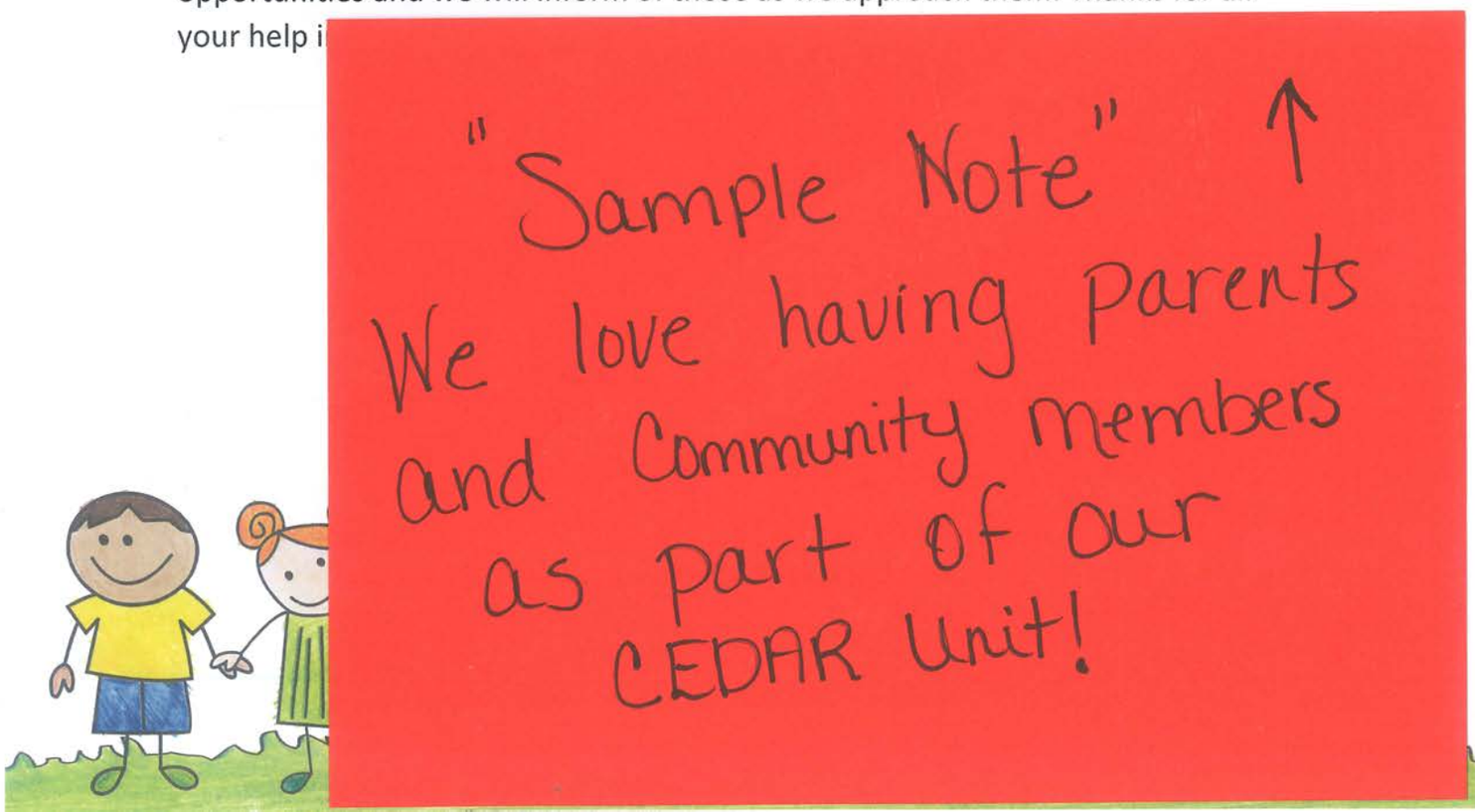
It has shaped our community by giving us el

This is a sample reflection sheet that a student completed after our History Lesson on Wheels.



Parents,

Our class is working on a coal study unit. It is very important to give our students the opportunity to learn the importance of coal in our area. I would love to include my students' families in our learning process. Our unit focus is "Building up Our Community" where we will explore how the students can use their personal talents, interest, and hobbies as well as the resources coal has brought us to build up their community . Through our unit, students are seeing the importance of their hobbies, talents, and interest in building up our community. We would love to have you help us in this learning experience. If you have any background in working with coal or any special talent or interest that you would like to showcase to the class, please send me a message and we will schedule a time for you to share. In March, we plan on having our outdoor learning experience and will need help with that as well. We will send more information as that date gets closer. Students will be participating in many "in-class" learning opportunities and we will inform of those as we approach them. Thanks for all your help i



Coal: Building an Economy to Fuel Our Tomorrow

[redacted]

Family Learning Activity

1. Who did you ask to come visit to help your class to understand the importance of coal? Give a brief description of this person:

My poppy. He used to work in the coal mines. A rock fell on his Knee So he had to quit the mines. He became a drummer.

2. Why did you choose this person to help our class?

I chos him because he knows how things work underground and Most people don't know that.

3. What did your class learn as a result of your family member presenting to our class?

That they are a lot of things that are not used during the

4. D

yes we
how the
He is an
skills to

Sample Student Reflection...
Students reflected on guest that they invited to be a part of our lesson.

Family Learning Activity

1. Who did you ask to come visit to help your class to understand the importance of coal? Give a brief description of this person:

2. Why did you choose this person to help our class?

3. What did your class learn as a result of your family member presenting to our class?

4. Do you think that this presentation helped our class to gain a deeper understanding of the importance of coal in our area?

This is some sample Exit Tickets that my class Completed to evaluate one of our activities With our guest speaker about benefits of reclaimation.

Exit Slip

Name [redacted]

Date _____

I really got it when...I didn't like it when...I enjoyed...

I enjoyed learning how to use reclaimed land to boost our future economy.

I'm still wondering...I figured out...I didn't understand...

Exit Slip

Name [redacted]

Date 2-24-17

I really got it when...I didn't like it when...I enjoyed...

I really got it when she talked about Reclamation and animals

I'm still wondering...I figured out...I didn't understand...

Exit slip

Name [redacted]

Date _____

I really got it when...I didn't like it when...I enjoyed...

I enjoyed the part talked about the animals that were in danger how reclame land help them

I'm still wondering...I figured out...I didn't understand...

Exit slip

Name [redacted]

Date _____

I really got it when...I didn't like it when...I enjoyed...

I liked when she told us what happens when you reclaim land. And it destroys mountains later it becomes land for villages

I'm still wondering...I figured out...I didn't understand...

Exit slip

Name [redacted]

Date _____

I really got it when...I didn't like it when...I enjoyed...

I enjoyed when she said I hope you need to think about your future I figured out that [redacted] country school was a struggles.

I'm still wondering...I figured out...I didn't understand...

Exit slip

Name [redacted]

Date _____

I really got it when...I didn't like it when...I enjoyed...

I enjoyed when she talked about animals and if thir endangered or not and how we can use returned land to keep the animals homes safe.

I'm still wondering...I figured out...I didn't understand...

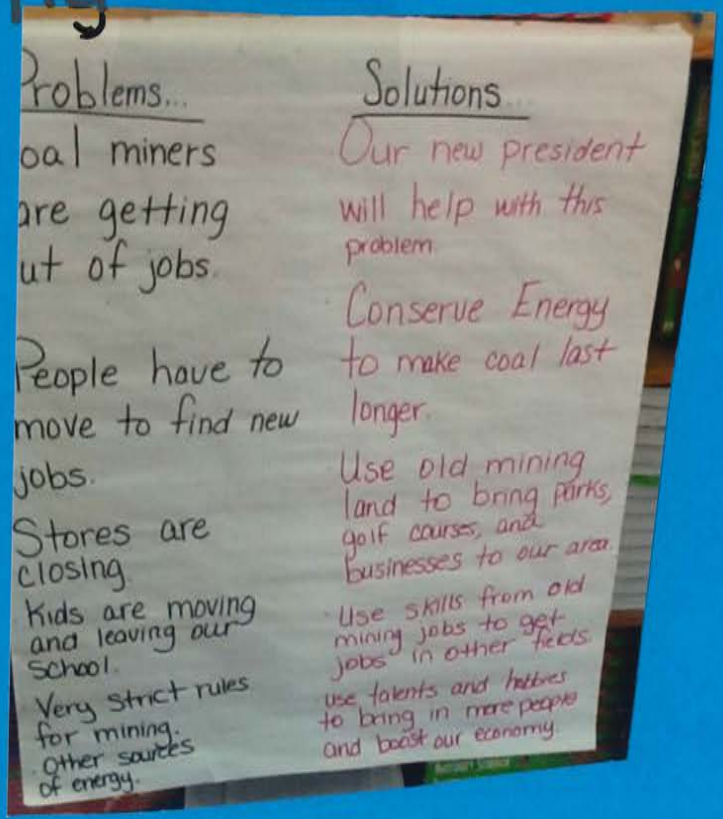
Work Samples for Essential Question 2

01-10-17

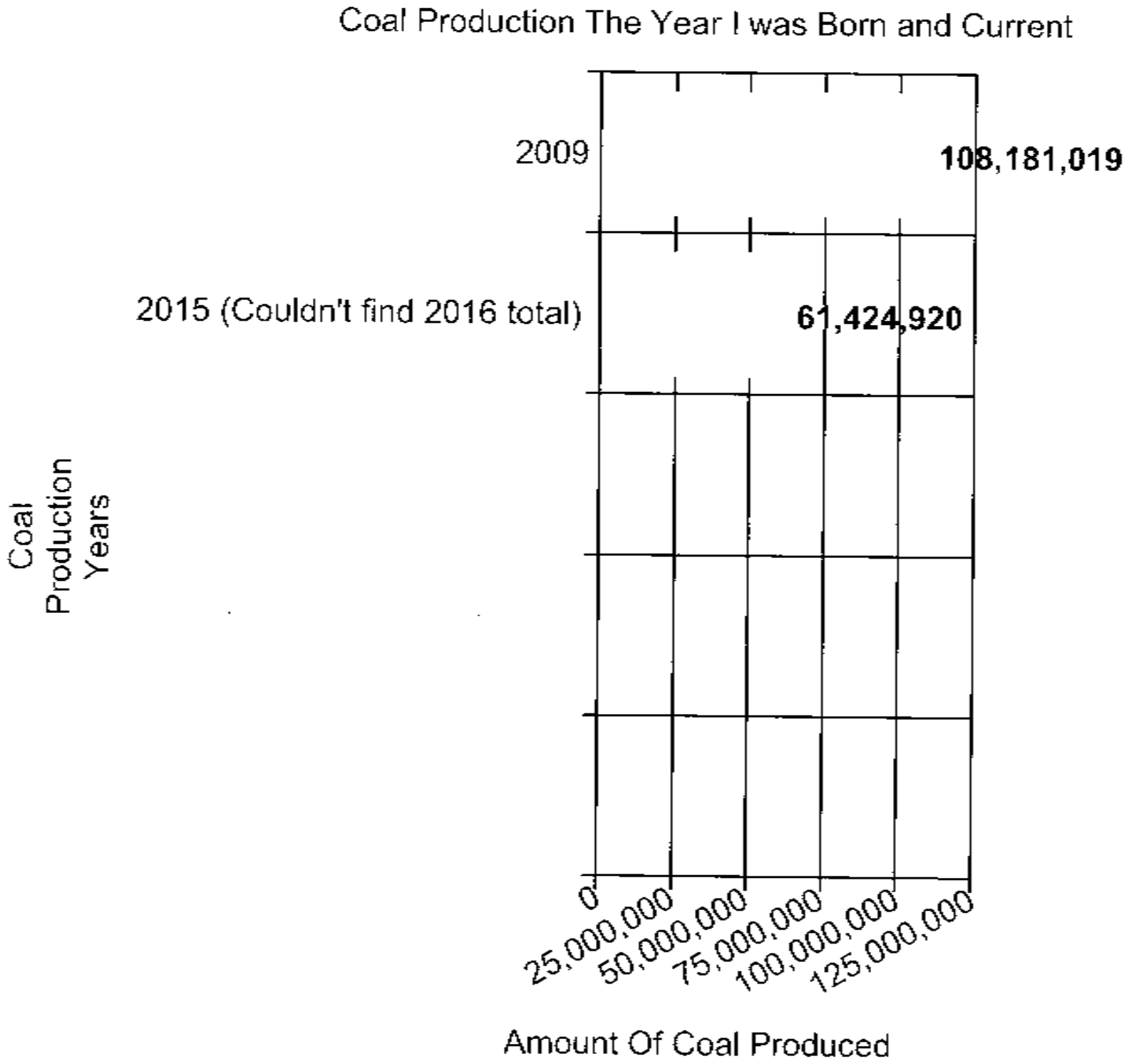
Essential Question #2

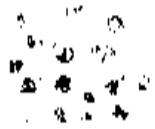
- How can we use our local resources to over come current issues and challenges that our area is facing?

This is a sample of a class chart showing Problems/ current issues and Possible solutions. Students helped make the class chart after research and making Posters in Small groups.



Problems...	Solutions...
oal miners are getting ut of jobs.	Our new president will help with this problem.
People have to move to find new jobs.	Conserve Energy to make coal last longer.
Stores are closing.	Use old mining land to bring parks, golf courses, and businesses to our area.
Kids are moving and leaving our school.	Use skills from old mining jobs to get jobs in other fields.
Very strict rules for mining.	use talents and hobbies to bring in more people and boost our economy.
other sources of energy.	


Coal Production The Year I was Born and Current
2009
108,181,019
2015 (Couldn't find 2016 total)
61,424,920
Coal Production Years
0
25,000,000
50,000,000
75,000,000
100,000,000
125,000,000
Amount Of Coal Produced



Cookie Mining Reflection

Good!

What did you discover while doing the cookie mining activity?

How did this activity help you to understand how that mining conditions in real life impact the amount of coal mined in our area?

Name: [redacted] Date:

A. LAND ACQUISITION COSTS (PRICE OF COOKIE)
(Montana – $8; Pennsylvania – $5; Kentucky – $7)
Name of property _____

B. EQUIPMENT COSTS
Flat toothpick x $2 =
Round toothpick x $4 =
Paper clip x $6 =
Total equipment costs $

D. MINING/EXCAVATION COSTS (CHIP REMOVAL)
Flat toothpick x $1 labor =
Total excavation costs $

C. RECLAMATION
(Original number of squares covered before cookie was mined =)
Squares covered outside original outline after reclamation x $1 labor =
Total reclamation costs $

E. MINING VALUATION
Number of whole chips mined x $2 =
Gross profit $

START-UP FUNDS			**$ 19**
less	total mining costs (A. + B. + C.)	-	
less	total reclamation costs (D.)	-	
less	gross profit (E.)	+	

TOTAL NET PROFIT/LOSS $

City Comparisons

After watching the YouTube Video, "Building a Future on Reclaimed Land". Use Google Earth with the class and You Tube Video Research to study your selected city. Compare the city to our community. What are some things that the bigger city has that we don't that could help our area to prosper in the future?

We have reclaimed land that we could put an airport on.

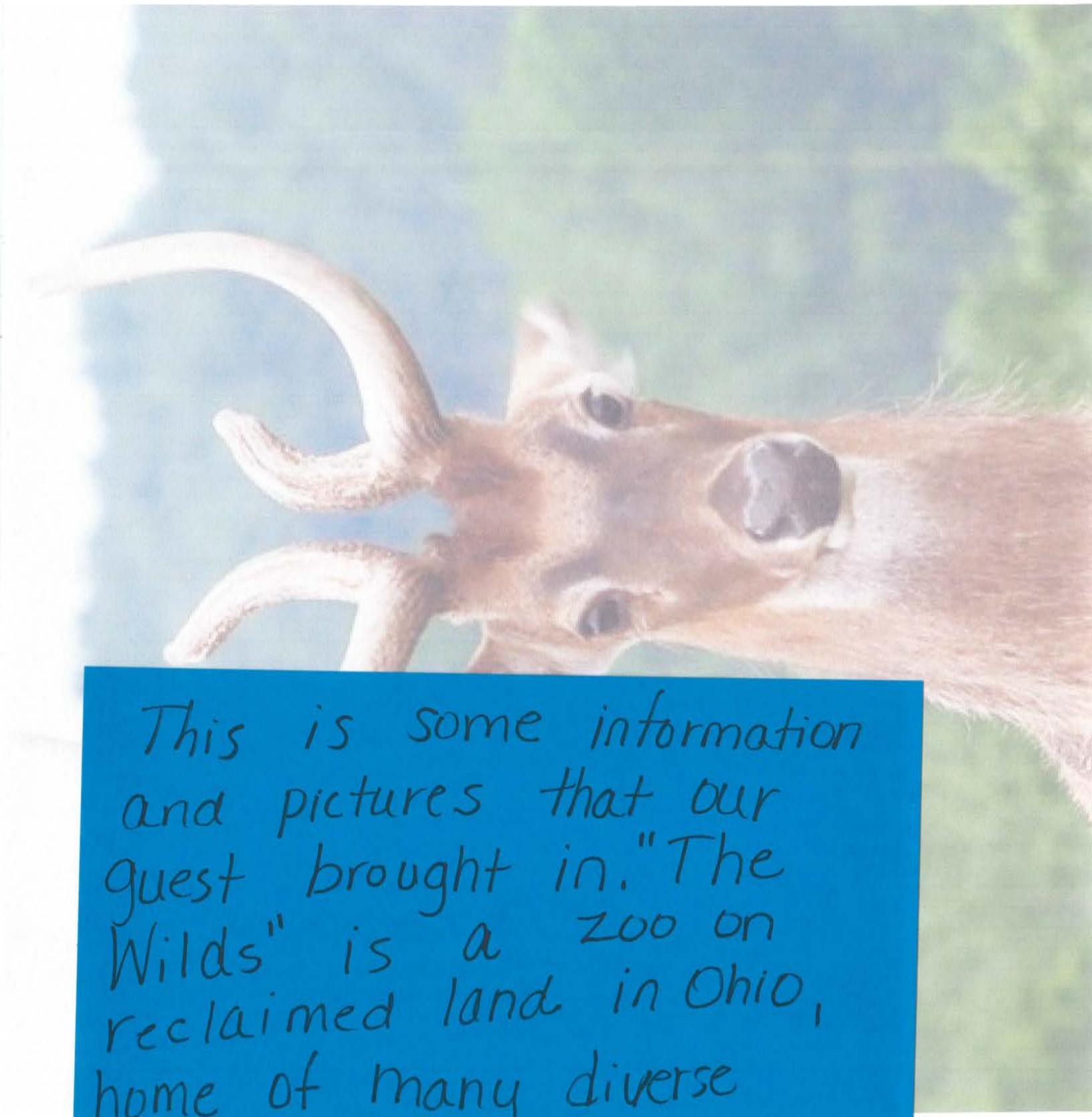
Atlanta

They have an international airport that would connect us to the entire world. We could trade our products with other countries.

Video Reflection …

- After watching the YouTube Video, "Building a Future on Reclaimed Land". Write three new facts that you discovered that we could use to help overcome current issues and build a future sustainable economy.

1. _____
2. _____
3. _____



This is some information and pictures that our guest brought in. "The Wilds" is a zoo on reclaimed land in Ohio, home of many diverse animal species.

Reclamation of Land after Coal Mining

When mining is completed, coal mines are required to be reclaimed to standards defined by the state and federal government.

Reclamation standards include replacing topsoil and establishing vegetation cover to prevent erosion.

The environmental reclamation of coal mining sites is controlled by the federal government through the Surface Mining Control and Reclamation Act of 1977 which is regulated by the Office of Surface Mining Reclamation and Enforcement (OSMRE).

This law created two programs, one for regulating active coal mines and one for reclaiming abandoned mines for whom no party could be held legally responsible (such as when the mining company has gone bankrupt or closed).

These programs are funded by a small tax on coal mining operations. The amount varies, depending on whether the coal was from an underground mine or a surface mine. Because surface mining (also calleed strip mining) disturbs the land more than underground mining, the tax on surfaced-mined coal is higher than the tax on coal mined undergroubd. Mine companies are required to post a bond that covers the estimated cost of reclamation at that site, in case the company goes out of business before reclamation is complete.

Half of the money collected in each state with an active reclamation program is given to that state, and the other half is kept in a federal emergency response fund, and can also be used for states with no active reclamation program.

Reclamation Process

Reclamation standards usually specify wildlife habitat as the goal for post-mining land use, and the main objective of the reclamation plan is to encourage natural re-vegetation of mined sites.

The usua steps in the reclamation process are:

1. Reclamation begins with replacing the topsoil.

2. Grasses are planted (both native and non-native), and the land is fertilized.

3. Native woody shrubs and trees are planted in clumps.

4. Additional shrubs and woody species will be planted along watershed areas.

Abandoned Mine Land (AML) grants are funded in part by a fee collected on all coal produced in the United States to help eliminate dangerous conditions and pollution caused by past coal mining. Past AML projects include closing dangerous mine shafts, reclaiming slopes where erosion has made the land unstable, and restoring streams

and water supplies damaged by mining.

Reclamation is a necessary part of coal mining, and creates many jobs. Some jobs, of course, are the jobs of doing the reclamation. Hydroseeding companies, excavating companies, and landscaping companies are a few of the jobs that come directly through reclamation.

But many other jobs can come from well-planned and innovative use of reclaimed mining lands. In our own area, there are schools, farms, airports, prisons, golf courses, industrial centers, and parks built on land that used to be coal mines. Underground mine sites are being used in some areas for aquaculture (raising fish for food) and mushroom farms.

There are even entire communities, some of them affiliated with groups like Habitat for Humanity, built on reclaimed mine sites.

Projects that are in the planning stage include cattle ranching, bee-keeping, sustainable forestry, and farming fast-growing crops like hemp and bamboo, both of which can be used to make things like cloth, paper, and building amterials.

Solar energy farms and wind farms are also in use on some reclaimed sites, and the potential growth of those industries will provide jobs long into the future.

Wildlife habitat is already the number one use for reclaimed land, but wildlife habitat is also being creatively used for horseback riding trails, ATV trails, and mountain biking, as well as for hiking. And hunters flock to reclaimed mine lands every year, especially to hunt deer, turkeys, bears, and elk. Reclaiming surface-mined land has helped to increase the populations of all those animals in Kentucky, and the elk that were first reintroduced here in 1997 now number about 10,000!

One of the most exciting uses for which reclaimed mined land is already being used is to provide a safe place to keep and breed endangered species. In our own area, there is a large wildlife reserve facility called The Wilds. It is affiliated with the Columbus Zoo. There, the animals roam about 10,000 acres, and they have already had a litter of baby Cheetahs, which are very endangered in their native Africa. They have also had several baby White Rhinos born at The Wilds.

There are many, many ways for people to restore and reclaim land that has been mined. Much of that land should be allowed to return to its natural state, of course, preserving Appalachian forests and wildlife. But when the land is reclaimed responsibly, both people and wildlife benefit. In a few short years, you children will be deciding what to study in college, and how you want to spend your lives. Who knows? Some of you may one day be helping to raise endangered species, or working in one of the many jobs that are being created on reclaimed mining land. Or you may come up with even more ideas. It's never too soon to start thinking of the future.

[redacted] wild life

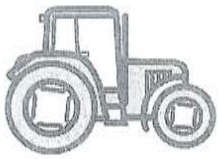
center mon to fri

7:00 Am 6:00 PM

at Pike wild life

Centerer

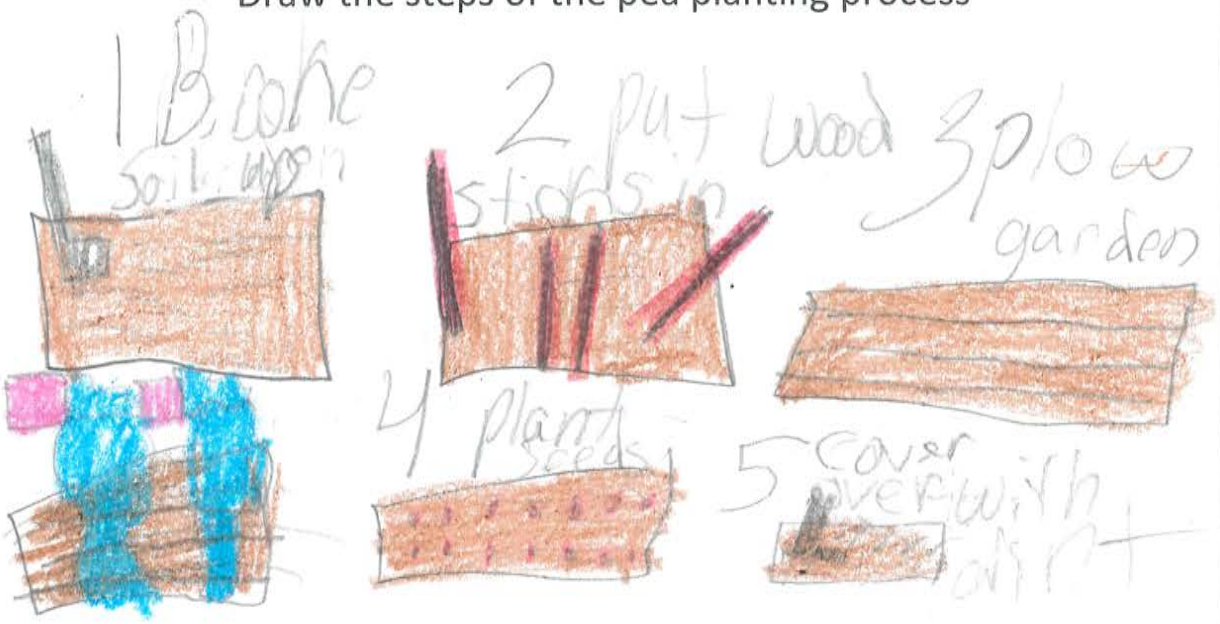
This is a sample brochure that a student created. She developed a wildlife center as an idea for local reclaimed land.



Growing a Sustainable Economy through Farming

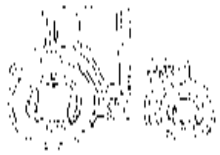
We are learning how to plant crops to grow a sustainable economy. As we plant our pea crop in our class garden draw and write the planting process. You may number and label the steps.

Draw the steps of the pea planting process



Write the steps of the pea planting process

Step 1 Brake soil up Step 2. put wood sticks in the grass Step 3 Plow garden Step 4: Soke soil Step 4 plant seeds Step 5: Cover Cover with dirt.



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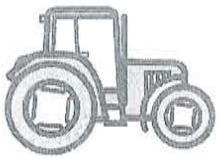

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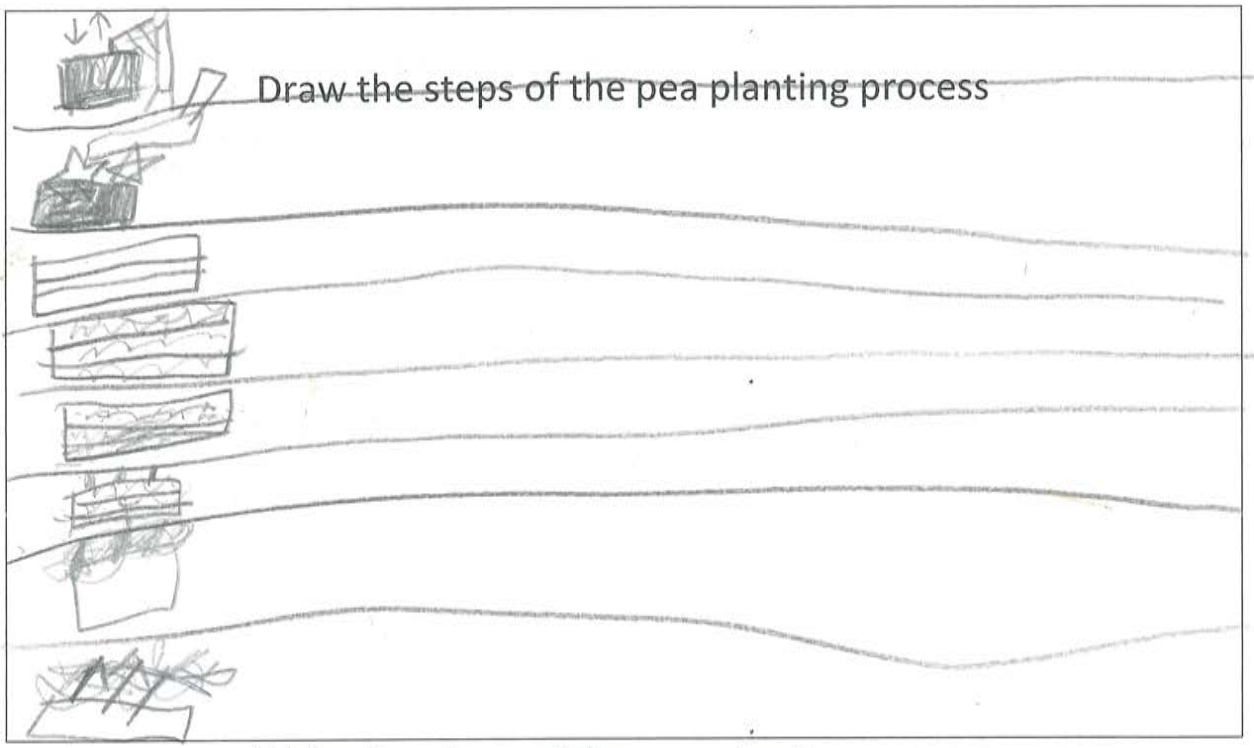
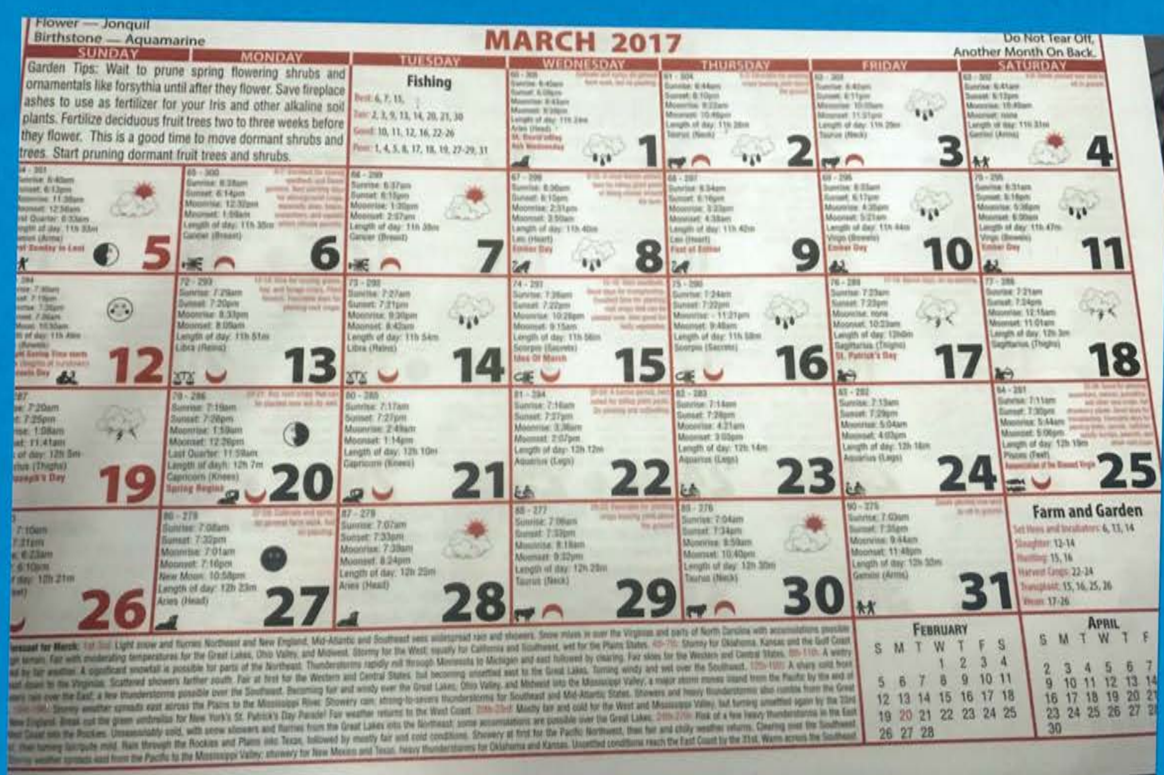


Write the steps of the pea planting process

Step 1. Braking the soil.
Step 2. Plow.
Step 3. Make rows.
step 4. Pore water in soil.
Step 5. Plant
Step 6. wait until you see stem. Step 7 wait 60 days and you will be retey to eat them.


To PLANT a
garden
is to
believe
in TOMORROW
-Audrey Hepburn


Flower — Jonquil
Birthstone — Aquamarine
MARCH 2017
Do Not Tear Off, Another Month On Back.
SUNDAY
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
SATURDAY
Garden Tips: Wait to prune spring flowering shrubs and ornamentals like forsythia until after they flower. Save fireplace ashes to use as fertilizer for your Iris and other alkaline soil plants. Fertilize deciduous fruit trees two to three weeks before they flower. This is a good time to move dormant shrubs and trees. Start pruning dormant fruit trees and shrubs.
Fishing
6, 7, 15,
2, 3, 9, 13, 14, 20, 21, 30
10, 11, 12, 16, 22-26
1, 4, 5, 8, 17, 18, 19, 27-29, 31
1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31
Farm and Garden
6, 13, 14
12-14
15, 16
22-24
15, 16, 25, 26
17-26
FEBRUARY
S M T W T F S
1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28
APRIL
S M T W T F
2 3 4 5 6 7
9 10 11 12 13 14
16 17 18 19 20 21
23 24 25 26 27 28
30

Snow pea - the earlyest type of pea peas is tough peas they can take the weather condition There different colors and there very flat

all peas are sweet,

Split peas are split in half

3 general types of peas

Snow peas

Sugar snap peas

Garden peas

TOMMY ROE

"Sweet Pea"

Oh, Sweet Pea
Come on and dance with me
Come on, come on, come on and dance with me
Oh, Sweet Pea
Won't you be my girl
Won't you, won't you, won't you be my girl

I went to a dance just the other night
I saw a girl there she was out of sight
I asked a friend of mine who she could be
He said that her friends just call her Sweet Pea

Oh, Sweet Pea
Come on and dance with me
Come on, come on, come on and dance with me
Oh, Sweet Pea
Won't you be my girl
Won't you, won't you, won't you be my girl

I walked on over and I asked her to dance
Thinkin' maybe later on
We'd be makin' romance
But every guy there was thinkin'like me
I had to stand in line
To get a dance with Sweet Pea

Oh, Sweet Pea

It grows thru Snow, Snap, Garden peas. The melting sugar pea starts out flat and sometimes called a snow pea. There is a ... called a ... ing sugar ... a Mammoth ... ng Sugar

This is a sample of notes that a student recorded on their song sheet during our "Pea Presentation". This was part of our idea for farming on local reclaimed land.

Samples of Presentation boards during our "Pea Project".

This was a newspaper clip showcasing our class garden. Our activity was also featured in the County School Systems newsletter sent home to employees of our district.

Future farmers

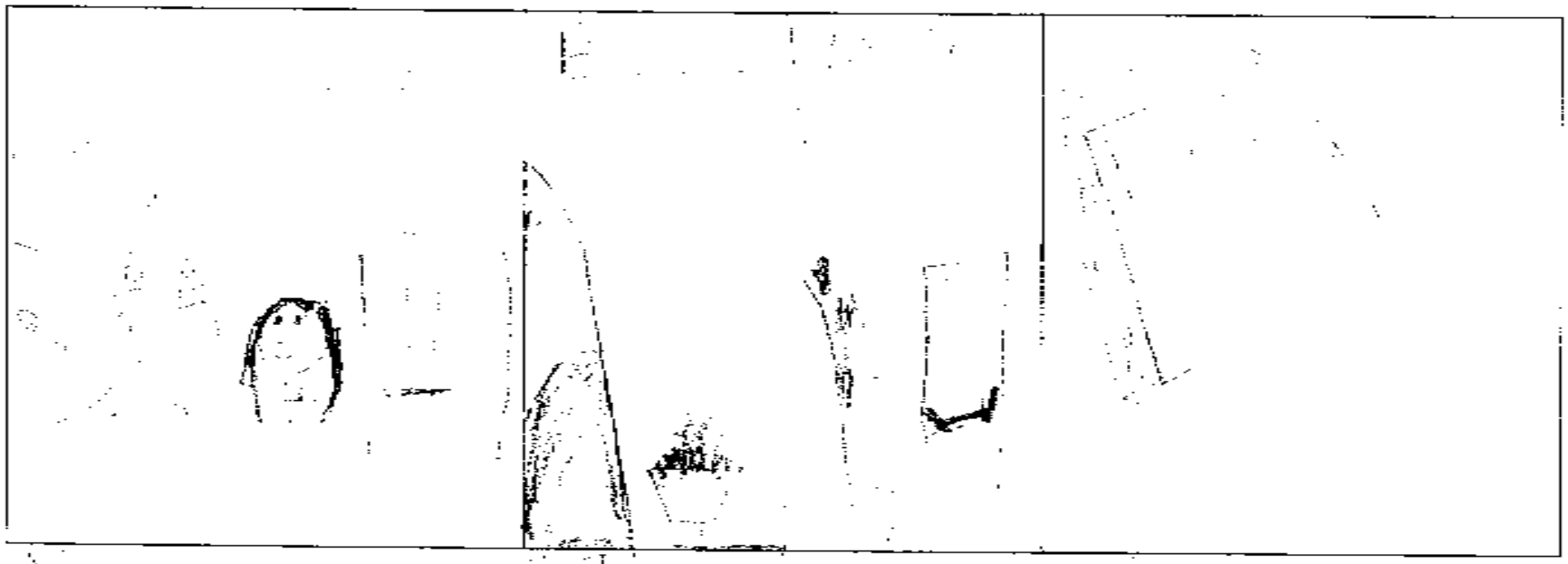
"ins and outs" of growing a pea crop. The students loved getting their hands dirty as he assisted them in planting a class garden in front of the school. This was part of the class's CEDAR unit on growing a sustainable economy through farming and agriculture using reclaimed land.

Submitted Photos

[redacted]

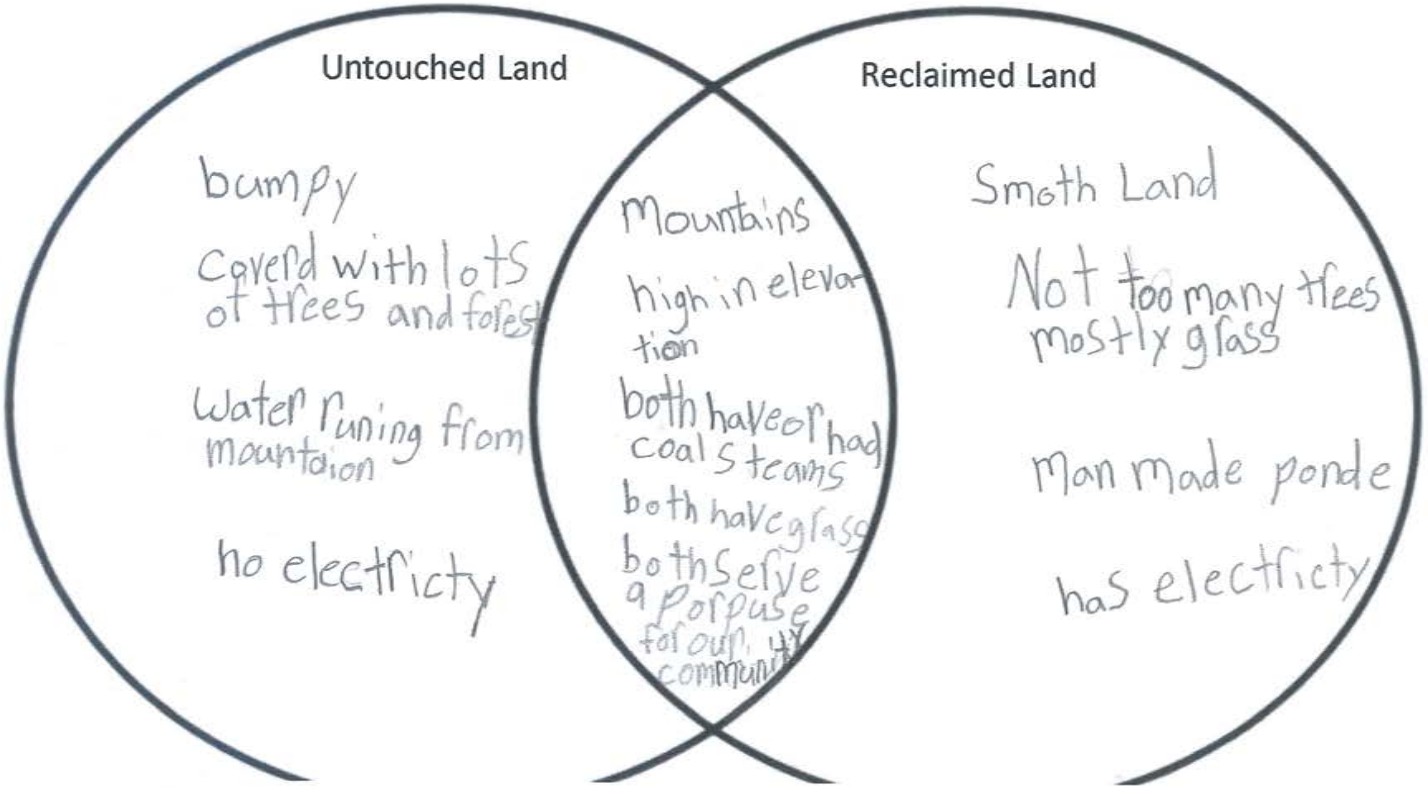
2017 Outdoor Classroom

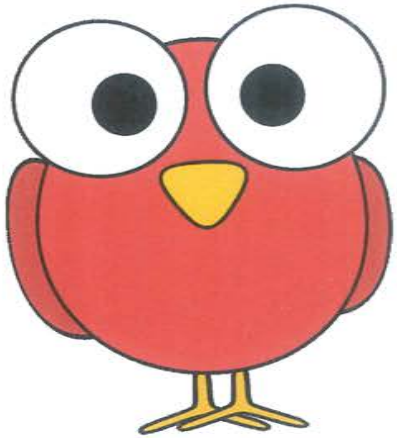
How did coal play a role in my day today…



Bird's Eye View

Compare and Contrast: After flying the drone over a mountain that has never been mined or reclaimed and then flying over a previously mined/reclaimed mountain compare and contrast the two.





Work Samples for Essential Question 3

01-10-17

Essential Question #3

- How can you use your personal interest, skills, and talents to fuel a brighter tomorrow for our local area?

Young entrepreneurs at [redacted]

[redacted] students at [redacted] were transformed into entrepreneurs as they opened small businesses built around their interests, hobbies and talents in effort to build a future sustainable economy. Students developed critical thinking skills as they paid rent, managed utilities, taxes and hired store employees. They gained an in-depth understanding of the real world and saw firsthand how resources from coal impacts the economic sector of everyday life. Staff and community members got to shop from the young entrepreneurs at the school's first ever Market Day.

Submitted photo

This newspaper clip displays one of the most meaningful activities in our unit. It was this activity that transformed my students into entrepreneurs. Students gained first hand experience of how they can use their skills, talents, and interest in combination with coal resources such as electricity, reclaimed land, and materials from coal bi-products to build a sustainable economy

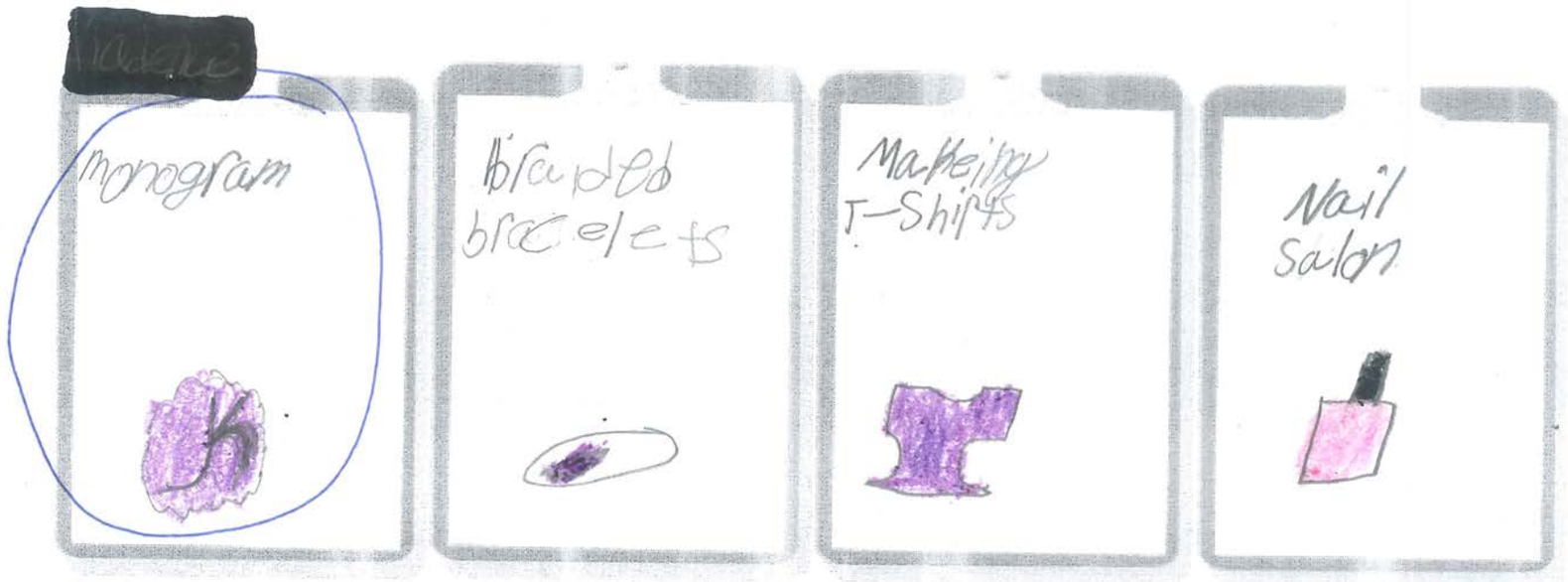
Future business owners

Submitted Photos

[redacted] at [redacted] were transformed into entrepreneurs as they opened small businesses built around their interests, hobbies and talents in an effort to build a future sustainable economy. Students developed critical thinking skills as they paid rent, managed utilities, taxes and hired store employees. They gained an in-depth understanding of the real world and saw firsthand how resources from coal impacts the economic sector of everyday life. Staff and community members got to shop from the young entrepreneurs at the school's first ever Market Day.

Business Brainstorm

Brainstorm business ideas with your partners. Ask your partners, "Do we want to provide a good or service?". Be a good listener. Write everyone's ideas on the clipboards.



Once your group agrees on a good or service, color in the clipboard with the winning idea.

Small Business Plan

- Part V -

As your business becomes more successful, so will your tax contribution to the local government. These taxes will be used to help the people in your community. How will the taxes raised from your business impact your community?

The taxes raised from my business would give my community money. They would use the money to build roads. This would let us drive more places and access more places easier. Money would be used for schools to get books, computers, and things that students need. the money would be used to help people who don't have job to get food. Tax money from my business will help my community in many ways.

The next few pages 20a-e is a sample business plan. We created these before we opened our small businesses for Market Day.

Small Business Plan

- Part I -

The key to every successful business, is a solid business plan. Use this page to help you formulate the building blocks of your business.

#1) What is the name of your business?

[redacted] used cars

#2) Does your business offer a *good* or a *service*?

GOOD **SERVICE**

#3) What *good/service* is your business providing?

cars

#4) Who are your *target customers*?

grown ups in my community

#5) List two resources for your initial *funding*.

1) I nad to pay rent, eletricand taxes

2) at the end of the activity

#6) How much will your *good/service* cost to buy?

$2.00

Small Business Plan

- Part III -

i'm lovin' it

JUST DO IT.

Every time you see and hear the symbols and phrases above, you know exactly what company is trying to sell you something. These are known as a company's logo and slogan. Now it is time to create a logo and slogan that people will associate with your business.

Small Business Plan

- Part IV -

The next piece of starting your business is figuring out how people are going to hear about you. This is called a "Marketing Plan." Use the space below to create an advertisement you could place in a local magazine or newspaper to introduce your business.

Need a ride
[redacted] used cars!
come get a deal as
biggs my nat.

if you need a car call me at
353-971=210

Pages 20f - 20H are sample reflection sheets that students completed after Market Day. They show student understanding of how coal made their business possible as well as how their businesses will contribute to a sustainable economy →

Market Day – "Building a Sustainable Economy"

My Business: [redacted]

Description of my business:

Coal made my business possible by:

How will your business help to make a sustainable economy?

Market Day – "Building a Sustainable Economy"

My Business: [redacted]

Description of my business:

Coal made my business possible by:

How will your business help to make a sustainable economy?

Market Day – "Building a Sustainable Economy"

My Business: _____

Description of my business:

Coal made my business possible by:

How will your business help to make a sustainable economy?

Pages 20I through 20K are samples of Market Day predictions, accounting sheets, and reflections.

Prediction

Store Name: [redacted]

Business Owner: [redacted]

Do you predict your business to be successful? Why or why not?

Yes, everyone needs a bookmark, maybe even 2 or 3!!! I would buy a book mark off myself!

What is the estimated profit for your business?

62$ because everyone wants one!!!

Does your business require?

Water X NO

Electric X yes

Extra Employees X NO

Think About IT...Will your items be sold at one set price or will there be a time you mark your items on "Sale"?

Do you have competition with your business? NO, they will not be on sale! yes, cloud pets, Sandart, and tattoos.

Small Business Owners Accounting Sheet	[redacted]
Name of Business:	[redacted]
Business Owner's Name:	[redacted]
Product or Service:	Product
Cost of Product:	$2.00
# of products/services sold:	25 sold
Amount of Money made before bills:	50.00
Cost of product/service fee and taxes:	3.00
Cost of rent, electric, water, employees	electric cost 1 dollar 2 dollar for rent
Profit	44.00

Reflection:

Did you meet or exceed your predictions? Why or why not?

I exceed and Made 35 aftr my bills.

Was your business successful?

My business was successful because I almost sold out.

Could your business help to build a sustainable economy?

yes because I can bring more Money and Jod to the economy.

Did energy play an important role in your business?

yes because I had to use a Oven to bake.

What changes would you make for your business to be more successful or a better asset to the local economy?

add diffret products to My Business.

These are sample shopper Experience surveys. I loved having feedback from staff members that were part of Market Day!

Shopper Experience Survey

I enjoyed the businesses: yes no

I like the products they offered: yes no

What was your favorite business/product?

Jewery

Were prices fair? yes no

Were there enough items available? yes no

Additional Comments Welcome on Back ☺ Loved the shopping experience.

Best Small Business

"M

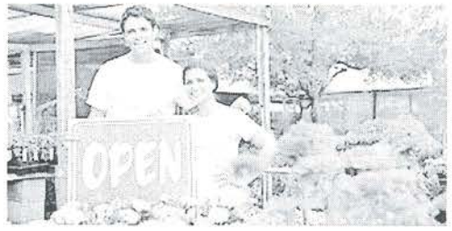
Presented t

This is a sample of an award for Market Day.

These are some sample products that I bought from Market Day!

Economy

Growing a Sustainable Economy



The goal of community sustainability is to establish local economies that are economically viable, environmentally sound and socially responsible. Achieving this goal requires participation from all sectors of the community, both to determine community needs and to identify and implement innovative and appropriate solutions. This section presents information from a variety of sources on approaches and techniques used successfully in different communities to develop key aspects of their local economies on a sustainable basis.

Agriculture and Food Systems

Community efforts can preserve agricultural land, encourage sustainable agricultural practices, support local food producers, and facilitate the production and distribution of locally produced food through farmer's markets and cooperative food buying programs. This section presents examples of whole systems approaches to sustainable agriculture.

Fisheries

Aquatic wildlife play a major role in sustaining healthy marine and freshwater ecosystems. It is therefore important that communities associated with fisheries and aquatic ecosystems responsibly manage these resources. Community participation can provide support for sound management practices and remedial programs, as well as for persons and industries engaged in commercial and recreational fishing.

Forestry and Wood Products

Trees are important for both urban and rural ecosystems. Mature trees maintain desirable microclimates and shelter wildlife. Trees also have economic value as a raw material used in producing paper, buildings, furniture, and other wood products. Examples of communities balancing these environmental and economic considerations are in this section.

Manufacturing and Industry

Economically healthy businesses and industries with minimal environmental impact on communities should be encouraged. Communities should work to attract and support such industries and to reduce or eliminate negative impacts from existing industries. New approaches are explored in this section.

Small Business

Small businesses are sources of employment and providers and consumers of goods and services that sustain the local economy. Their operation should support the local ecology, minimize energy use and waste, and utilize recycled products and materials. Examples are in this section.

Technology

Technological advances in business, health, education, and the environment provide new opportunities for communities. More information products are available, and some may have environmental implications. Communities must be current and guide their economies accordingly. This section provides examples.

Economics and Finance

Residents from all segments of the community can play a role in the future of their local economy. Working together, business and government leaders, local non-profit organizations, and citizen groups can analyze needs and resources and guide the economy. Local financial institutions can invest in sustainable community initiatives. Examples of innovative approaches are in this section.

Urban/Rural Economic Ties

It is in the interest of urban and rural residents to work together in mutually supportive ways. In this section are examples of cooperative efforts in land preservation, sustainable agriculture, growth management, appropriate development of rural resources, improved trading and tourism, and development of low-impact regional planning and transportation systems.

Responding to Text
After reading the article, read each question and answer them on the lines below.

What does growing a sustainable economy mean to you?

growing a sustainable means to me by getting a job without worring about it.

How could using your interest, talents, and strengths help us to grow a sustainable economy for our area?

You can use your talents and make you a job like etc.

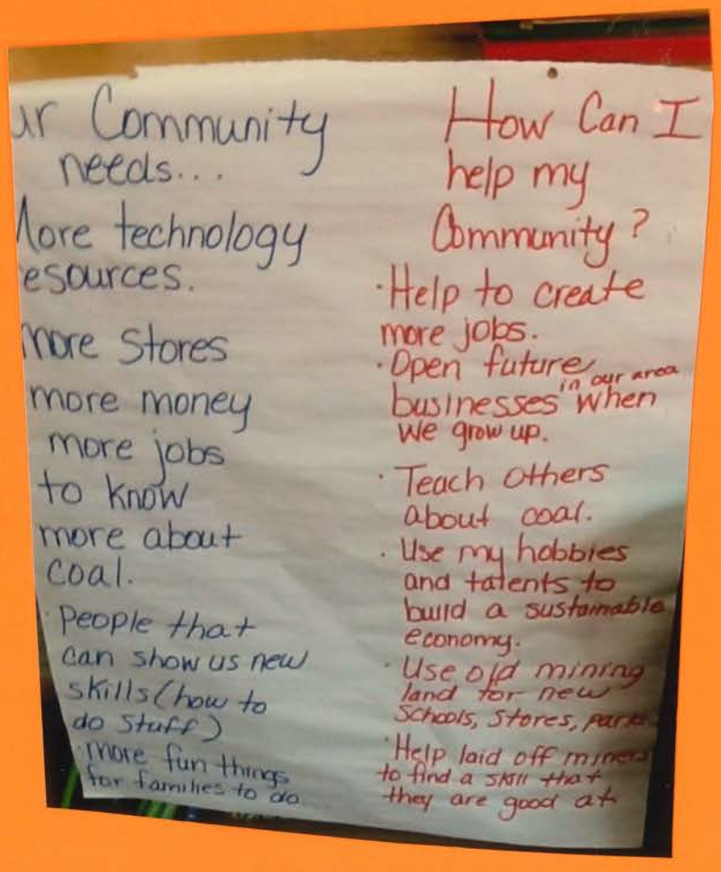
What are some problems that our LOCAL area/economy are facing right now?

We are losing coal and jobs coal mines are closing.

What are some solutions that you can develop for the problems you chose above? (How can you use your interest, talents, and strengths to help solve the problems that you identified?)

use sun power and save coal use your talents and make them job. make more coal mines.

This is a sample of a class generated chart that list what my students felt were community needs and solutions/ways they can help.



Pages 21 A and B are sample reflections from Career day.

2017 Career Day – "Building a Future Sustainable Economy"

Restate Each Question and Answer them in Sentence Form

Career choice: [redacted]

Why did you choose this career?

I choose this because My mom makes shirts, sibe, keychain and a lot of other stuff and I injoy makeing that stuff with her.

How does coal Impact the career that you chose?

If We didn't have coal I Wouldn't have electricity to run the machine that cuts out the monogram stuff.

How would your career choice benefit your community?

They would be able to Buy monogram shirts and accessories local and Wont have to drive long distance to get it.

2017 Career Day – "Building a Future Sustainable Economy"

Restate Each Question and Answer them in Sentence Form

Career choice:

My career choice is to be a docter.

Why did you choose this career?

I chose this career because I want to help people. People who are sick need a doctor's help to get better.

How does coal Impact the career that you chose?

Coal impacts this career because if miners are out of work there are less patients to see. When they are out of work they had no insurance.

How would your career choice benefit your community?

This career choice will benefit my community by allowing me to care for patients who are sick.

2017 Career Day – "Building a Future Sustainable Economy"

Restate Each Question and Answer them in Sentence Form

Career choice: Teacher

Why did you choose this career?

I choosed to be a teacher because I like to help kids with their work and to help them learn.

How does coal Impact the career that you chose?

It impacts my career because You use electricity for lights and computers. Also, It brings Jobs and families to our commuity.

How would your career choice benefit your community?

It would benefit your community by You having a good education in school so you can go to the High School and to College.

Name Haleigh

2017 Career Day – "Building a Future Sustainable Economy"

Restate Each Question and Answer them in Sentence Form

Career choice:

Teacher

Why did you choose this career?

To help kids learn to get a education go to college and be some body. I also would also like to teach kids with a learning disabilities.

How does coal Impact the career that you chose?

By teaching you teach the children about the history about coal. I can also teach kids about the ~~inmortants~~ of coal.

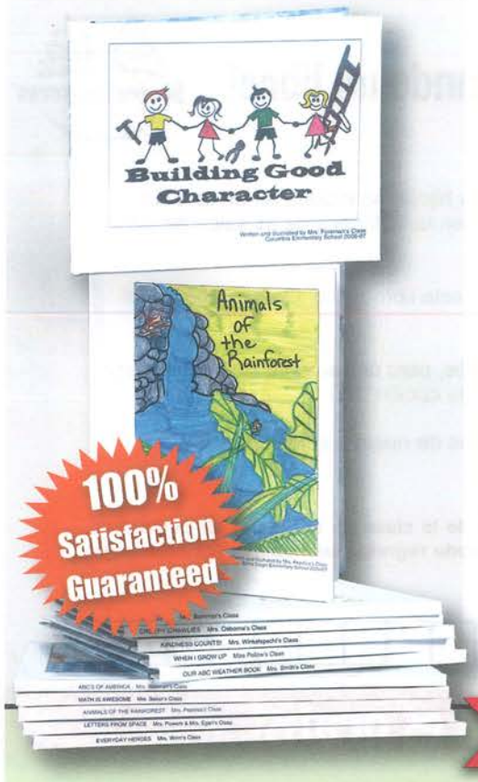
How would your career choice benefit your community?

Because I'm helping the community children to learn.

Look on the back

Page 22 →

This is a Sample order sheet that I sent home so that parents could buy a class book from our favorite authors.



Our Class is Publishing a Book!

Studentreasures PUBLISHING

Dear Parent,

I am proud to tell you that your child's work will be featured in a hardbound book! This will be a treasured keepsake in my classroom library for years to come!

This is your chance to purchase copies of this one-of-a-kind book. **Order now and shipping & handling is FREE!**

Our classroom will receive this book free, but only if I get your order form back with your signature, even if you check, "No."

Thank you for your continued support in our classroom endeavors.

Your Child's Teacher

☐ **YES, I would like to order copies of my child's hardbound classbook. I understand that if I am in any way dissatisfied, I may return any copies for a full refund.**

CHILD'S NAME

Order now and shipping & handling is FREE!

1 Place Your Order

Total # of Hardbound Books Ordered ☐☐ x $19.95 USD each = ☐☐☐.☐☐

☐ Deluxe Binding (optional) Per Book ☐☐ add $4.95 USD each = ☐☐☐.☐☐

2

3

NAME

EMAIL

PHONE

tted.)

Included in our unit evidence box is a copy of our Published class book. Be Sure to check it out ☺

FOR MORE INFORMATION, GO TO: STUDENTREASURES.COM/PREORDER

This is a sample Poster that one of my students created for career day to advertise her bakery.

→

Menu

Cupcake: 5.00$
Cake: 10.00$
Cream horn: 2.00
Cookie: 1.99
icecream: 5.00
Snowcone: 2.00
Others: 0.50¢

Crazy Cookie!

Want to Pre-order? Call 1-900-Cookie.

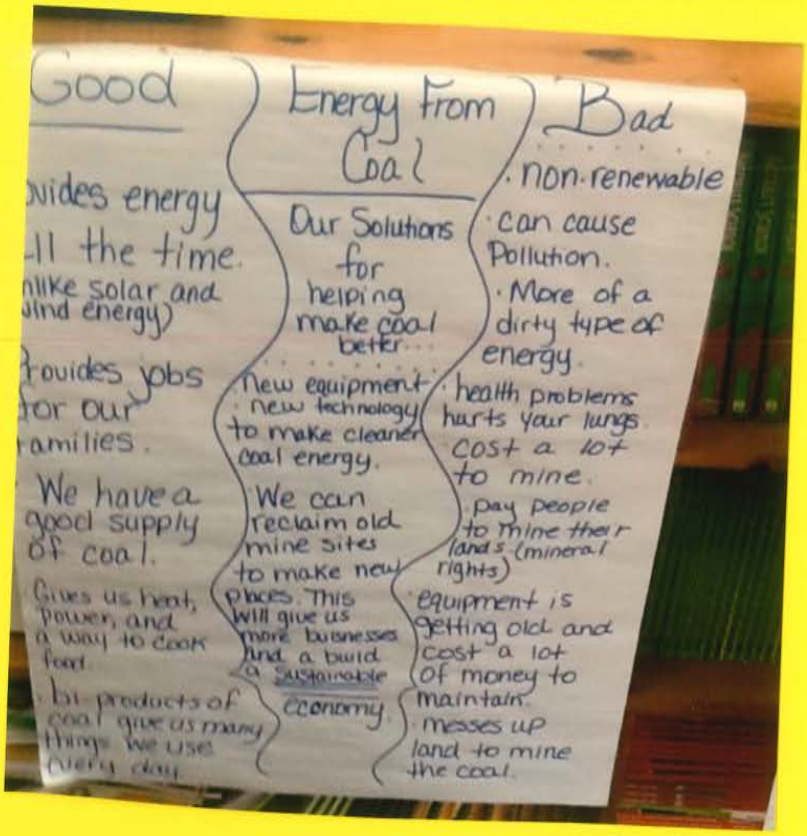
Work Samples for Essential Question 4

01-10-17

Essential Question #4

What are other types of energy sources other than coal? How do they play a role in the problems/solutions we are facing with coal?

(Essential Question #4 was added as my students began the unit. Formative assessment data showed a need for a deeper understanding of energy sources and the role they play in today's energy sector.) This was important for my students to see the true value of coal.



This is a sample chart that my class created noting the good and bad of Energy from Coal. The middle section are ideas that the students generated as solutions for helping to make coal better.

Name: _____

Date: _____

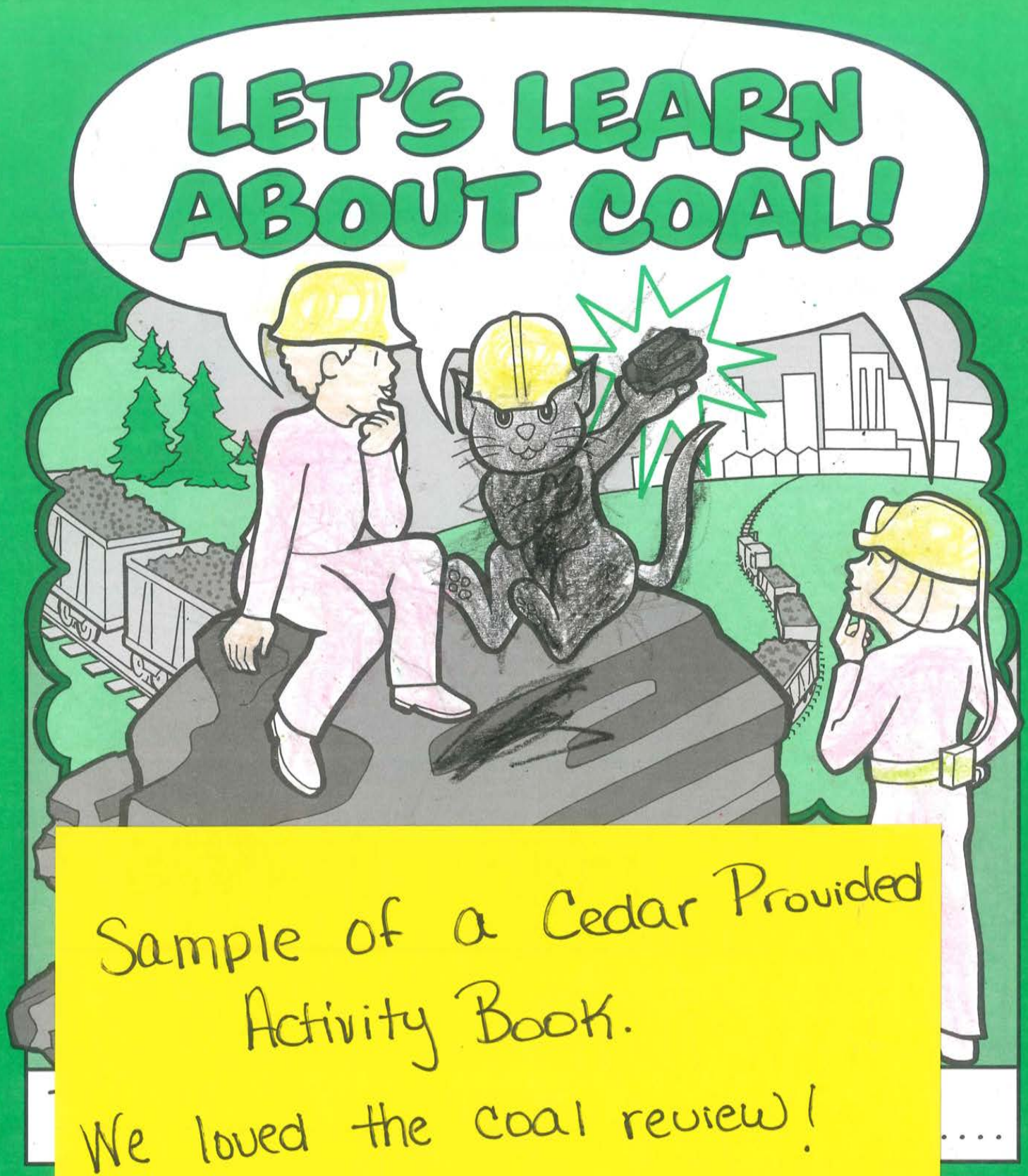
School House Rock – "Energy Blues"

While watching the video, see how many forms of renewable and non-renewab
on your dry erase board. As a group... discuss the sources and tell what categor
your sheet.

Let's Move!! We will watch the clip a second time and this time stand up when
you hear a renewable resource. Tally the number of times you were up and dow
more non-renewable energy sources?

Renewable Energy Resources	Non-R
1 Wind 2 Solar 3h Hydropower 4 geothermal 5 biomass	1. Coal 2. natural go 3. oil 4. nuclear 5. energy

This is a sample recording Sheet that my students used while watching "Energy Blues". We played a "take-ten" game where they stood up when the song said a non-renewable resource and sat down when they heard a renewable resource.



Sample of a Cedar Provided Activity Book.

We loved the coal review!

Energy Webquest

Name: _____

a) Visit the website: eia.gov/kids
b) Click on, "What is Energy?" Then, click, "Energy Basics." Read the information on this page.

c) Answer the questions in the chart below.

What are the five main renewable energy sources?	What are two of the main non-renewable energy sources?
1. Biomass 2. Geothermal 3. Hydropower 4. Solar 5. Wind	1. Natural gas 2. Coal

d) Read the last three paragraphs on this page. List 3-5 facts that you've learned about how we use energy sources.

1. industrial: We use energy in factories mining and Construction.

2. transportation: cars, trains, trucs and ships.

3. Residential: We use energy for our homes.

4. c... rest...

e) ...

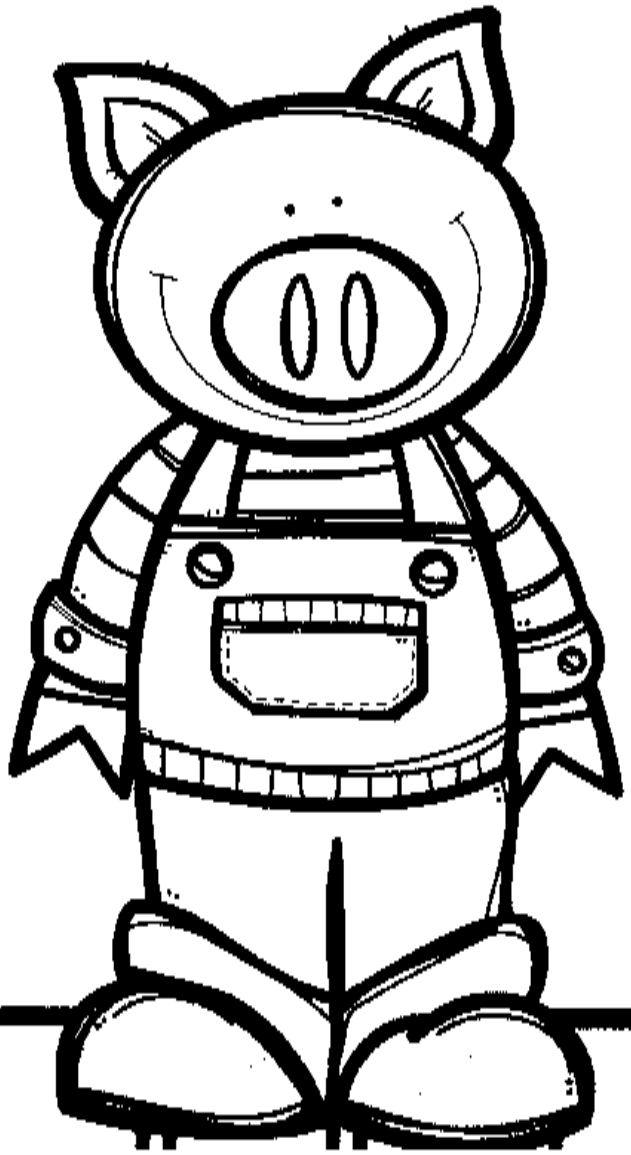
f) ...

This is a sample webquest that my students did to expand their energy Portfolio.

Piggy's House of Cards

STEM

Students **construct** a house for the three pigs.



Piggy's House of Card introduction STEM

1. Read aloud to class and/or provide each group of 4 students the pig story found at this website.

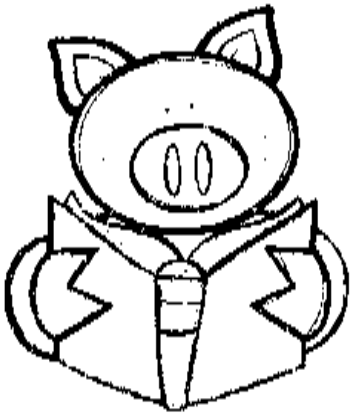
2. In groups, students will answer pig question cards. You may choose to give 1 question per group or more. Several different questions are provided. Allow time for class discussion.

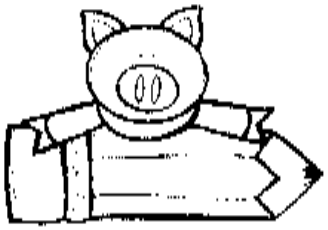
3. Then, in groups, students will design a house for the pigs made of index cards and masking tape only.

Criteria: Your house of cards will be judged on how well it stands up against the wolf trying to blow it down (hand fan)

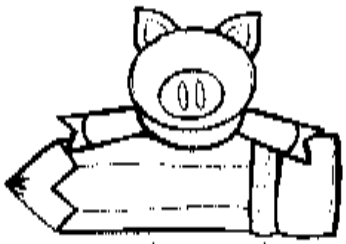
Constraints: You will only be given 20 index cards and 12 inches of masking tape. You may not have more!

Don't forget to fill out your BLUEPRINT (the recording sheet) for the task as you complete each step with your group.





Your Task:



Design a house for the pigs made of index cards and masking tape only.

Criteria: Your house of cards will be judged on how well it stands up against the wolf trying to blow it down (hand fan)

Constraints: You will only be given 20 index cards and 12 inches of masking tape. You may not have more!

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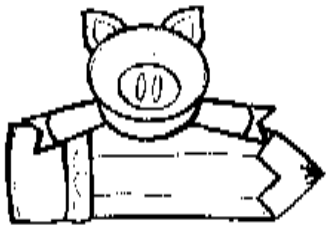
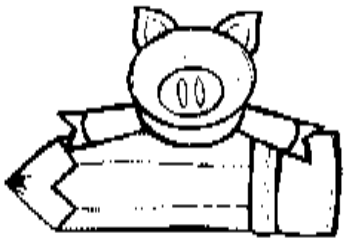


Your Task:



Design a house for the pigs made of index cards and masking tape only.

Criteria: Your house of cards will be judged on how well it stands up against the wolf trying to blow it down (hand fan)

Constraints: You will only be given 20 index cards and 12 inches of masking tape. You may not have more!

Don't forget to fill out your BLUEPRINT (the recording sheet) for the task as you complete each step with your group.

This is a Sample of a → STEM activity where students use the engineering design process to build Piggy a new house that the wind wouldn't blow down. I stepped this activity up a notch by adding a critical thinking activity where they had to explore energy options and choose the best energy source for piggy's house.

[redacted]

A House For Piggy – STEM LESSON and Critical Thinking Activity

After completing the stem activity discuss with your groups the way to provide electricity to piggy's house. Choose the best energy source for Piggy's house and circle it below:

coal powered

Solar

Natural Gas

Water

Wind

Explain why you chose the choice that you did.

[redacted]

Brainstorm

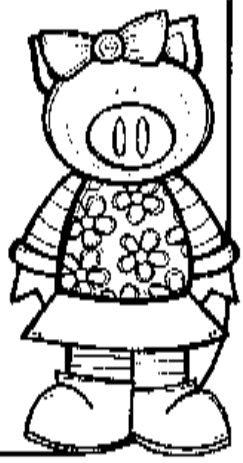
Design a house of cards for the pigs.

Investigate

What do you know about the challenge?

Design

Sketch and label your design. Why is your design the best for your team?



ENGINEERING DESIGN PROCESS

ASK

What is the problem? How have others approached it? What are your constraints?

IMAGINE

What are some solutions? Brainstorm ideas. Choose the best one.

PLAN

Draw a diagram. Make lists of materials you will need and steps you will take.

CREATE

Follow your plan and create something. Test it out!

IMPROVE

What works? What doesn't? What could work better? Modify your design to make it better. Test it out!

THE GOAL

This is a sample foldable that explored the energy sources. On the back, students added coal and developed some solutions that they thought would help reverse "the bad" traits that they listed for coal.

→

The Power of Wind Energy

The Good

Wind can turn turbines to create electricity. It is renewable and is a very clean way of obtaining energy.

The Bad

It requires large, noisy blades to work, changing the environment. If the wind isn't blowing, it doesn't work.

This is a sample poster that a group created after researching "Solar Energy". Our class divided into groups and each group chose an energy source. They noted good and bad facts. Students then taught their ideas/findings to the class. →

Solar Energy

Good

Solar energy is powered by the sun

Solar energy is probably the most important source of renewable energy available today. Traditional the sun has provided energy for practically all living creatures on earth, through the process of photosynthesis in which plants asorbs Solar energy. But It's good because It is a clean resource and does not use up time

Solar energy works

Bad

Solar energy can also be good and Bad but Im talking about bad. Solar energy is bad because what if it's cloudy or nighttime because it runs on sunlight so that means it wouldn't work if you had a house that runs on solar power you would not have power Q4:7 unlike coal power you would not have power all the time But it would Worth perfect if you

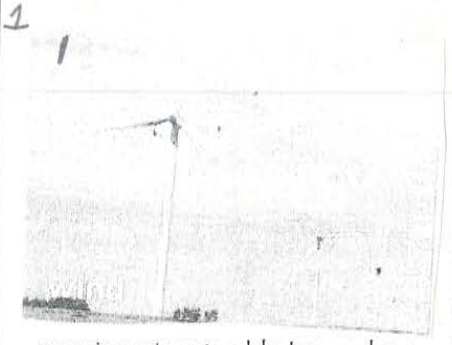
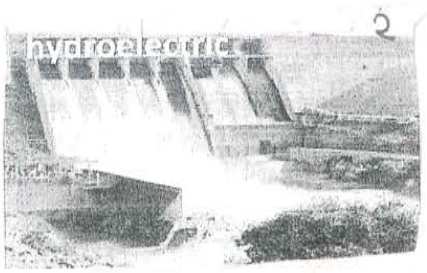
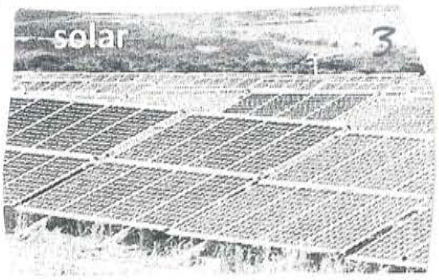
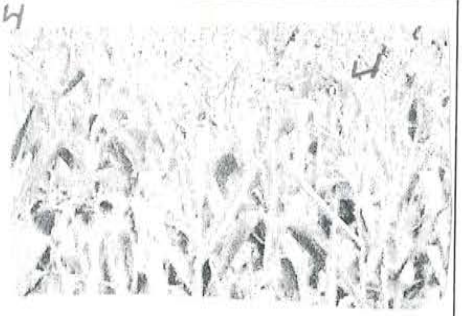
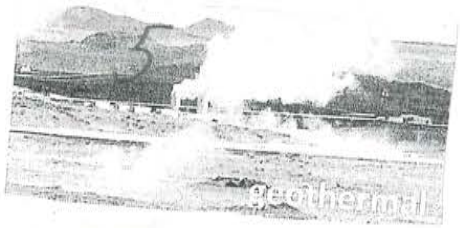
Solar powered house with sunlight all the time.

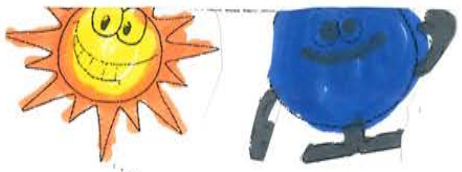
with Sun

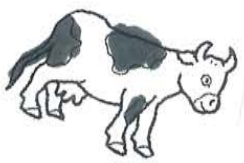
Name [redacted] Date: 2-27-17 Feb 2017

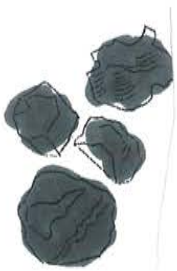
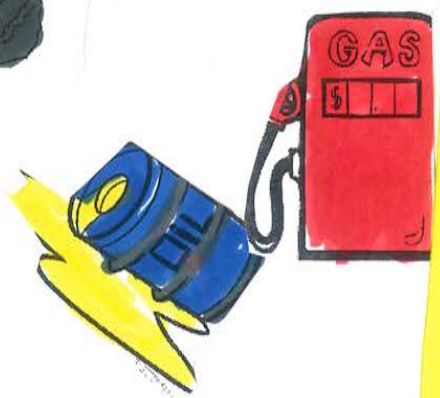
Alternative Energy

Cut and paste the images in the correct squares.

1  -moving air spins blades on large wind turbines. The turbines generate electricity.	2  -energy from moving water in a dam spins a turbine that generates electricity.	3  -energy from the sun can be captured using solar panels and converted to electricity.
4  - energy from plants & energy. -stored energy from plants such as corn can be used to make fuel for cars, trucks, and airplanes.	5  -heat from the Earth's interior generates electricity and can be used to heat homes and buildings.	**Alternative Energy**



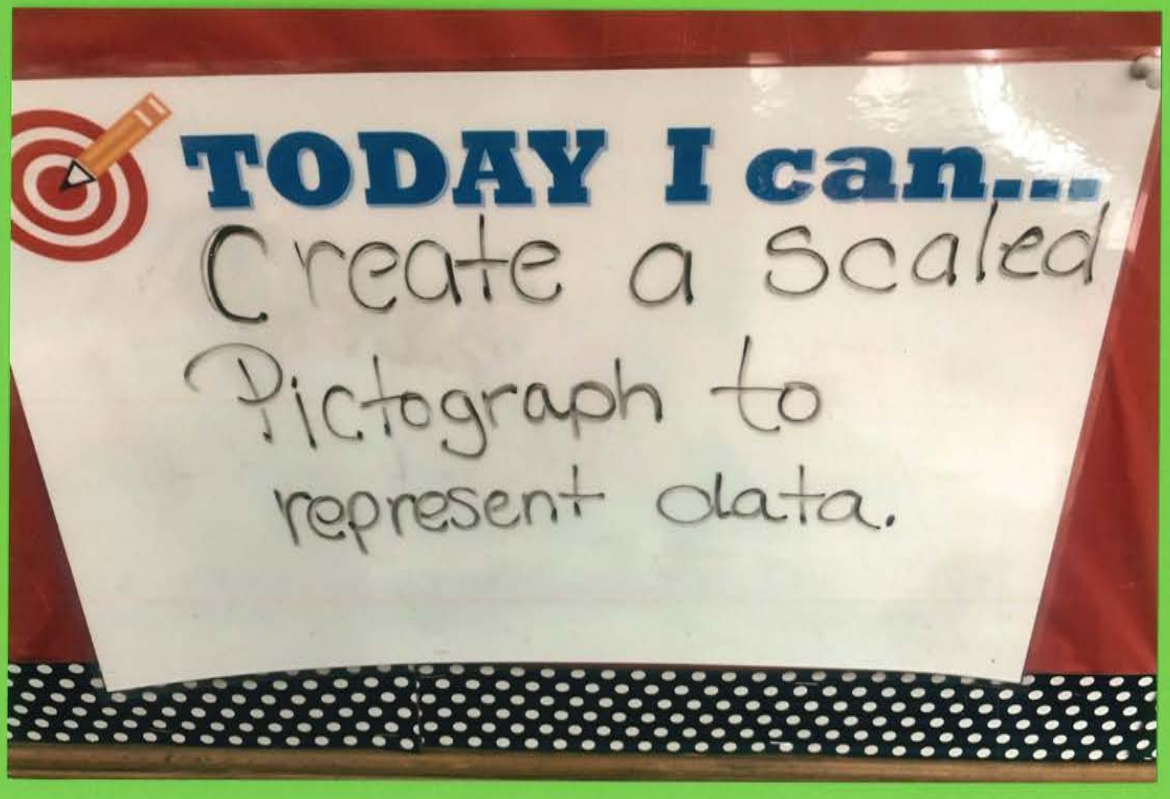
This is samples of energy source sorts that was part of our lesson expansion to broaden my students' energy Portfolio. →

Work Samples

01-10-17

Work Samples...

This is a Sample of One of our "I can" statements / learning targets. These are posted daily to guide our learning.



Coal K-W-L Chart

Name: Date:

What I know about coal	What I want to know about coal	What I learned about coal

These are samples of Post online. We have a class facebook page to keep our parents informed. We love to showcase our work!

To wrap up the CEDAR Coal Unit [redacted] got to dress up for career day today. They had to tell why they chose the career, how Coal has an impact on the career they chose, and how their career will benefit the community. We had police officers, teachers, doctors, news reporters, EMTs, artists, postal workers, coal miners, electricians, bakers/chefs, zoologists, lawyers, and many more careers represented today!

This is just a reminder that we ARE going to Grant's Branch Tomorrow. FINALLY! If it is cold and rainy we will spend the majority of our time inside the cabin. We will leave school around 9 and return around 2. Please dress your child warm!! We will pack lunch from school and also provide snacks. Many of you have sent things and we really appreciate it! We have some really fun and exciting educational centers and learning opportunities planned for tomorrow as we wrap up on our CEDAR unit and learn about reclaimed land and the benefits to our community!
Thanks for all your help! As always, you are simply the best!

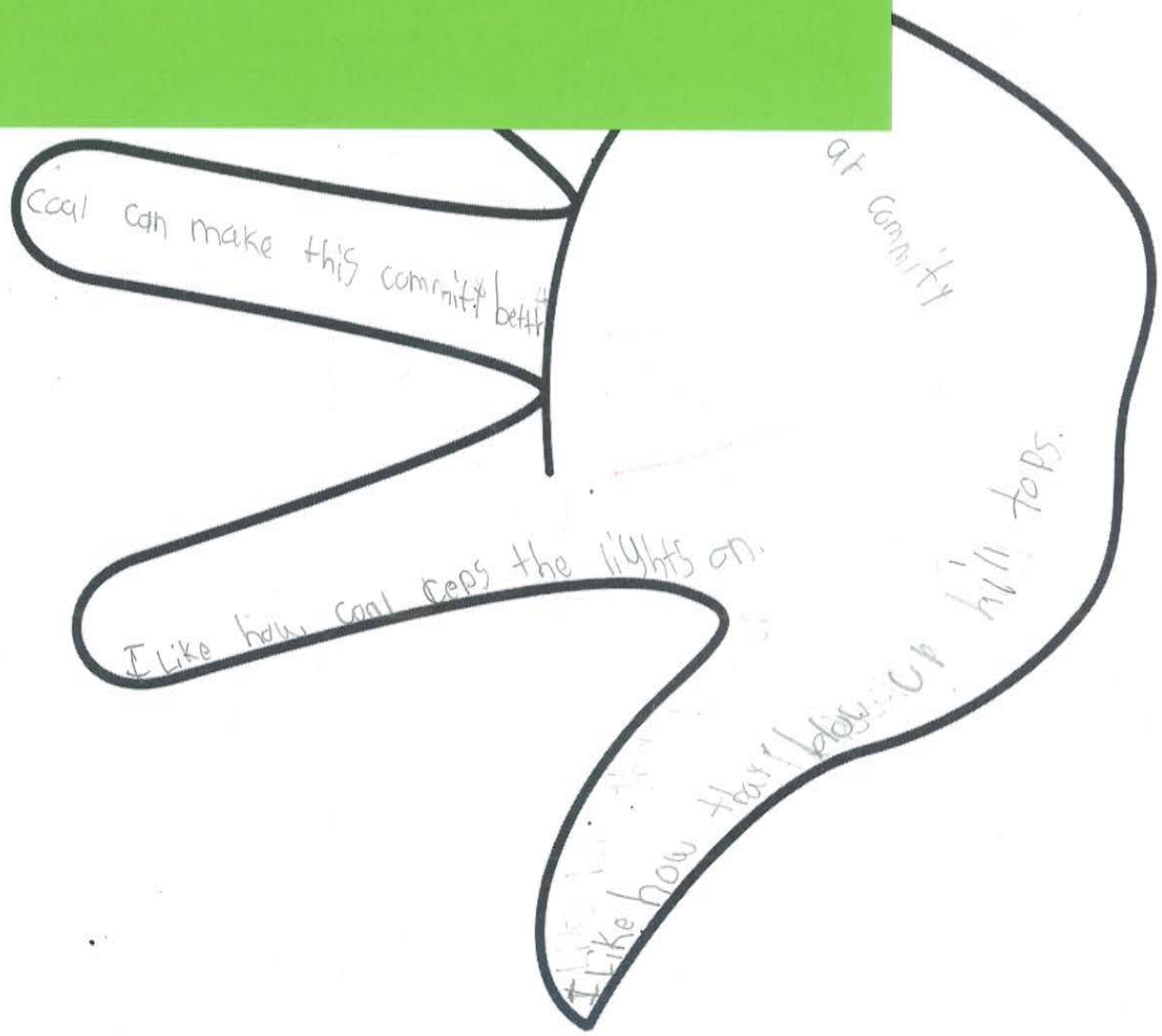
Post

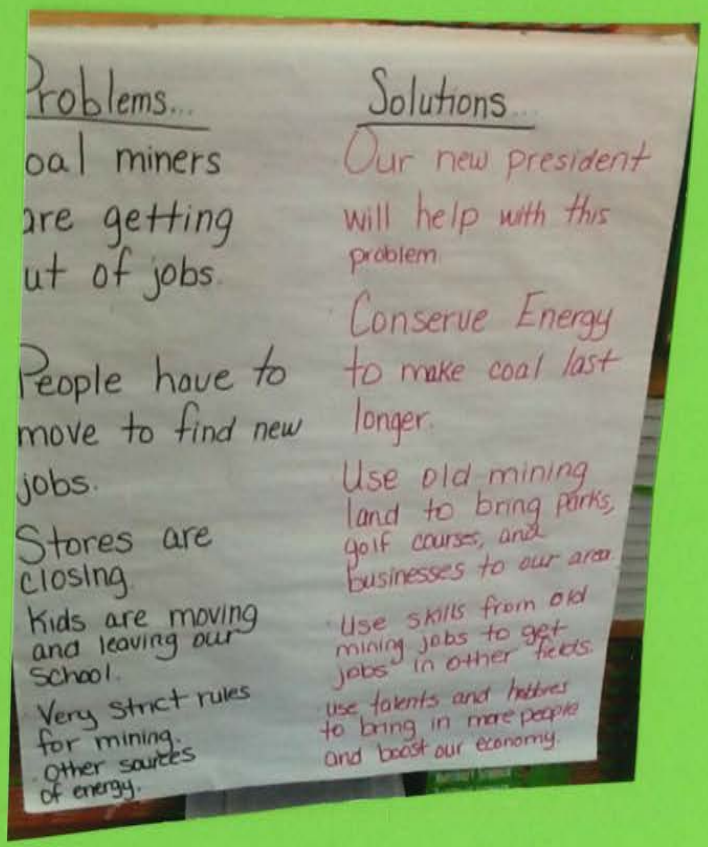
Our Class Coal Council

Our class voted for officers for our Class Coal Council. These student leaders will assist in leading the Coal Unit.

This is a sample certificate that I presented all of my students with, for reaching our unit goals and performing above my expectations.

This is a sample that shows 5 things about coal that the student liked or found interesting or important during the coal unit.





Problems...

oal miners are getting ut of jobs.

People have to move to find new jobs.

Stores are closing.

Kids are moving and leaving our school.

Very strict rules for mining.

Other sources of energy.

Solutions...

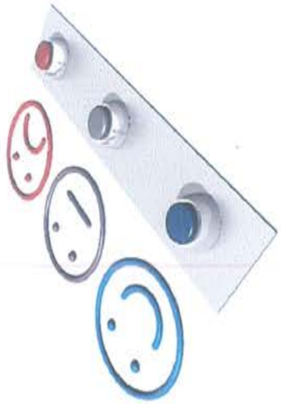
Our new president will help with this problem.

Conserve Energy to make coal last longer.

Use old mining land to bring parks, golf courses, and businesses to our area.

Use skills from old mining jobs to get jobs in other fields.

Use talents and hobbies to bring in more people and boost our economy.



CK...

for our unit?

...s "I Can" statements for the unit?

...oing to reach our learning goals?

...oal?

...:

...s my faviort because every... ...d the other got to shop at ...nates store.

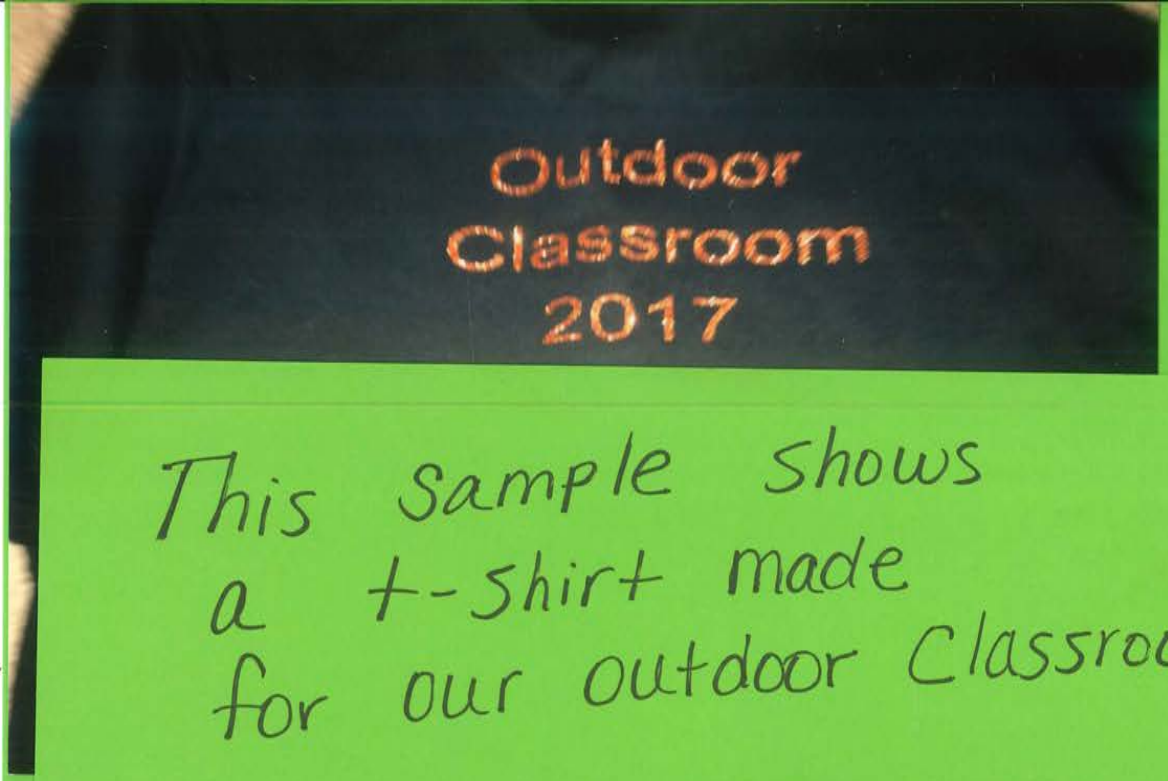
...out the unit:

...e anything.

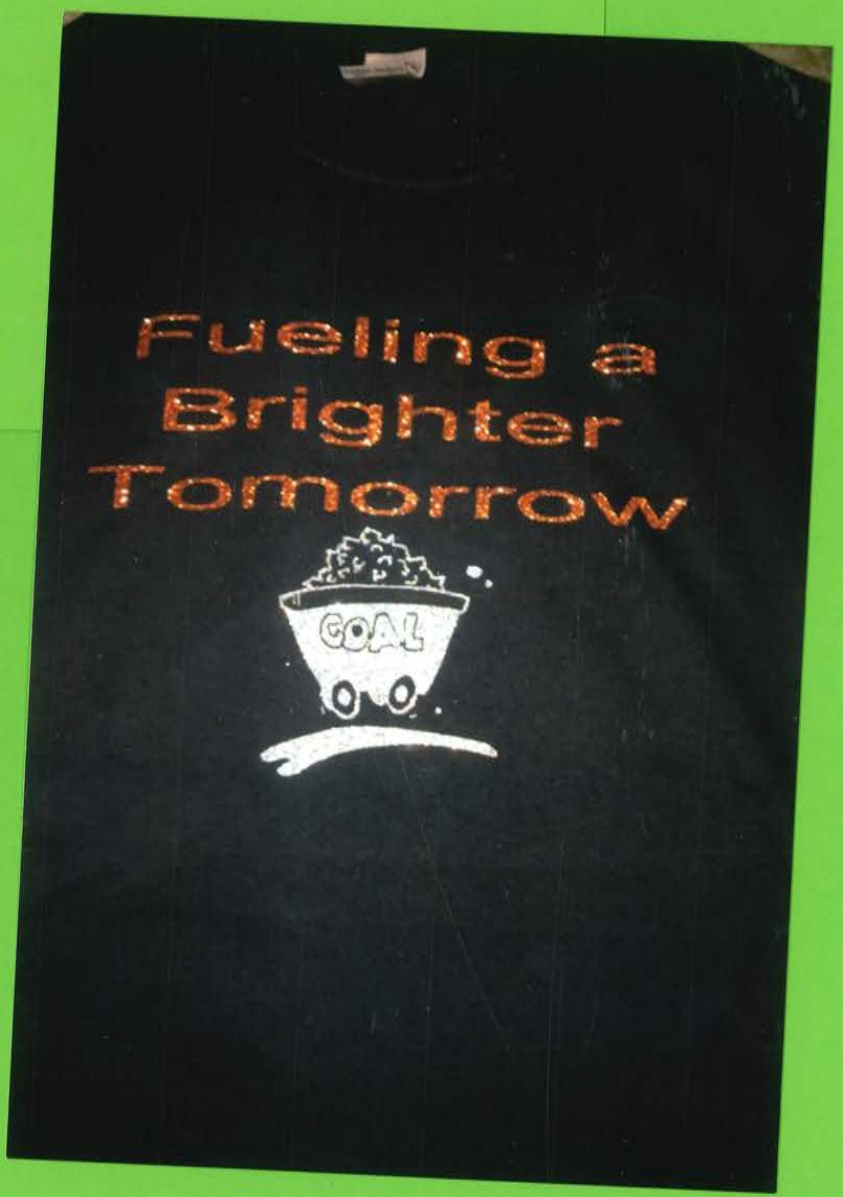
This sample shows one way that my students had to evaluate our unit. Students evaluated our unit in several different ways as you will see in the other samples. I let them choose how they wanted to evaluate their learning :)

This sample is a picture that a student made and left on my desk during our coal unit. When a child uses their free time toward what you are teaching, it lets you know that they enjoy what they are learning.

Task: Develop a T-Shirt Design that demonstrates one important fact that you have learned during the coal unit. You may choose to include a slogan, quote, or picture. Make sure the design demonstrates a part of our unit that was important to you.

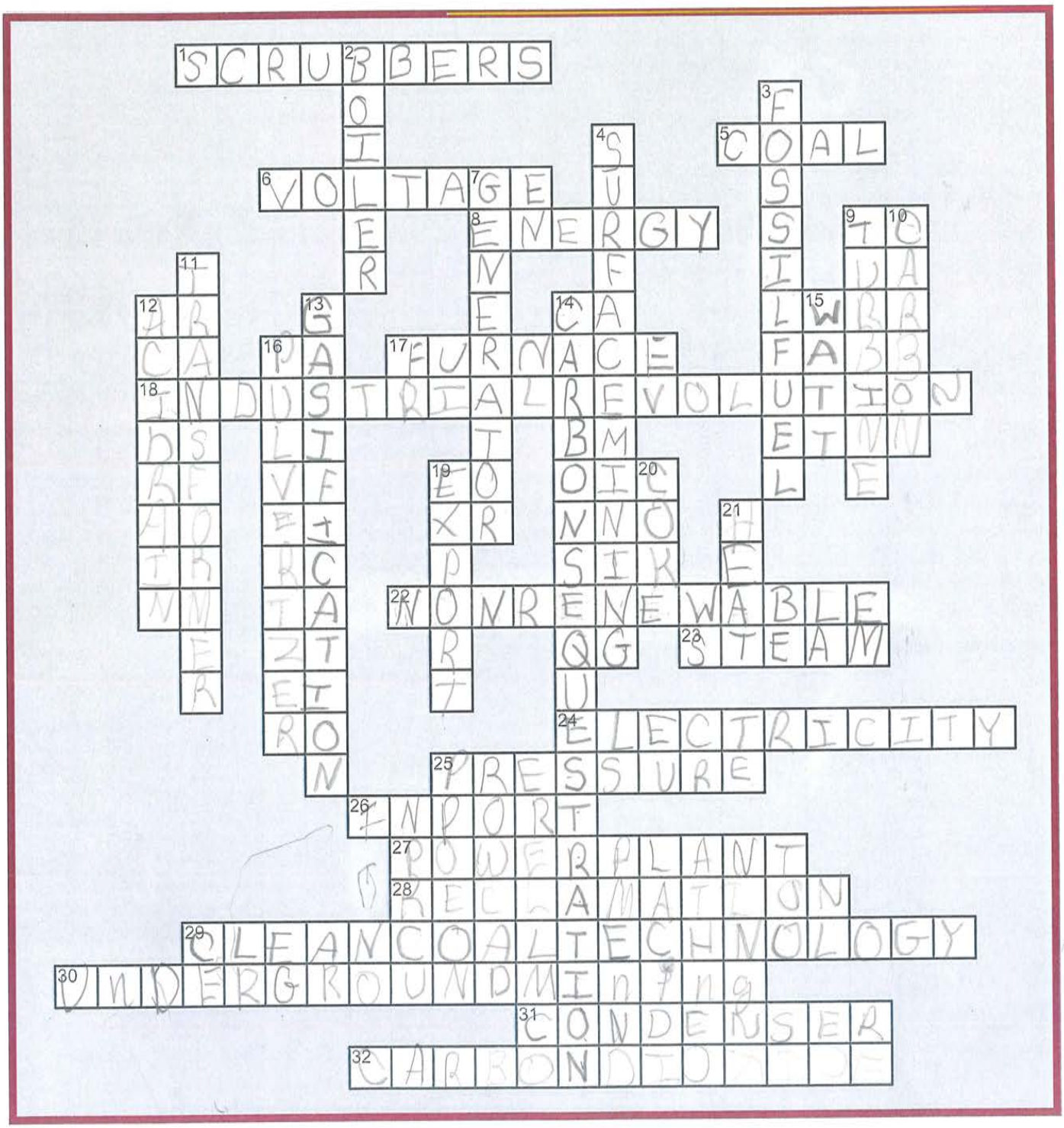


This sample shows a t-shirt made for our outdoor Classroom.



Complete the Crossword Puzzle

Name _____ Date _____



Task: Develop a T-Shirt Design that demonstrates one important fact that you have learned during the coal unit. You may choose to include a slogan, quote, or picture. Make sure the design demonstrates a part of our unit that was important to you.

How Does Coal Drive Your...

?

Coal was found where I live. Coal miners were brought to the area. They were so much coal that they needed more people to work there so they built coal camp houses that my neighbors like in today.

Coal is used in my State to make electricity. We use it in our homes and schools everyday. Coal by products give us a lot of materials we use like concrete and paint.

Coal might be used in new ways like to make a scalent to protect houses in any weather condishins. Reclaimland from old mines will be the future spot for factories, solar and wind farms, and farms.

Goal 1

To learn about the history of coal in my area and to find out what resources coal has gave us.

Goal 2

To leran ways to use resources from coal like products made from coal, reclamed land and energy.

Goal 3

What can I do to use what coal gave us to build a better econom.

My Learning Goals : Write your goals for our unit in the boxes above. As you complete the unit color the stars to rate your progress toward your goals.

Key

Green: I have met my goal.

Yellow: I ALMOST have met my goal. I

Red: I have not met my goal.

RATE OUR UNIT
As We reach the  Finish Line...

Directions: Circle the medal that BEST rates our CEDAR unit!

If you chose:

1. Gold: Why do you think we had a gold unit?
I think it was a gold unit because it was put together so well and so organized
2. Silver: What made this unit a silver? _____
   What did it need to be a gold? _____
3. Bronze: What made this unit a bronze? It was a lot of fun!
   What are two things that we could do differently to make it a gold? _____

Activity in a Nutshell 

What are you learning?

We are learning about the history of coal and about the importance of coal to help us build a future sustainable economy.

How will you learn it? (Activity)

Coal research on our chrome books. We highted facts, We wrote facts on index cards and we did a fact swamp where we traded our facts with our class.

How will you know you have learned it?

We are doing a open response. We made a student creat rubric and it helps us score our work.

End Of Unit Evaluation

Please complete this evaluation online or on paper.

1. We had a voice in planning our coal fair unit.

Always

Almost Always

sometimes

never

2. We had input in how our unit was evaluated?

3. We had a variety of activities that were interesting, engaging, and fun.

4. I met my goals for the coal unit

5. I would change the following to make the unit better...

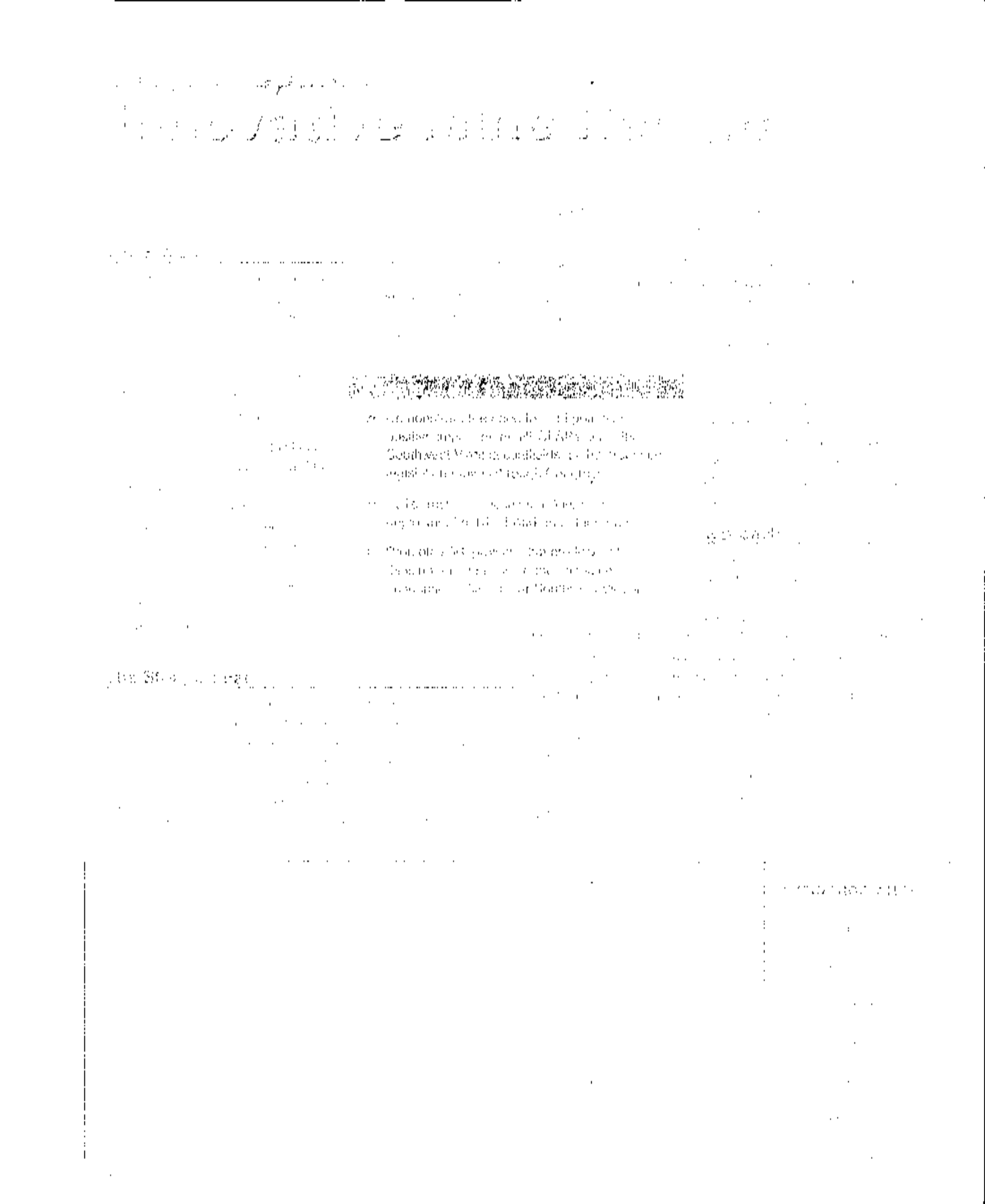
6. The unit was meaningful to me.

Always

Almost Always

Sometimes

Never



AppalachianVoices

Innovative Mine Reclamation in Southwest Virginia

Project Update

Prospective Abandoned Mine Land Sites Suitable for Economic Development

Prospective Site Name	Location	AML/Adjacent to AML	Category
Norton Riverside Trail	Norton	AML VA000067	Recreation
Norton Cloverleaf	Norton	AML VA000067	Industrial
Lonesome Pine Airport	Wise County	VA00065	Residential
Lonesome Pine Airport	Wise County	VA00065	Industrial/Solar
Devil's Fork	Scott County	VA000281	Recreation
Glamorgan	Wise County	VA000418	Agri-forestry/Industrial/Residential
Red Onion Industrial	Dickenson County	Adjacent to VA000041	Industrial
Dante	Russell County	VA000094	Windmill
Bull Creek	Buchanan County	Adjacent to VA 000292	Recreation
Poplar Gap	Buchanan County	Adjacent to AML	Commercial/Industrial/Recreation
Buchanan County Airport	Buchanan County	VA000668	Commercial
Big A Mountain	Russell County	Adjacent to AML	Agri-forestry
Puckett's Creek	Lee County	VA000258	Agri-forestry/solar
Route 606	Lee County	VA000553	Solar/Windmill
Stone Mt. Trail	Lee County	VA000263	Recreation
Spearhead Trails	Tazewell County	VA000686	Recreation/Industrial/Residential
Meade Fork-Pound	Wise County	VA000800	Industrial
Tom's Creek	Wise County	VA000070	Aquaculture
Haysi-Russell Fork	Dickenson County	VA000676	Recreation/Commercial
Dungannon-Clinch River	Scott County	Adj. to VA000028/000697	Recreation
Abbs Valley	Tazewell County	VA000200	Hydro/Aquaculture/Agri-forestry

Learning Checkup

"Evaluating Your Learning": As you complete the activity, answer the following questions to check your learning.

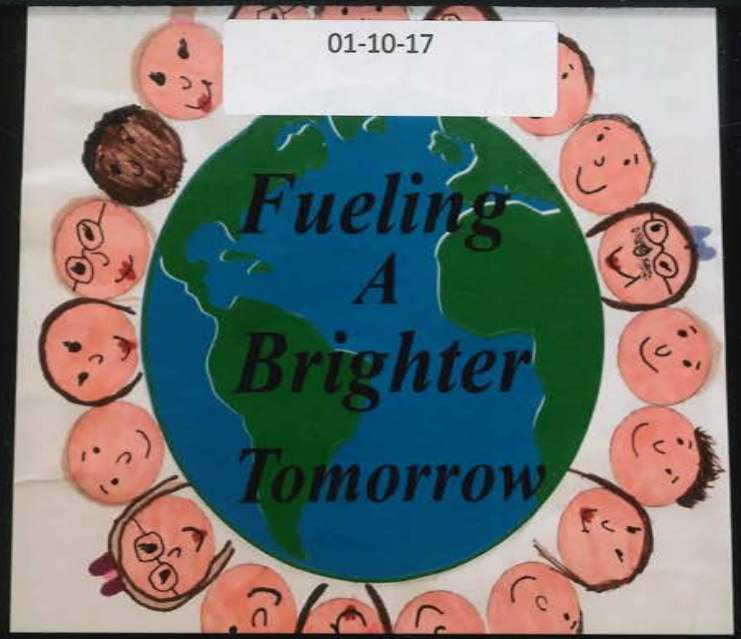
Activity:
Kentucky Fact post it note poster

Learning Goal:
To Understand the historical value of coal in our community to help us build a future Sustainable economy

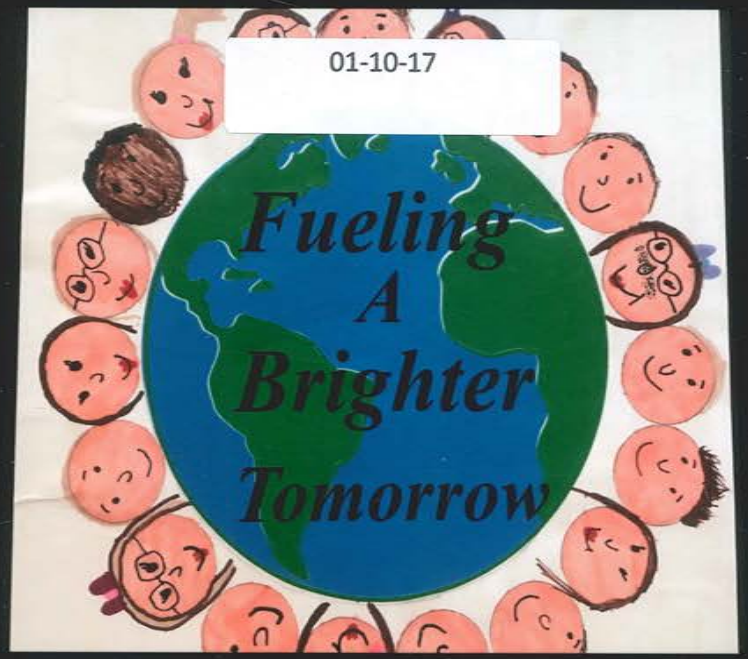
This activity helped me to work toward my learning goal.
1 2 3 (4) 5

I did my best on this activity
1 2 3 4 (5)

This activity was important to me so that I can reach my learning goal.
1 2 3 4 (5)

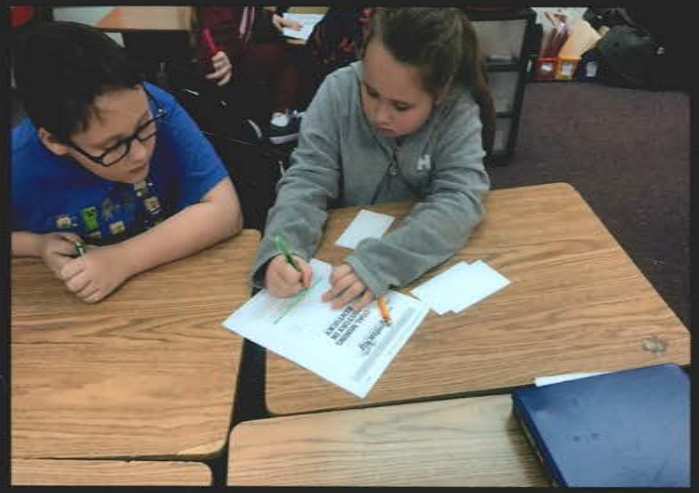


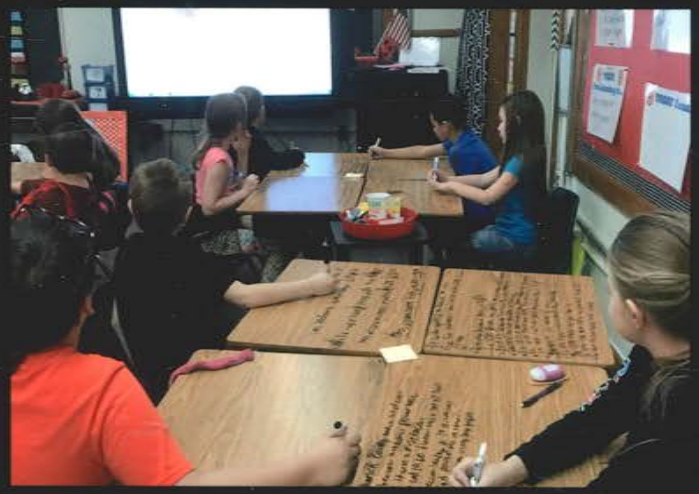
Book Contents:
2. Photos and
Description of Activities



Activity Pictures and Explanations

Activity 1: Students conducted internet research, printed articles, and are highlighting key ideas and details in the text.



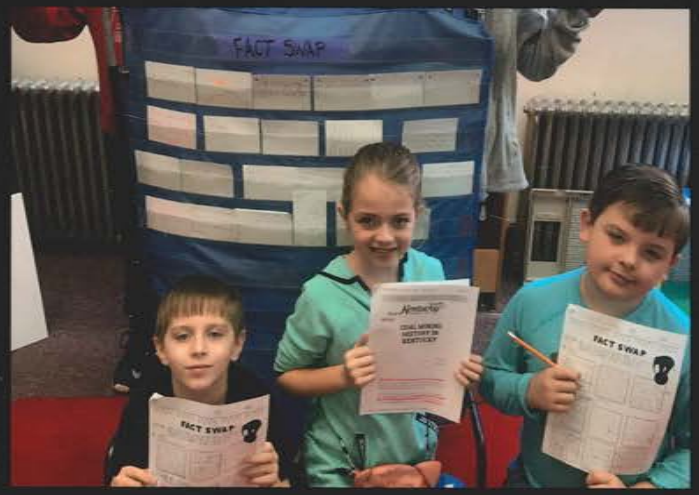


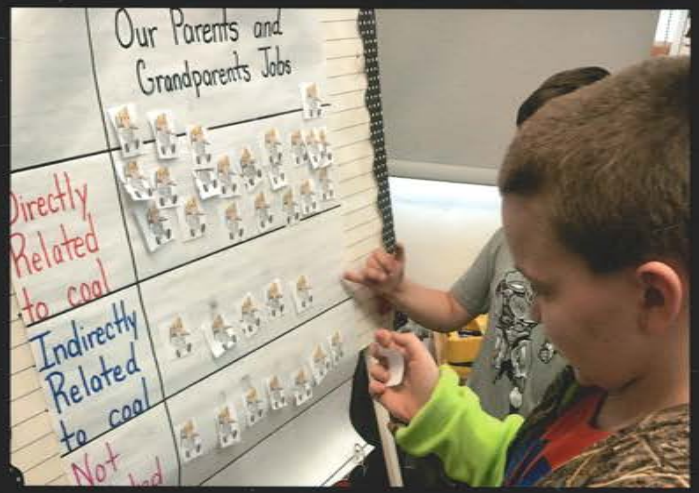
Activity 2 : Students interacted with a CEDAR provided timeline and wrote facts on their desk with dry erase markers, noting events in history that were meaningful to them.

Activity 3:
A student is presenting his coal timeline to the class. This was part of his research on coal history where students found one meaningful coal fact or event for each year of their life from birth to present.

Activity 4:
Students worked in groups to create a student developed rubric as a scoring guide for their open response question; demonstrating knowledge of essential question #1

Activity 5:
Students are showcasing their fact swap sheets. They developed facts on index cards from prior research. They wrote 3 facts and then had a fact swap where they traded facts with the class to build a fact bank.





Activity 6:
A student is busy deciding which category that his parent's and grandparent's jobs should be placed in. This was part of our class generated pictograph.

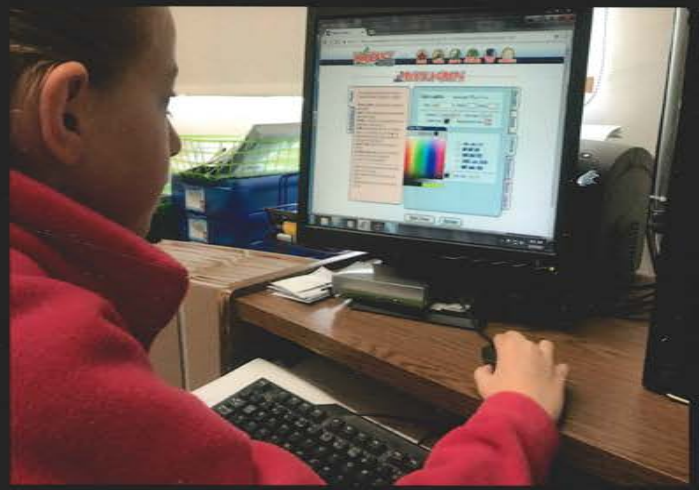
Activity 7: Students were engaged in music and discussion with a local Musician and Appalachia Storyteller. We were excited to have him help us to develop a deeper understanding of coal's history and our heritage.

Activity 8: Students created a chain by writing ways that history helps us to link our coal past with the present and future.

Activity 9: History Lesson on Wheels - While traveling to our outdoor classroom on reclaimed land we used the bus microphone to do a history lesson on wheels. Students saw The Henry Ford House, An Old Company Store, Old Mine Sites, and rows of Coal Camp Houses.

Activity 10: A student is sharing an old family book full of mining pictures as students' work to understand family traditions and how coal has shaped them.

Activity 11: Students held a news broadcast on the current issues that our local area is facing as well as some solutions that they developed using resources we already have and combing with interest, skills, and talents to build a future sustainable economy.



Activity 12: This student is using a computer program to generate a scaled horizontal bar graph comparing coal production when she was born to current coal production in our state.

Activity 13: Students are mining cookies in this coal simulation using two brands of cookies that represent the land being mined in KY and in another state.

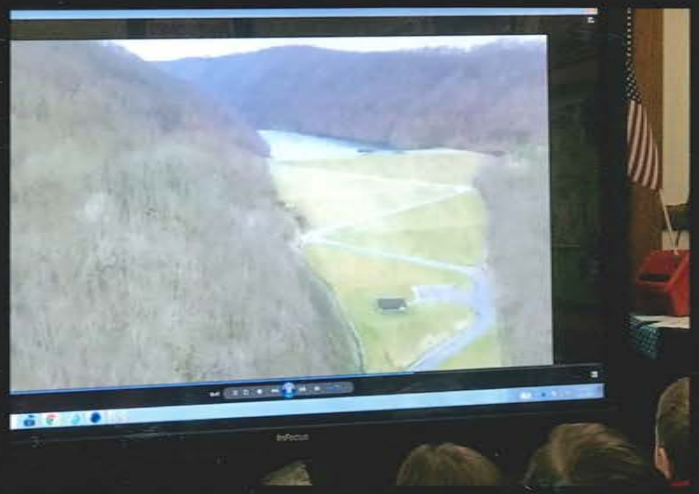
Activity 14: This student is using his chrome book to watch the YouTube video, Building A Future on Reclaimed Land".

Activity 15: A Guest Speaker is teaching us uses of reclaimed land and benefits to our economy.

Activity 16: Students are developing blueprints using area and perimeter and sketches of their ideas for local reclaimed land. They are making brochures to advertise their ideas.

Activity 17: A student is working in our class garden, as he learns the proper way to plow up the soil with the corner of his hoe. Students are learning farming techniques for reclaimed land.

Activity 18: The kids are on site at our outdoor classroom on reclaimed land. Using a Phantom 3 Drone, they are getting a "Bird's Eye View" of the site to use for our next activity.



Activity 19: We are using our drone footage to complete a Venn Diagram comparing reclaimed land to untouched land.

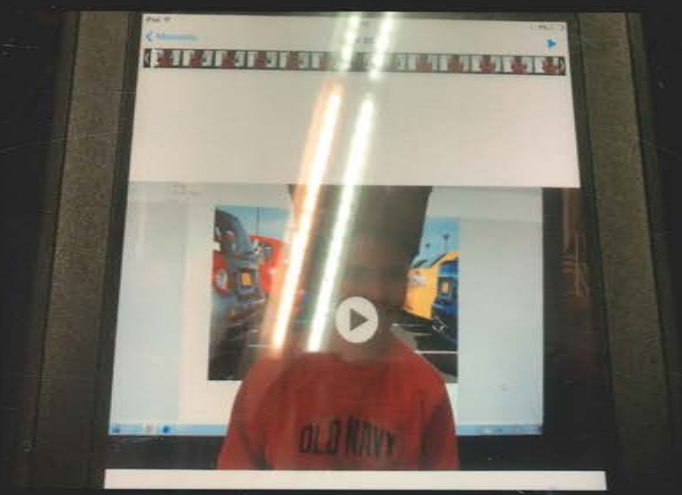
Activity 20: Our students were transformed into entrepreneurs as they opened their own small businesses for Market Day. They gained an in-depth understanding of using skills, interest, and talents to grow a future sustainable economy.

Activity 21: Students stop to snap a picture after presenting their future careers. They gave presentations on stage, discussing the impact of coal to their career as well as the benefits of their career choice to their local economy.

Activity 22: One of our class authors/ illustrators is hard at work on the cover of our class book!

Activity 23: Young Authors sharing their love for books and appreciation of coal present their published book at Open House for parents of students in grades K-5.

Activity 24: Student entrepreneurs take their business to a whole new level by creating marketing signs.



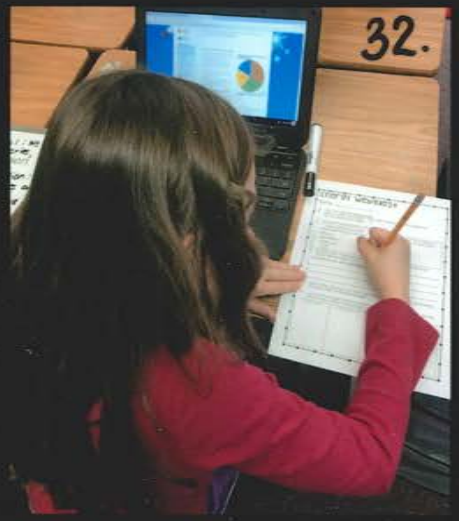
Activity 25: Students use an ipad to produce and film commercials to advertise their small businesses for Market Day.

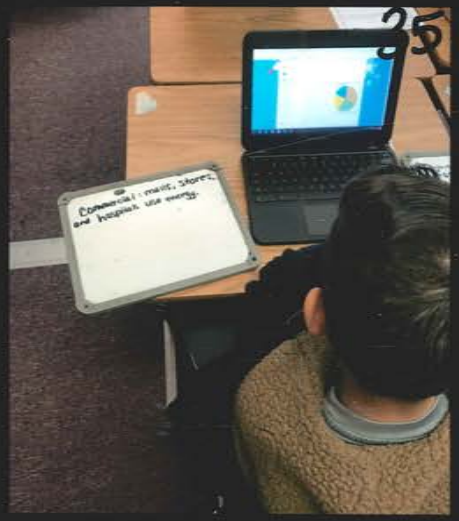
26. Students were given a block and were asked to brainstorm and write the first word that came to mind when they thought about coal. They came up and built a tower out of the blocks. If the last word placed on the tower was the same as the student's response they were putting on, then they had to develop a new word.	27.This student is showcasing her "Art" project for the school coal fair which was inspired by the work from our class coal unit. This is a statue of her dad who worked in the mines as an Electrician before the massive amount of layoffs hit our community. The student is proud of her final product and of her "Coal Roots"!	28.This activity the students' researched coal facts and wrote a fact that they felt exemplified the importance of the history of coal in our area. We used the facts to create a classroom display.
29. A student is deep in thought working in his Cedar Activity Book!	30. Students' watched, "Energy Blues" from School House Rock as we studied to broaden our energy portfolio. Students participated in a "Take 10" activity where they stood up and sit down to identify if an energy type was renewable or nonrenewable.	31.Here a student is drawing our cover for our Cedar Unit. This is something I normally create but this year my students wanted to do it and so here it is!

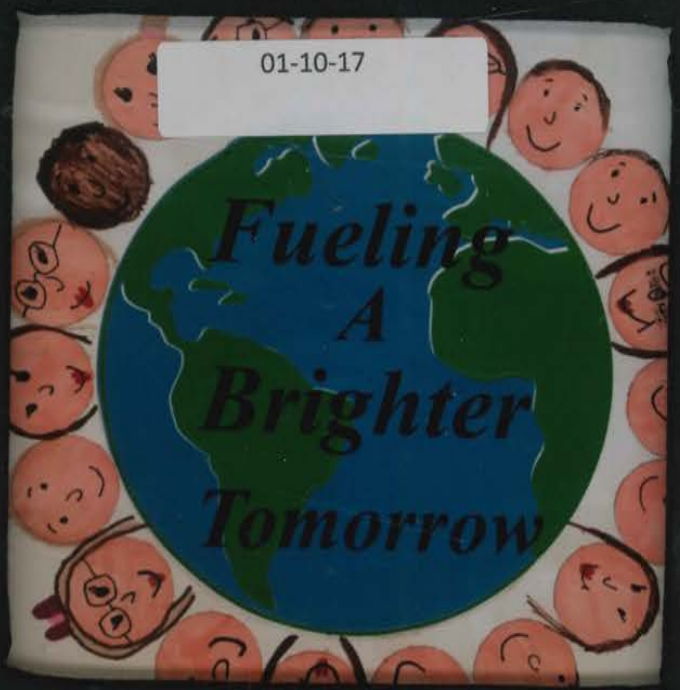
Extension Activities:

32. A student is completing an energy web quest using her Chrome Book. This activity has taught research skills.	33. Students participate in a STEM activity where they apply critical thinking skills and engineering design to build a house for piggy that won't blow down using 20 index cards and 12 inches of tape. Then students had to complete a critical thinking expansion where they had to decide what would be the best energy source to power piggy's house and explain why.	34. Students work in research teams to research energy types and present to the class. In this picture two students are presenting their findings and one of the students is teaching her peers as she adds examples onto the board.
35. A student is conducting internet research and using a dry erase student response board to take notes.	36. Students complete a renewable and non-renewable energy sort to show their understanding of energy types.	37. A student is completing a cut and paste energy activity as part of one of our lesson expansions so that students could see the other options for electricity and understand the value of coal as an energy source.

Extension Activities:







Book Contents:

1. Introduction
2. Description of Activities/Goals
3. Conclusion
4. Unit Proposal
5. Financial Accounting Sheet

1. Introduction

Over the last two months, we have walked it, talked it, taught it, explored it, flown it, built it, grew it, sold it, showed it... but most of all lived it. For coal isn't just a unit or a topic to my students. It is yesterday. It is today. It is tomorrow. Some things change with time and yet some things manage to remain. Coal has, is, and always will be a part of my students' life. This is the reason why I feel that implementing a CEDAR unit into my instruction is important.

As children of coal country, coal will fuel their future, I am often asked why I teach my students about coal. When beginning my CEDAR unit this year, I stumbled upon this quote: "What you teach today may someday light the world." (–L.W. Fox.) Coal has lit our little world for many generations. Despite the downs that we have experienced locally within the last few years, coal will continue to fuel the future. Coal has laid the foundation of our little community and the resources that it has supplied will benefit us for years to come. We have been faced with problems and who better to find solutions than our children, after all they are our future. As for me, I didn't want to tell my students what to see within this unit but more so what direction in which to look. It is through a student led unit that mastery of our learning targets would occur.

I really struggled to write my CEDAR unit this year. I was on maternity leave and the deadline was quickly approaching. Having previously taught this group of students in the past, I knew they had a pretty extensive background of coal. As I was trying to decide the direction to go with my unit, I thought about how I started the year out with twenty-five students on my roster. One-by-one the list dwindled as parents had to move away to find jobs. I had also experienced these problems first hand as my husband had

to transfer away to keep his railroad job. I was juggling being a teacher, a mommy AND daddy to a toddler and a two week old, and trying to stay in the place that I call home. After dwelling on these issues, I knew right away that I wanted my students to 1. Understand the history of coal in our area in effort to understand all that it has provided us with. 2. Realize current issues and challenges that our area was facing and 3. Explore possible solutions and possibilities for the future of our community/economy. I drafted a unit proposal from these three learning goals and developed essential questions around them. I mapped out an outline of my unit to serve as a guide but I knew that once I returned to school my students would lead the learning and take the unit in the direction that they wanted it to go. This is exactly what happened with our unit. You will see additional activities and expansion activities in my photos and samples that were not addressed in my unit proposal but were brought forth by the curiosity of some very inquisitive and imaginative youngsters. Without these additions, our unit wouldn't have been merely as successful as what it was.

When I returned to school, I began a KWL chart with my students. We created a class coal council which consisted of a president, vice president, and secretary; they would decide on ways to reach our unit goals and add to the unit draft that I began with. However; what really sparked my unit was when one of my students had crafted me a handmade desk nameplate from clay that she had baked in the oven to harden. On each side was handmade roses with detail that could easily compare to a real rose in someone's garden. I was amazed with the talent. I began noticing talents of other students in my class. One student could draw and sketch anything that you asked of her. A couple other students were quiet salesmen during a school fundraiser. Not only

did I see a classroom of children, I saw future business owners, future entrepreneurs, EXACTLY what our future economy was in need of.

My students led the learning throughout the unit. They created student formulated rubrics for scoring guides to evaluate parts of our unit by using a red, yellow, green light system that we use in class. They researched our topics, led the discussions, and presented their findings throughout the unit. They continuously self-assessed and reflected upon the activities and essential questions. The depth that my students took this unit truly amazed me. They evaluated our unit at the end as well as completed a survey using survey monkey.

2. Description of Activities and Goals

The goal for our unit was to develop an understanding of the essential questions and use that understanding to write a class book. The book would reflect ways that the students' could help their little coal town to solve the problems that it is facing. My goal was for my students to develop a connection with coal's role in their past, present, and future. I also wanted them to see how they could develop solutions to the problems we are currently facing by using their talents, interest, and skills in addition to the resources that coal has provided us with.

The following essential questions were established for this unit:

1. How can understanding the historical value of coal in my community assist me in establishing and promoting a brighter tomorrow?

2. How can we use our local resources to overcome current issues and challenges that our area is facing?

3. How can you use your personal interest and talents to fuel a brighter tomorrow for our local area?

4. What are other types of energy sources other than coal? How do they play a role in the problems/solutions we are facing with coal?

(Essential Question #4 was added as my students began the unit. Formative assessment data showed a need for a deeper understanding of energy sources and the role they play in today's energy sector.) This was important for my students to see the true value of coal.

As mentioned in the introduction, my student's played an active role in reaching our learning goals. They used 21st century skills along with critical thinking to exceed my expectations with this unit. I was amazed at the research that they conducted with their personal chrome books. They actually led research groups and taught the class through group presentations. Although we completed a wide range of activities that I felt were successful, the most meaningful activities was the entrepreneur part of our unit. My students blew me away as they created their small businesses and opened a future sustainable economy. Not only were they faced with critical thinking opportunities as they paid rent, utilities, hired workers, and managed their store front but they exemplified skills such as public relations and leadership that had went unnoticed before this day. I had students that actually invented their product for Market Day. One idea in particular, I could envision being very successful! Students produced commercials to advertise their business. They created slogans and posters and newspaper ads! I would have loved to been able to share the entire videos with CEDAR. They were a true example of a successful unit!

A second activity that I felt was a successful part of the unit which aided in reaching our learning goals corresponded with essential question number two. (Learning how to use our local resources to overcome current issues that we are facing.) We had a guest to come in and share their knowledge of farming with our class. Considering the season they focused their lesson around pea crops and taught students the "ins and outs" of gardening. We extended this activity by creating a class garden outside the school where we are currently growing a pea crop and looking forward to adding other vegetables. We introduced students to the farmer's almanac calendar. We had a guest to discuss benefits of using our reclaimed land for such things as farming. We discussed the farmer's market and how we would love to sell our harvest to gain a deeper understanding of providing produce for our community. Students researched large cities and brainstormed ways that we could benefit from such things as auto factories, steel factories using local coal for production, international airports, and buildings for businesses all using reclaimed mine land in our area.

The third activity that stood out to me was when the students presented their careers on stage. They explained how that career choice could help to grow a future sustainable economy by bringing in new businesses and by ordering materials and supplies from other businesses, to using utilities like power and water. One particular student was dressed as a teacher and she connected her job to all of the other students' jobs. She explained that without them, her job wouldn't be possible. Also, the students explained the impact that coal had on their job from providing reclaimed land to build it on, to bi-products being used in materials that they needed, to coal giving them electricity or establishing their community.

(Please see additional book labeled #2 Photos for pictures and explanations of all of our unit activities)

3. Conclusion

All good things must come to an end and this is especially true for our CEDAR unit. As we wrapped up our final CEDAR lesson, my students and I evaluated the success of our unit. We began with three essential questions and picked up one more along the way. We watched video clips, looked at finished products of work samples that we kept, and discussed our "L" on our class KWL chart. We were able to answer all of the things that we wanted to know as we started our journey of this year's unit. My students can now answer higher level questions and prove their answers when being asked to explain the importance of history of coal in their life or how to use reclaimed land or other coal provided resources to invent a product or open a business. Included in the green section of our work samples, you will see numerous ways that we evaluated the unit (survey monkey, open responses, class book, learning checkups, exit tickets, goal sheets, KWL charts, and ratings.) All of the evaluations were evidence that the students are confident that they met their goals and can apply their knowledge in real life situations. The students refer to market day as, "The Best Day of their Life!" and the pride that grew along with our crop in our class garden is proof itself that effective learning has taken place. Over the last two months, we have walked it, talked it, taught it, explored it, flown it, built it, grew it, sold it, showed it… but most of all achieved it! One thing is for sure, with coal as their foundation, one day these kids will move mountains!

Key =# dots correspond to the activity number for photos, activity descriptions, and work samples, located in the labeled black binders

List the Over-Arching Goal of Unit: **Students will research the historical value of coal, the challenges they are facing with the decline in coal jobs, and their solutions to fuel a brighter future for the coal fields using resources provided by coal. Through a final product (Published Book) they will demonstrate a deeper understanding and develop a connection with coal's role in their future as well as their role in the future of their community. Students will develop an understanding of how they can use their talents, skills, and hobbies to resolve current issues and help to grow a Sustainable Economy.**

Essential Questions: (2-5) These should be thinking questions that generally begin with "How" or "Why" and may have multiple answers.	KCAS Standards (list those that will support each essential question and will be assessed in the unit.)	I Can Statements of what students will be able to do	Assessments/Products (list at least one assessment or product for each standard.) Formative Assessment Is on-going as teacher checks students' progress. Summative Assessment will be the final product.	Activities (describe activities that support the assessment(s)/ product(s) and advance the standard.)	List materials required for each activity.	Cost
1. **How can understanding the historical value of coal in my community assist me in establishing and promoting a brighter tomorrow?**	English/Language Arts Standard 1: Reading Information Text Read Closely to determine what the text says explicitly and to make logical inferences from it. Cluster: Key Ideas and Details ----------	I can read an article and make inferences/draw conclusions.	Printed Articles – Students will highlight facts from printed articles and connect those facts to reasoning how and why they influence our area today. (Product- Highlighted Articles and Class Created Chart) (Assessment- student responses on dry erase boards)	Students will read articles from internet research and make inferences of how the events from the article has shaped/impacted our area today. We will conduct class discussions and use dry erase response paddles to assess student understanding. 1	Paper to print articles Highlighters Chart Paper Chart Markers Dry Erase Markers	30.00 8.00 12.00 10.00 45.00
	English/Language Arts Standard #: 7 Conduct short research projects that build knowledge about a topic. Strand: Writing Cluster: Research to Build and Present Knowledge	I can research the historical value of coal in my community to relate to my personal life.	Timelines- Students will research coal during their lifespan from when they were born until present. They will create a timeline to convey their findings. Students will apply critical thinking skills as they use their findings to make future predictions.	Printed Research-Students will print articles they find sufficient and highlight facts that help them to gain a deeper understanding of how coal has made the community what it is today. 3	Paper for articles Highlighters Poster Board Glue Markers	27.00 14.00 25.00

	--- **English/Language Arts** Standard #: 8 Standard: Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories Strand: Writing Cluster: Research to Build and Present Knowledge ---	I can research a topic and present my findings in writing.	Product: Open Response Writing > Students will complete an open ended response demonstrating knowledge of the essential question.	Open Response Writing Students will create a rubric-whole group. They will help to identify how the piece will be scored and what a final piece should include, Students will write facts from research on index cards and use the cards to complete the open response. 4	Paper for printing Index cards 10.00
	Math 3.MD.B.3 – Draw a scaled picture graph and scaled bar graph to represent data with several categories. Solve one and two step problems using information presented in the scaled graphs.	I can create a scaled picture graph (pictograph) to represent data.	Product: Scaled Pictographs and questions/problems using data from graphs.	Students will create a class graph after compiling individual graphs showing number of parents and grandparents with jobs that are related to coal both directly and indirectly and jobs that have no connection to coal. 6	Cardstock Poster Board Markers 25.00
	English/Language Arts Standard #3 Standard: Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. Strand: Speaking and Listening	I can listen to a guest speaker and ask/answer questions to demonstrate my understanding.	Assessment: Students will use dry erase response boards to ask and answer questions.	Activity – Folklore Musician/ Appalachia Story Teller will visit to help our class gain a better understanding of coal's past and the marks it has left within our community, economic and cultural. 7	Dry erase markers

2. How can we use our local resources to overcome current issues and challenges that our area is facing?	**English/Language Arts** Strand: Speaking and Listening Standard 1 Standard: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). c. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others. d. Explain their own ideas and understanding in light of the discussion. ----------	I can participate in conversations with my peers on current issues of my community and possible solutions. I can present my ideas by hosting a LIVE classroom newscast with question/answering session.	Product/Assessment Problem/Solution On Chart Paper Class News Cast using Skype and our Class Mondo Board	Activity: Students will create a classroom coal council where we will conduct weekly coal meetings and address issues and challenges that our community is faced with along with possibilities for our community's future and possible solutions to noted problems. This activity will steer our unit. Students will create a NEWS BROADCAST on the problems and solutions that they come up with. They will use our class Mondo Board and skype to present the broadcast LIVE into the other classrooms within the building.	Chart paper Chart Markers Poster board to make A backdrop for newscast Post-it notes 20.00

	Math 3.MD.B.3 – Draw a scaled picture graph and scaled bar graph to represent data with several categories. Solve one and two step problems using information presented in the scaled graphs. ----------	I can create a scaled bar graph to represent coal produced by our state both in the past (year I was born) and present.	Product: Scaled Bar Graph	Students will create a scaled bar graph to show coal production the year they were born and coal production within our state currently. They will use this data to drive the discussion of what they can do as a class and personally to contribute to their community.	Poster board Markers
	Social Studies **S.S.E.P 2.2.1** Identify Social Institutions (Government, economy, education, religion, family) and explain how these social institutions help the community)	I can use critical thinking and problem solving skills to understand what happens when coal prices are cheaper and easier to access in other states.	Product: Reflection Sheets	Cooking Coal Mining – Students will participate in a simulation to help them see the problem that Kentucky is facing with coal. They will be a part of a simulation where they will buy land and mine it for coal. They will apply problem solving and critical thinking skills as they choose which land to buy and apply reasoning to their choices. Students will reflect on the simulation by answering questions. Students will explain how this impacts local economy and in turn help our community.	Paper to print reflection sheets paper money cookies graph paper 12.00
		I can compare a city with my city and create ideas of how to boost our local economy to build our community.	Product: City Comparisons	Students will study reclaimed land and develop ways that the land can be used to benefit our area the most. They will watch the YouTube video, "Building a Future on Reclaimed Land". They will use google earth and internet research to research and study another city and	Post-it notes Paper Markers

12

13

14

				compare it to our area. They will look at the economy of the other city and develop ideas to help our community prosper. We will use the booklet from CEDAR, What Everyone should Know about Land Reclamation as a resource as well as the Reclaimed Mine site poster.		
	English/Language Arts Standard #3 Standard: Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. Strand: Speaking and Listening	I can ask and answer questions to develop a better understanding on harvesting crops. I can identify the benefits of farming to our local community.	Class Garden Project: Student Reflection: Students will reflect upon how harvesting crops on reclaimed land could boost local economy as well as provide homegrown food for locals, keeping money close to home.	We will have a guest to come in and teach us about planting/harvesting and how it could be used to help boost our community. They will teach us how to plant and care for certain harvest and we will begin a class garden.	Post-it or index cards Plastic cups Soil Seeds	
	Math 3.MD.C.6 Measure areas by counting unit squares. **3. MD.D.8** Solve real world and mathematical problems involving perimeters of polygons including finding perimeter.	I can use area and perimeter to create a model of my idea for reclaimed land in my community.	Product: Reclaimed Land Area and Perimeter Activity	We will visit a local park that is a reclaimed mine site. While here we will have outdoor classrooms all focused on coal. We will have various community members helping with this event and will have sessions for students to attend that will focus on the historical importance of coal to that area. Students will participate in flying a drone over the area and then will create a poster sized model of the land with a focus on area and perimeter. They will then apply critical thinking skills to redevelop the land in to what they think would best benefit the community.	Graph paper Tape Poster board Cardstock Crayons Markers	20.00 60.00

3. **How can you use your personal interest and talents to fuel a brighter tomorrow for our local area?**	**Social Studies** **S.S.E.P 2.2.1** Identify Social Institutions (Government, economy, education, religion, family) and explain how these social institutions help the community)	I can create a product or service to sell at Market Day to develop an understanding of how the economy helps the community.	Product: Market Day Products/ Students will write a reflection of how the can use their talents and interest to develop products and services to boost the economy and build up the community. Product: Class Product commercials.	Students will host a Market Day where they will use their interest and talents to create a booth where they will sell a product or service. They must tell why they chose the product or service and how it would boost/benefit local economy. Through this activity students will see all the future possibilities that they could bring to their hometown other than coal related jobs. They will use a class iPad and Chromebook to create a commercial where they showcase their product or service and explain the impact it will have on their local economy.	Poster board Card stock glue Crayons Markers Paper to print reflection sheet
	English/Language Arts **Standard #: 7** Conduct short research projects that build knowledge about a topic. Strand: Writing	I can conduct internet research on a career of my choice and identify the relationship between my career choice and coal in enhancing my community.	Product: Career Fair Posters – Students will dress as their career and present their careers demonstrating how the career boost the economy and the impact of coal on their career choice.	Career Day- Students will participate in class career day. They will research a career. Career choices will be both directly related to coal and indirectly related. They will discuss how coal impacted their choice as well as the benefits of their career choice to the future of their hometown.	Poster Board Paper for research Markers
	English//Language Arts – Grade 3 **Standard 2** Write Informative/explanatory test to examine and convey complex ideas and information clearly and accurately through	I can write a part for our class book to inform/explain coal's historical value to our community, challenges and possible solutions to build up our community, and ways to use my personal	Product- A class published books – Parents and Community Members can purchase these books!! A copy will be in the library at the school and students will read it over skype and in the younger classes.	Students will create a class book as a summative project which will showcase their knowledge of the unit's essential questions. The book will be sent to a publishing company and will be available for	Paper Markers

	the effective, selection, organization, and analysis of content.	talents and interest/abilities to fuel a brighter tomorrow.		parents to purchase. We will also purchase one for our school library. Students will visit other classrooms and read to the younger students once we receive our copy of the book.	
				Reporting: Ink will; be used for Pictorial documentation and Printing the Report. Ink will also be used to run activities and papers, as we have a copy limit/code at our school.	Ink -50.00

Anticipated length of time for this unit of study (# of weeks and hours per week)?

8 weeks, 10+ hours a week, *some activities such as Market Day required 8+ hours to create, hold event, and complete reflections.

How will you engage your students in decision-making about this coal study unit?

My class will have a class coal council where they will discuss the problems they feel we are experiencing in our area as well as the solutions. This will steer our projects and activities. Also, a KWL chart helped us to know a starting point for our unit. I actually taught these students in a previous grade so I know their involvement in CEDAR coal study and that helped me to know where to go with the unit this year. My students are experiencing the problems created by coal first hand so we will use that knowledge to help them make decisions about the projects and activities that they participate in. They know first-hand what it is like to see students leaving the school, and for sale signs going up in their neighborhood. I want them to use that first-hand knowledge to drive this unit. I don't want to dictate what they "Learn" as a result of this unit... instead I want to give them opportunity and let them take it in the direction they choose. My students also share the final products with other classes by reading and teaching them! If my students can "teach" what they have been taught then I feel that they have accomplished their learning outcomes!

Who will assist with this teaching unit? ***(Community members, teachers, parents, etc.)***

Community Members – We will have a guest come in to teach about the heritage and value of coal. Also a guest to discuss farming and using the land to harvest local "home grown" foods. This would boost the economy and keep the money local. We will have a guest to teach the history of a local reclaimed land site which is now a park. Students will have an outdoor learning day where community members will help to teach the value of coal, ways to use our local resources and adapt to the changes of our community and economy, and ways to use interest and talents to benefit and contribute to our local community and local economy. Parents may volunteer during class activities and in completing the final product which is a book. We will be working with a publishing company to get that published. Teachers open their classrooms to allow us to come in and teach the other students in the building about their unit. We have a class Facebook page and we will be posting all about our unit so any parent that can contribute or add to our unit will be asked to help us out. Aides assisted in some of our activities and events, other teachers shopped at our Market Day, and even our Bus Driver helped with our history lesson on wheels.

If this unit has been taught by you or another teacher prior to this year, please list Year, Teacher, and School.

No

2016-2017 Coal Study Unit

Topics Studied in this unit include:

- Historical Value of Coal
- Current Issues and Challenges that my students feel they are facing:
- Future Possibilities/Solutions that my students feel would reverse the issues and challenges they are facing.

  With a focus on:

  1. Students using talents, interest, skills, and strengths
  2. Students understanding that coal...
     - Was WHY our community was established
     - Provides resources we use everyday such as electricity and products made from coal.
     - Enables land through reclamation to be returned to a natural state and provide land for businesses, homes, schools, factories, and more.

- Energy Sources

Subjects Covered

Math –

- Students ran small businesses and had to apply mathematical skills and problem solving strategies to run their businesses.
- Students created pictographs and bar graphs.
- Students worked with area and perimeter and applied to real world situations.

Language Arts (Reading, Writing, Speaking and Listening, Research)

Students read articles and responded to text.

Students conducted internet research and presented to classmates.

Students wrote and published a class book.

Students listened and participated in discussions

Social Studies/History - Students researched the history of coal in our area.

Students researched city landmarks in large cities and discussed how such things could lead to economic development in our area.

Science – Students Studied energy sources to gain a deeper understanding of the unit and the value of coal.

Arts and Humanities – Students illustrated a published book.

Students were taught songs and sung and danced during our history part of our lesson.

Technology- Students used google chrome books to research

They used a Class Mono Pad with Camera to skype other classrooms and share their learning with other students in the building.

They used an iPad and program to create commercials.

Students used a phantom 3 drone go gather footage of local reclaim land and a portion of untouched land to compare and contrast the two.