

CSU #
01-10-19



2018-2019 CEDAR Teacher Unit Program

***Growing
Where
We're
Planted***

*"Utilizing coal resources to build a future sustainable economy
and reach our fullest potential!"*

CSU #
01-10-19

*Class
Book
Sample*

*Coal built our region and has left a print on each
of us too!*

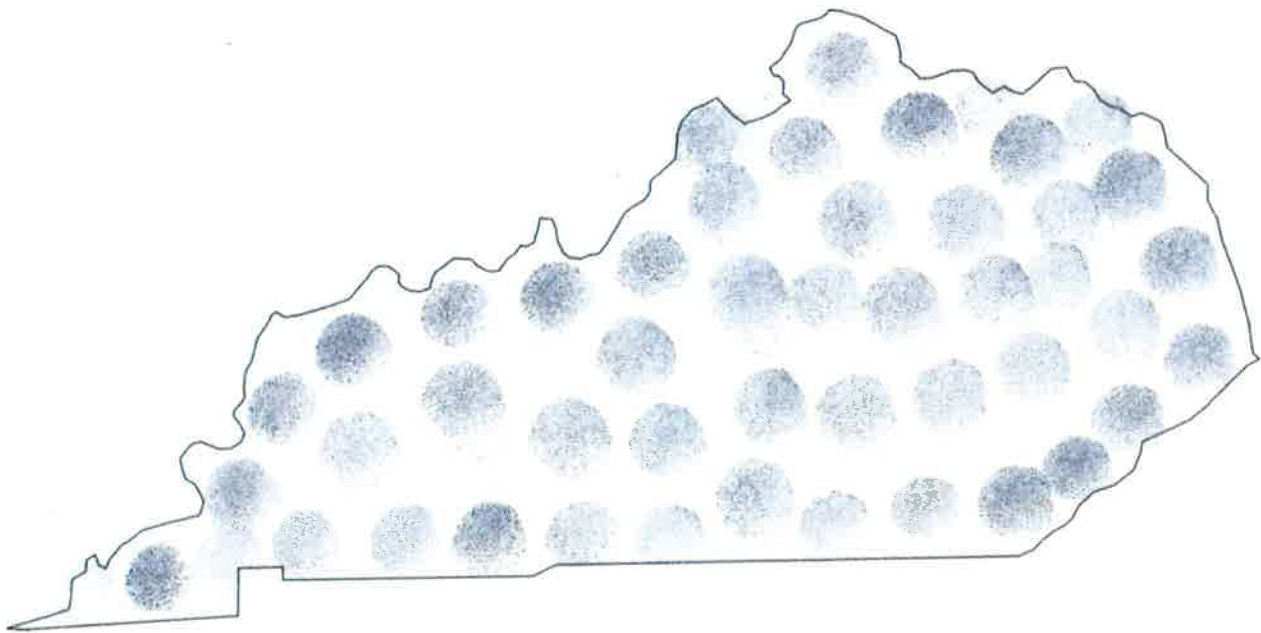
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Market Day Samples

Entrepreneurial Event-

This activity was to show students that they could use their talents/skills/interest, paired with coal resources such as reclaimed land to build a sustainable economy.

Coal's Print on Kentucky



A Classroom Collection of Coal's History and the Impact on our State!

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- Sample **Sample.** -

Coal's Print on Kentucky



A Classroom Collection of Coal's History and the Impact on our State!

BY: **Sample** mple **Sample**

DEDICATED TO

Coal and the impact it has had
On our State.



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Our state is known for
many things that have
shaped who we are.

It is the home to the
Louisville slugger, derby horses,
and a super fast car.

Some know it for chicken, known
to be "finger-lickin' good".

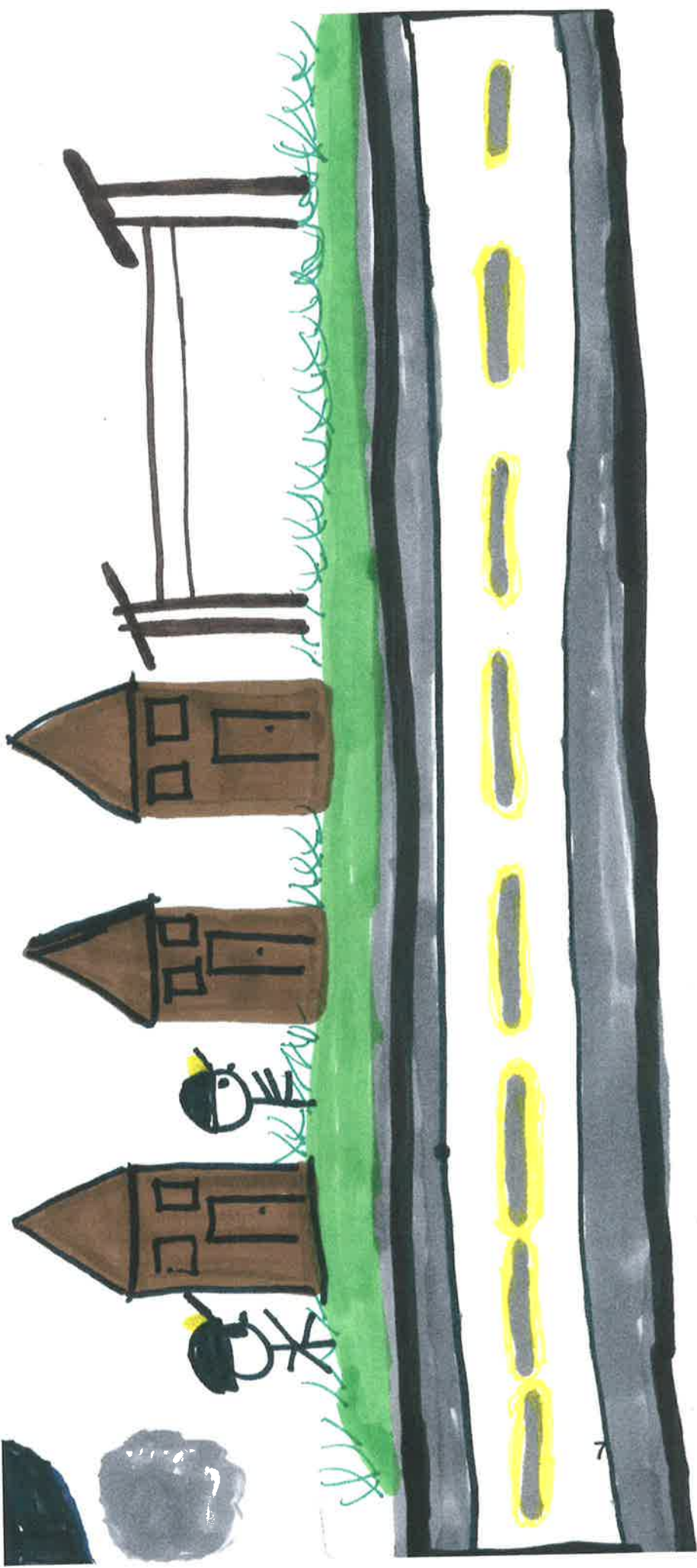
Even some country music singers
are from our neck of the woods!



There is something more that has fueled many of our dreams... the discovery of a fossil fuel bursting at the seams. Henry Ford needed coal to make enough steel to mass produce his Model T and put common people behind the wheel. In the early 20's Ford's need to feed his mills, led him to our town to work up a deal.



Our area was established around 1910. It was named after the coal company's chairman whom helped it all begin. Ford bought **Work Sample** and that's how Fordson Coal began. This would get the automobile into the hands of the average man. This moment in history goes far beyond a car. For it would provide many jobs for men near and far. Many of our ancestors came to be a miner. Ford began to strive to make conditions finer. Ford constructed a three building complex which would become the hallmark of his mining empire; as well as rows of coal camp houses for all the men he would hire.





With more automobiles being owned came the need for better roads. Also, railroads were established in our area to haul the coal in loads.

Coal soon became the major fuel for electricity generation and was used for other things throughout the nation.

Coal has made a print on our state. It is the foundation of our town. It is evident in all we do! Not only has coal impacted our state but has made a print on our lives too!

So as you read on in our little book, we will all share a story of coal to give you a closer look!



Coal has made a print on my life too! Coal gives my dad a job. It gives us money to pay for our bills. It gives us our power. Coal gives my family our house, a car, and the school that I go to. It gives us pretty much everything we need.





Coal has made a print on
my life too! Coal has gave
my dad a job. If he did
not have that job we would
have to move for him to
find a place to work. I
would have to leave my
friends and all the things
that I love about my home.





Coal has made a print
on my life too! My dad
is a coal miner. He has
worked in the coal mines
since he was 18 years old.
His job gives my family
heat and electricity. It
gives us money to pay
our bills and do the
things that I love like
playing Roblox.





Coal has made a print on my life. Coal gives my family and me lights and power. Coal gives my dad a job which gives me a house. It is so important, it gives us money for bills. Coal helps us with everything. Coal brought people to Kentucky.





Coal has made a print on my life. My dad was once a coal miner. He helped get coal out of the mines to make power. We use power every day to have lights to see when it is dark. Without power you can't see and might fall and get hurt. Coal is great for people. It gives us the things we need.





Coal has made a print on my life. My dad works in the mines. It helps my dad have money. He rides a little car thing. There was an explosion where 30 miners died. One time my dad brought home a piece of coal! It was so cool! My dad comes home with dirt on his face. Coal is important.





Coal has made a print
in my life. Coal helped
my Mamaw Faye's Pizza
place to stay open for many
years. She fed all the coal
miners and their families. The
pizza shop gave my family
money for all the things that
they needed. It gave them
food too. It also gave many
people in our community a job.
Coal has been very helpful to my family.





Coal has made a print on my life. Coal has helped my grandpa by giving him a job on the railroad. I get to play my PS4 thanks to coal. If we didn't have electricity that would mean no PS4.





Coal has made a print
On my life. It helps
us have electricity to
cook so that we can
eat and be healthy.
Coal helps people in my
family to have jobs to
get money and buy
materials that we need.





Coal has made a print on my life. It gave my Papaw a job. He was a coal miner for four years. Coal gives us lots of the things that we use every day. It gives us power, light, and heat. It helps us so that we don't get cold in the winter. Coal is very helpful.





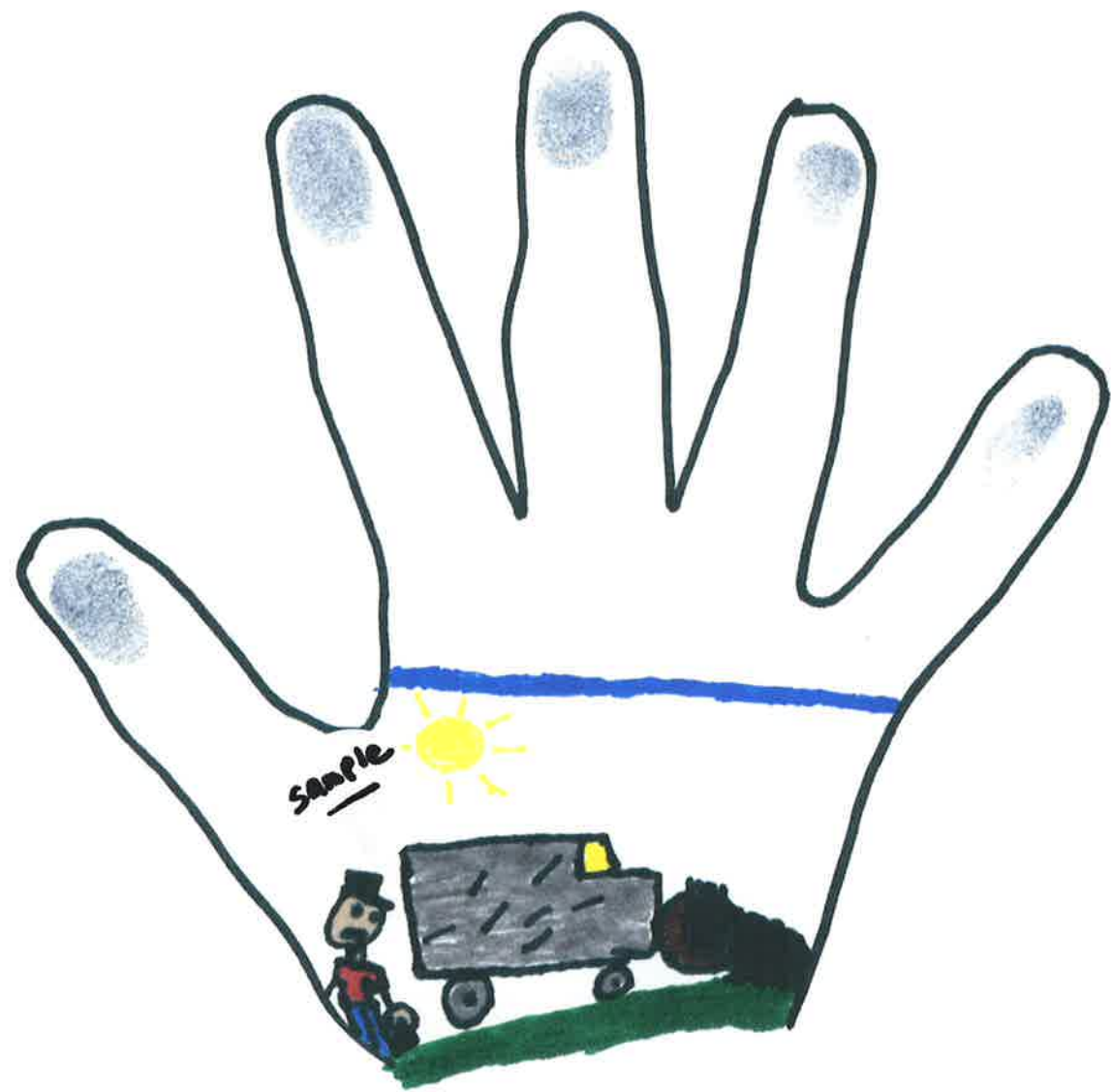
Coal has made a print
on my life. Coal gives
us power, light, and heat.
I really like coal miners
and appreciate them
and how they help us.





Coal has made a print on my life. Coal has got my dad a job on the railroad. It puts power in game systems, TVs, ovens, and much more. Coal has helped make cars, fires, and more.





Coal has made a print
on my life. Coal gives
us electricity to use for
light. It helps us cook
our food, It also gives
us a roof so that rain
won't get on us and
so that we are safe
from storms.



Coal has made a print on my life. I am a gamer. I play Fortnite. Coal provides power for my game to work. My family had a trucking company in our community. It gave jobs to a lot of families and gave my family the money we needed for shelter, power, and even our pool. Coal has made my life better.



Coal has made a print on my life. It has been used in building materials such as cement to make sidewalks and roads.

Coal is used to make a lot of our electricity.

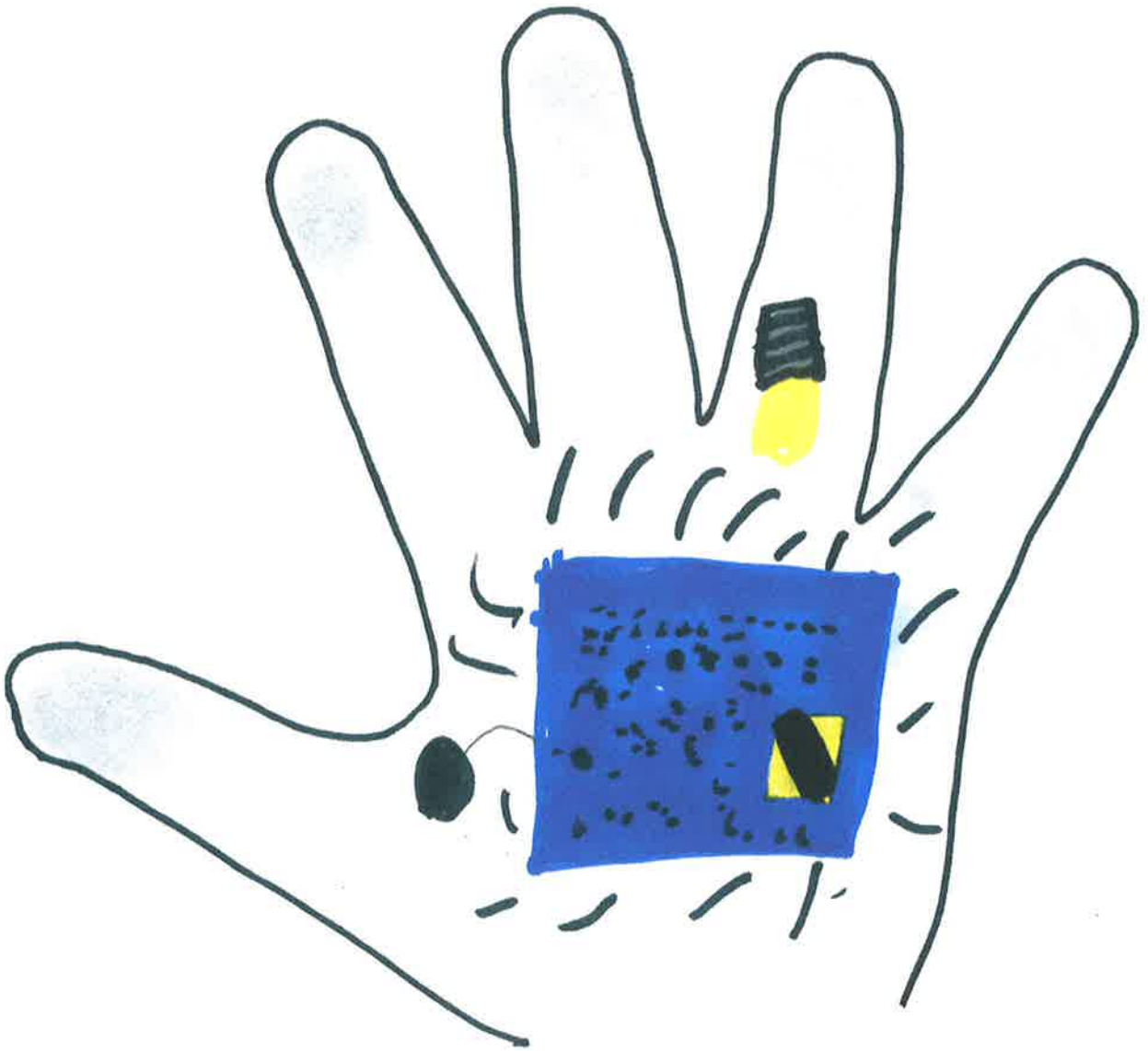
My dad's job is fixing the power lines so that we have electricity in our homes and school.



Coal has made a print
on my life. It has gave
jobs to my dad and
uncles. Coal gives us
power for lights, heat,
and to run the things
we like such as video games.
Coal really helps my
family.



Coal has made a print
on my life. Coal gives
us light and fuel. Coal
gave my dad a job. He
was an underground miner.
Now he is a teacher. He
teaches science to middle
school students. Coal is
important to the world.



Coal has made a print
on my life. Coal is
mined and used to make
power for us to play
video games. Coal gives
families jobs. My Papaw
worked in the mines. He
made money to pay for
all of the things he needed
and to take care of his
family.

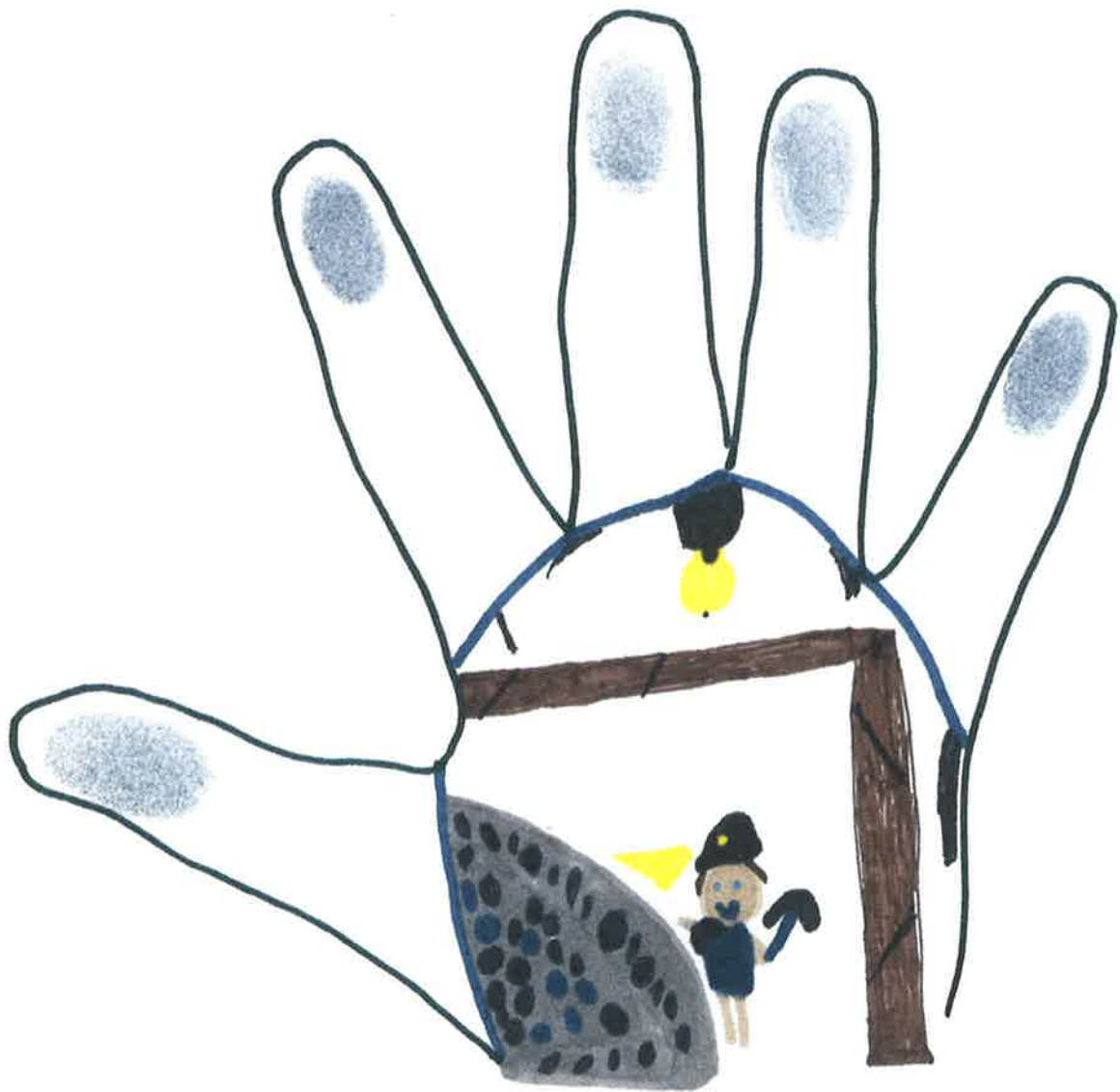


Coal has made a print
on my life too. My
mom works at Golden
Corral. A lot of people
eat there each day.

Coal gives a lot of
people in our community
a job so they have
money to eat at Golden
Corral. Coal helps my
State in many ways.



Coal has made a print
on my life. My Papaw
was a coal miner. This
gave him money to take
care of my mom when
she was growing up and
to take care of his
grandchildren now. He is
still a coal miner today
and he works all the
time. Coal is very
important to my family and me!



Coal has made a print
on my life. It gave
my family a job. Both
my Papaw and my Grandpa
worked in the mines.

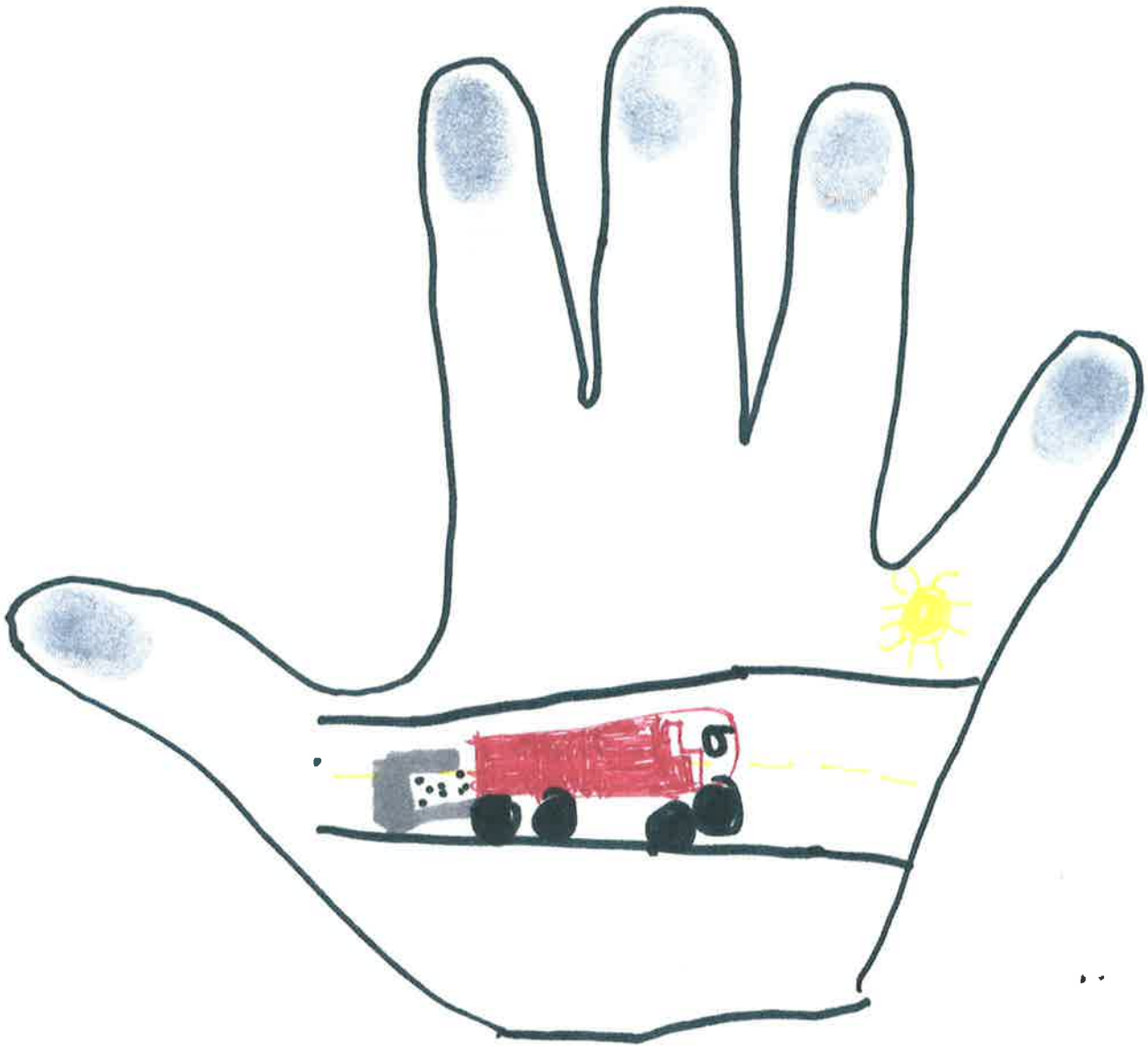
It gave my family
money to afford a
house, and gave my
family money to buy food
and pay our bills. That
is how coal works.



Coal has made a print
on my life. My dad
worked at a coal mines.
I was 3 years old at
the time. When I was
5 he got a job at Pizza
Hut. He is trying to
go back to the coal
mines.



Coal has made a print on my life. My dad used to be a coal truck driver. He hauled the coal in a truck to get it to where it could be used to make things we need. My dad worked a lot so I could not see him that much.



Coal has made a print
on my life. It helps
me get food because
my dad is a coal
trucker. That helps us get
food to eat to stay
alive. I am glad we
are alive today and
pleased to have coal.



Coal has made a print
on my life. Coal has
built our community.

Mining gives us jobs.

Jobs made people want
to move to our community.

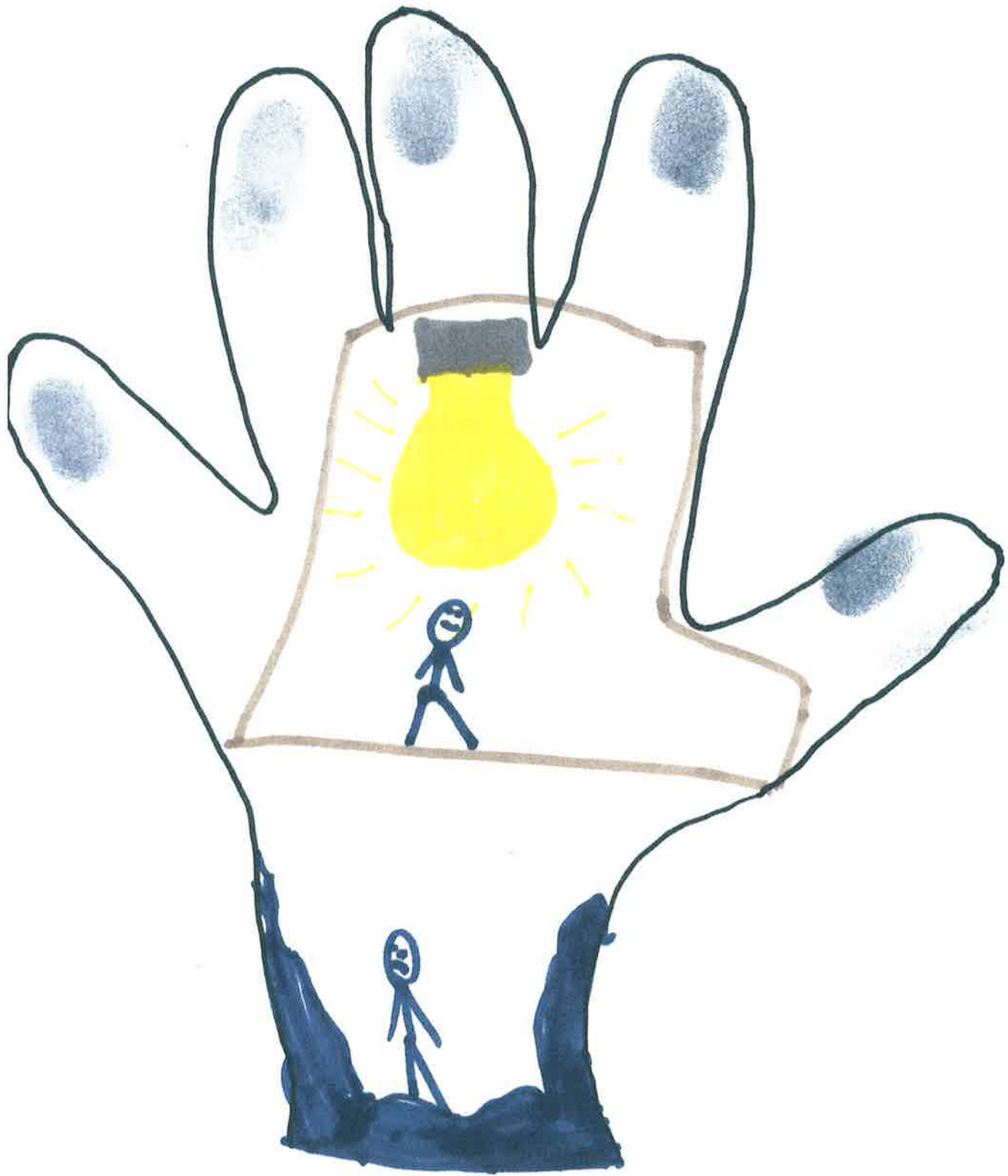
This made us need other
kinds of jobs too. Like
doctors and teachers. Coal
is helpful to everyone.



Coal has made a print
on my life. It gives
us power to have heat
and keep warm. It gives
us jobs and brings money
to spend in our community
so that we can have stores,
schools, hospitals, and gas
stations too! Coal really
helps our community.



Coal has made a print
on my life. When I
think of coal I think of
my Papaw John. He was
a coal miner. He worked
very hard to put food on
our plates and to help buy
my home. He is very sick
and has black lung. He
can't work in the mines
any longer. Coal and my
papaw are very important to me.



Coal has made a print
on my life. Coal keeps
the lights on. My Papaw
worked in the coal mines
and he brought in a
lot of money for our family.
He bought us a lot of
stuff we needed. Thank
you coal for all you do
for my family.

MEET THE AUTHORS



Growing Where We're Planted



This is our class fingerprint overall unit evaluation. The unit summary explains what the purpose of this student assessment was and what each color means.

CSU #
01-10-19

Introduction

CSU #
01-10-19

Pictures

Activities & Goals

Activities Index



This is an index of the activities. The enclosed work samples in the back of the binder behind the work sample tab correspond with these activities. I have placed a numbered dot on the work samples so that you can easily identify which sample goes to each activity.

Activity 1- Research

Activity 2- Fact Swap

Activity 3 – Miner in Me interviews and posters

Activity 4- Coal during my life timeline

Activity 5- Class Book- Coal's print on our area and on us

Activity 6- Guest Speaker – Life in a Coal Camp

Activity 7 – Pictograph

Activity 8- bar graph

Activity 9 – News Broadcast showing the problems and the class's solutions

Activity 10- Cookie Mining

Activity 11- City surveys and comparisons- to find possible solutions that could utilize our reclaimed land.

Activity 12- utilizing shut down businesses and homes to build up our economy after loss of coal jobs and a decline in our region's economy.

Activity 13- Restaurant simulation utilizing reclaimed land.

Activity 14- Job applications and resumes showing how skills and interest can help to get jobs and open businesses.

Activity 15- Library research/ books of careers.

Activity 16- Market Day- Entrepreneurial opportunity





Look
for
yellow ●
work
samples...

Evaluating Our Unit

Activity Effectiveness

Student Created Sticker System

To let my students evaluate the overall effectiveness of our 2018-2019 unit. Students created a sticker system that will show you what they felt were the most effective activities for each of our essential questions as well the overall activities. We voted by having them raise their hand as we reflected on the unit. I showed the students our evidence binder with the pictures for each activity and we discussed that activities “glows and grows” to identify the most effective ones. Below you will find the key for our sticker effectiveness system and look for stickers next to the pictures in the goals and activities section of this binder.

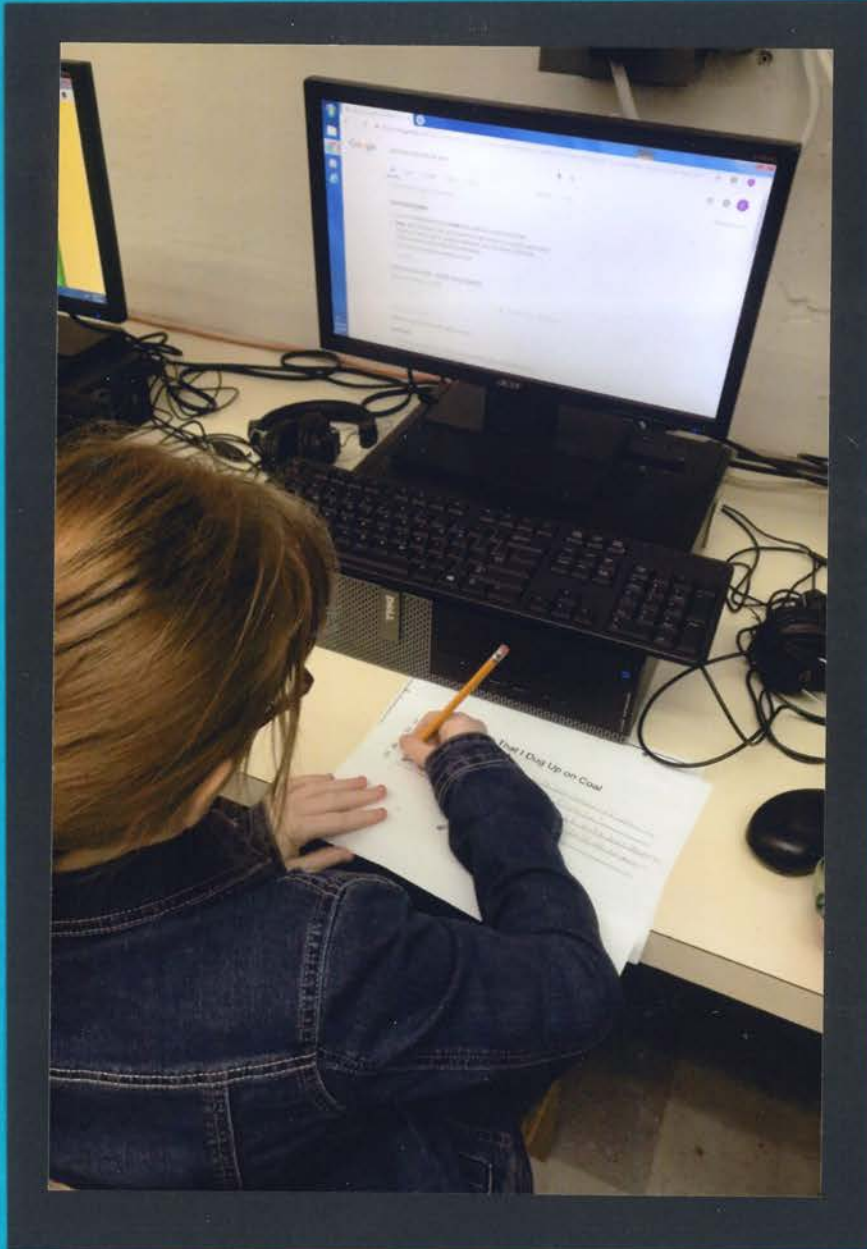
	Most effective activities for helping us answer our essential questions.
	Overall most meaningful activities to reach our goal
	Coolest activities- These activities made learning fun!
	We would have liked to leaped deeper into this activity or would continue this activity if time would allow.

Essential Question #1

“How has coal played a role in the development of our region and the history of our family?”

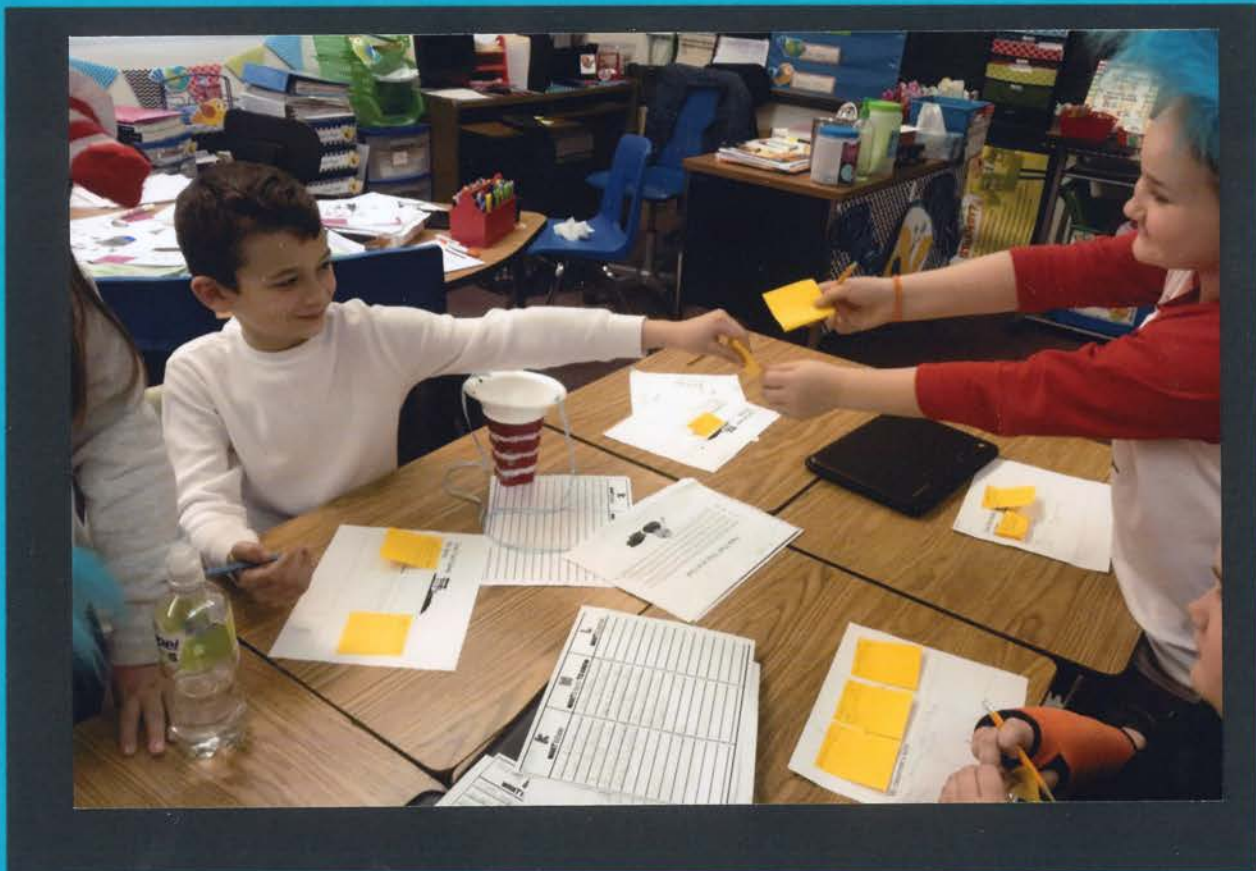
The activities on blue paper demonstrate essential question # 1 and focuses on the history of coal and how our region became what it is through coal.

Activity 1



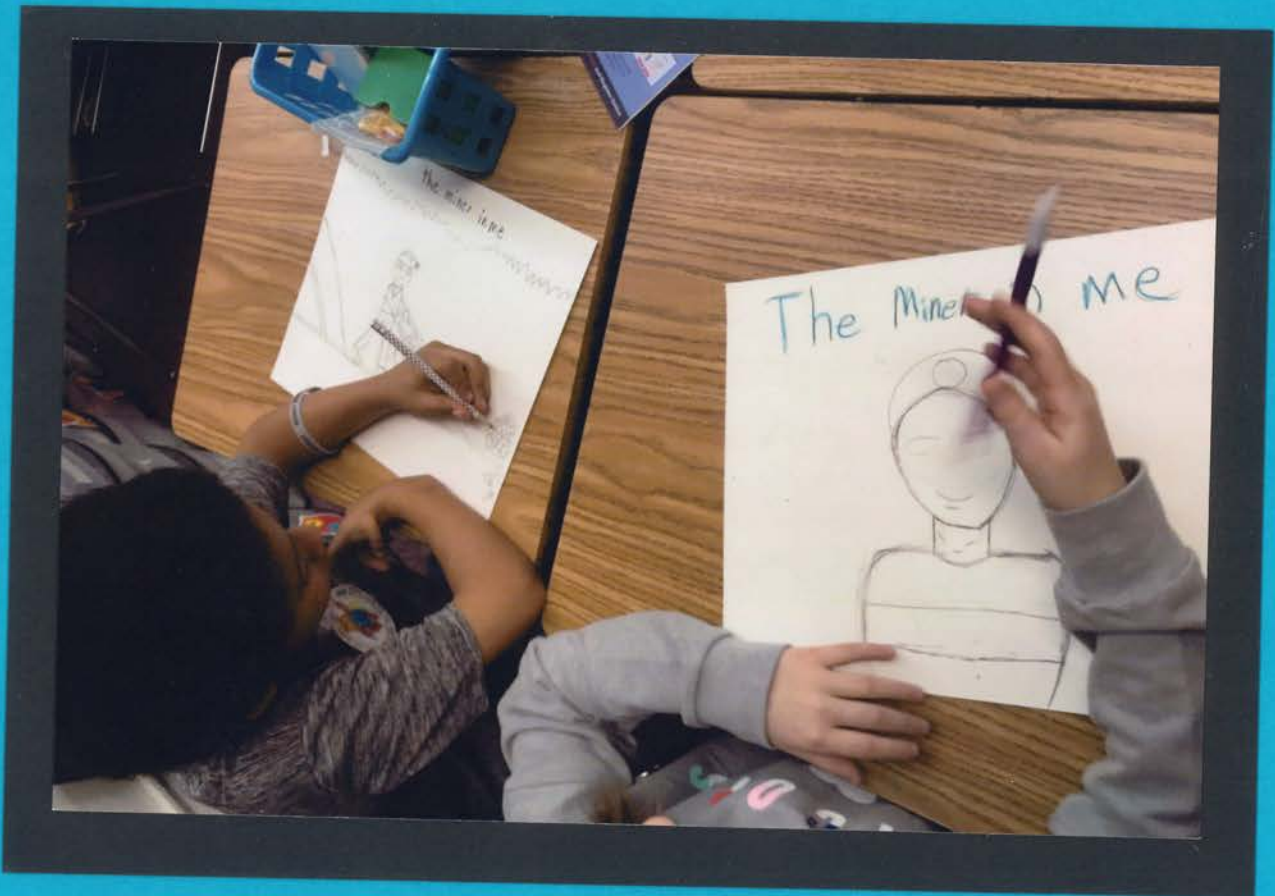
Students researched informational text/articles to develop an understanding of the importance of coal in the history/development of our area. They wrote facts they found to be important on post-it notes to create a fact folder.

Activity 2



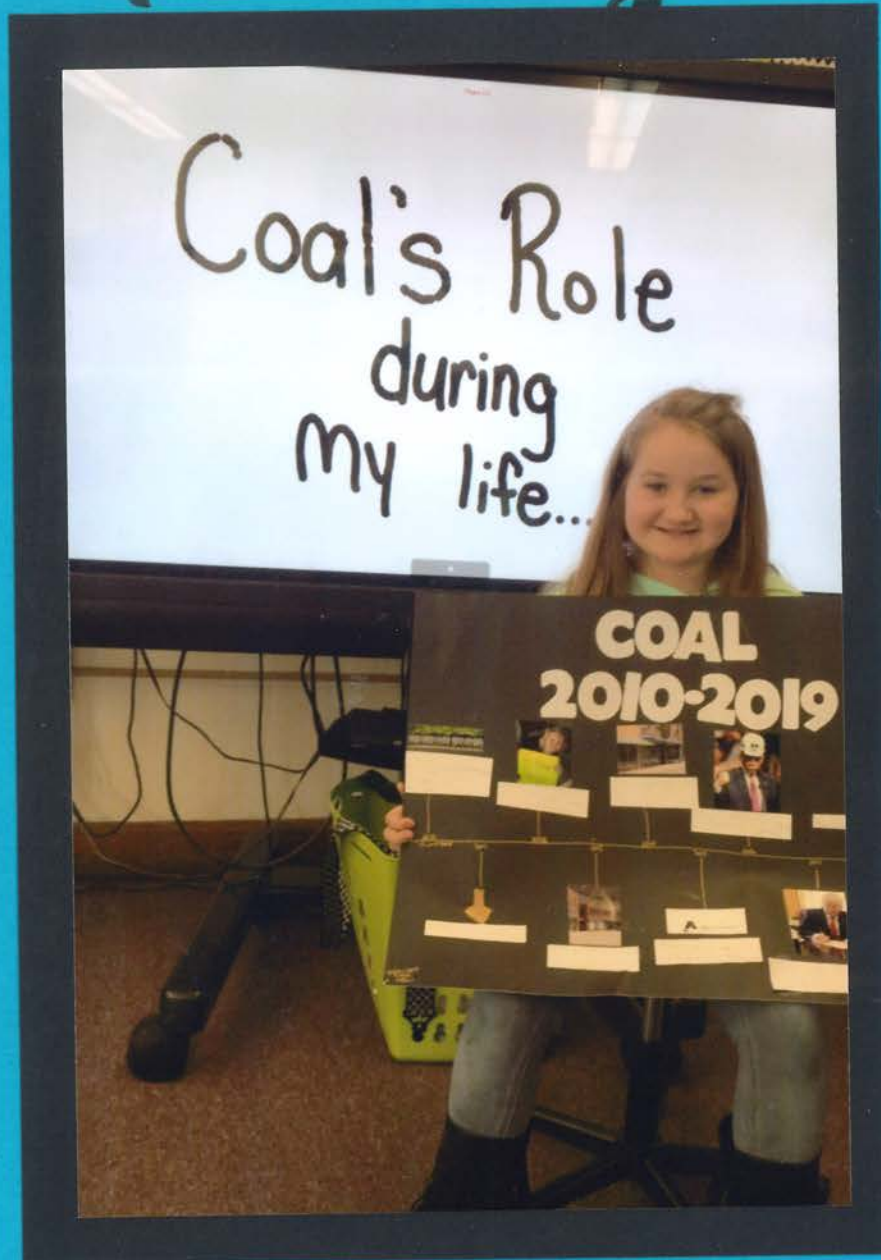
Students created a fact swap where they chose facts and recorded them on post it notes and then "swapped" with other students to create a collection of facts to help them answer essential question 1.

Activity 3



Students interviewed family/community members that have impact on their life to create a miner in me poster. This was part of the research on the historical impact of coal on their community. The purpose was to connect their findings to their personal life to build an understanding of coal's impact during their lifetime.

Activity 4



Students researched coal's impact during their lifetime dating from the year they were born until the current year. They watched a video timeline on coal to gain an understanding of coal's role in the development of our state. They wrote facts that stood out to them from the timelines on their desk with dry erase markers. In the picture above, a student was presenting her timeline and the events that she found important from each year of her life.

Activity 5



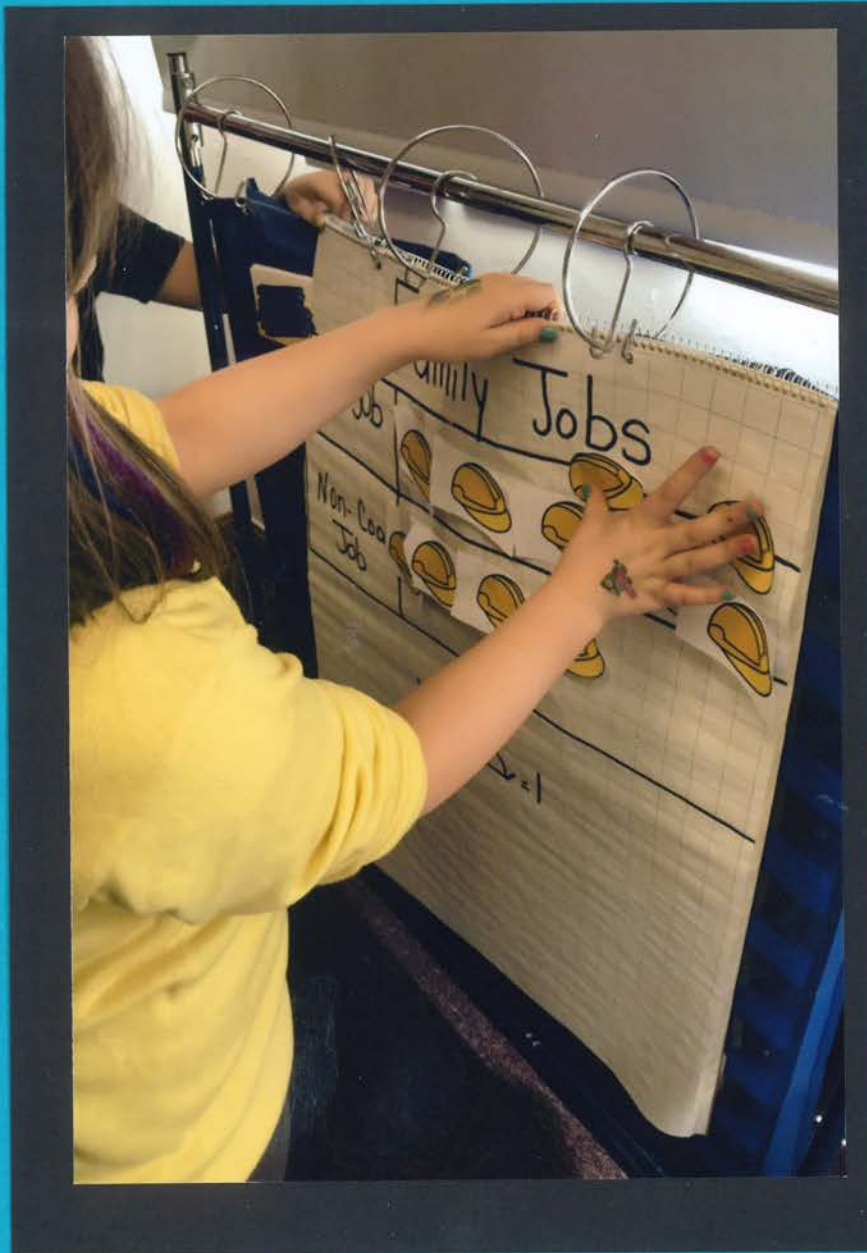
In this activity, we PUBLISHED our own book to show our understanding of essential question one. Our book is called Coal's Print on Kentucky. We have included a copy with our unit. Each student traced their hands and put their fingerprints on them and then wrote how coal had made a print on their life. I tell my students that I want them to know the content so well that they can teach it to others. They are so excited to have this book as a teaching tool for the other classrooms and that we can continue to educate other students not involved in a coal unit on the impact that coal has had on both the area and our personal lives.

Activity 6



It is one thing to tell students about a time in history but it is another thing for them to have the experience of talking with someone who has lived the experience. Our visitors are Appalachian Storyteller/musician and native of the coal camp houses in our area. She tells the story of life in a coal camp house. My students gained so much knowledge from her. She brought along many things they would use during that time. Students used show me boards to write questions for the guest.

Activity 7



In this activity students created a scaled pictograph as the product that showed parents/grandparents working in coal/non-coal related jobs. In the picture they are creating a class pictograph to show the number of parents currently working in a coal related job. They also created individual pictographs with scales.

Added Activity



History Lesson on Wheels: Students' were given a bus tour of the Ford House, The Company Store and Theatre, the old bank, and the coal camp houses. This activity allowed them to connect all of our research and stories with actual places.

Essential Question #2

“How has the continuing decline of the Eastern Kentucky Coal resource impacted the region?”

The activities on green paper demonstrate essential question # 2 and focuses on the current issues our region's economy faces due to the decline of the coal industry.

Activity 8



Students created bar graphs to represent the coal production from the year they were born until the current year. They began with digital bar graphs since the numbers were so large and then used that graph to make dry erase graphs on their desk. They solved one and two step problems using the data as well as analyzed the data to lead a discussion on the decline of coal in our region.

Activity 9



Students worked together with the teacher through class group discussion to develop a class list (chart) of the problems that our area is currently facing/ and developed solutions for each problem. They used this chart to create a news broadcast which displayed their understanding of the 2nd essential question.

Activity 10



In this activity students mined two types of cookies. One represented KY and one represented a state with a plentiful resource of coal. The cookie representing our state was a hard cookie with few chips. The other cookie was a soft cookie with abundance of chips. This activity let them see that mining was much more difficult in KY and that it was much more costly. Not as much coal means not as many coal jobs. This activity let students see how the decline in coal has impacted our mining industry.

Essential Question #3

The activities on pink paper demonstrate essential question # 3, “How could you utilize the resources provided by coal along with your talents/interest to develop possible solutions to build a future sustainable economy for your region?”

These activities focus on both the **future** solutions to our current problems as well as **entrepreneurial opportunities.**

Activity 11



Students compared/contrasted text on two cities to create ideas on how to boost our local economy. Utilizing technology, we polled all 50 states and got an amazing 400+ responses to help us in our city comparison. Students mailed out Flat Stanley near and far to help document some ideas from other cities that could possibly boost our economy. We created a class map where we documented each response. We then color coded our map by deciding if it was a possible industry for our area to develop on reclaimed land. Red dots represented industries that wouldn't be possible solutions and blue dots represented possible solutions. We also partnered with our STLP (Student Technology Leadership Program) who surveyed our school and sent out online surveys to the county email users so we could gather data on the jobs that are currently in Kentucky and get effect of the decline of the coal industry. We created a data binder, as you will see pictured in the work samples.

Activity 12

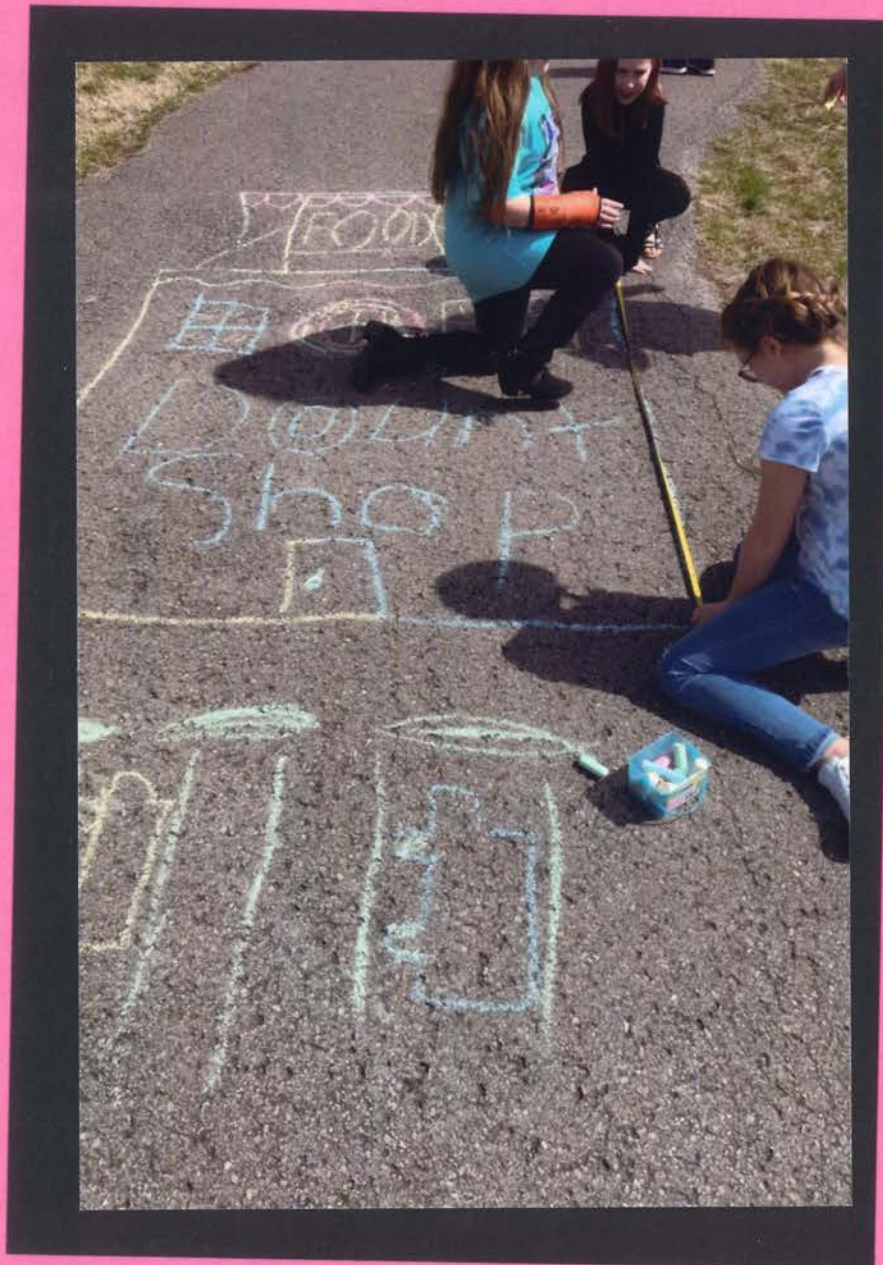


Students used area and perimeter to create a blueprint for a possible business in a vacant building (due to decline in coal and people moving to find jobs). Students came up with a business that would help meet a need of our community. Students took this activity to the next level when they wanted to use sidewalk chalk and tape measures to create their businesses on the concrete outside. Students calculated the area and perimeter of the businesses once they drew them as you will see in the added activity on the next page.

Added Activity



Real -World Area and Perimeter using sidewalk chalk and tape measures.



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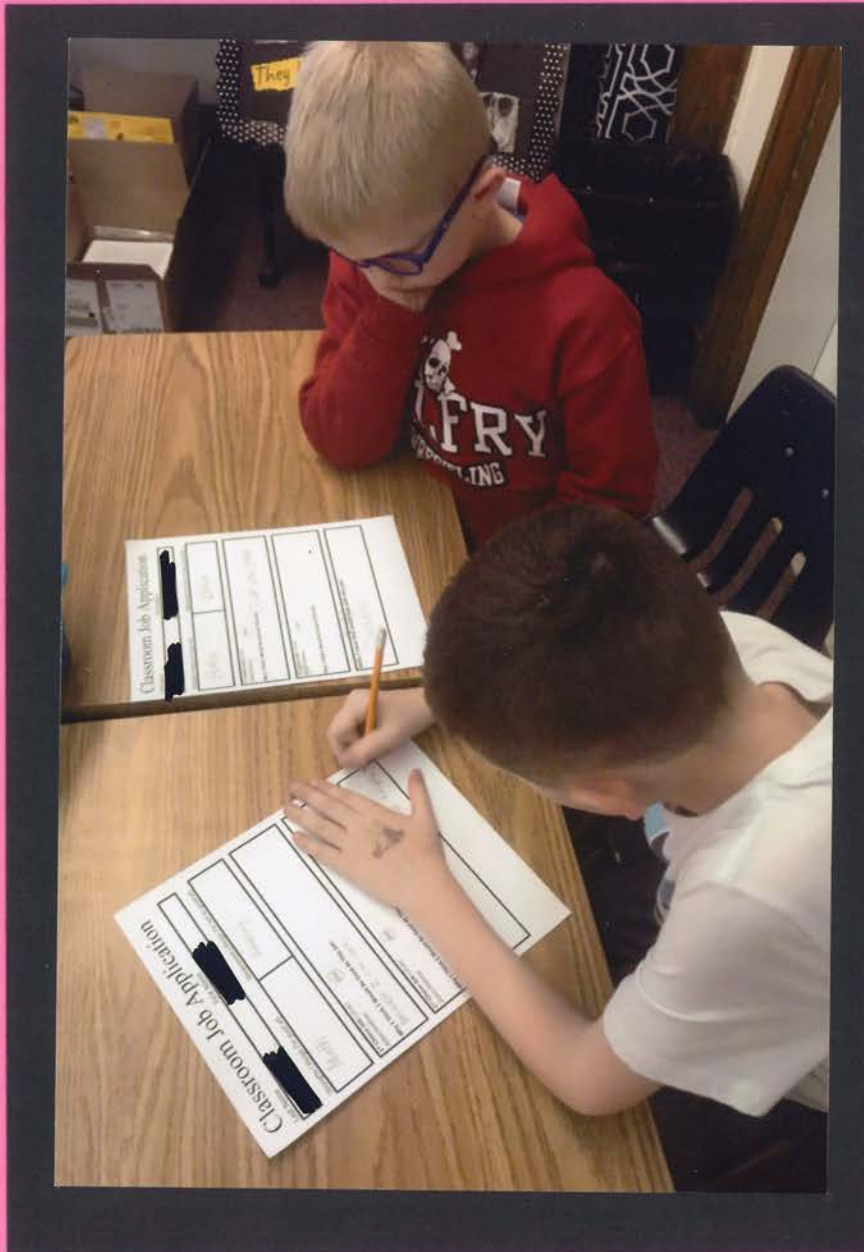


Activity 13



Students visited a reclaimed mine site so that they could gain an understanding of how we benefit from resources provided by coal. We added some activities to learn about reclaimed land including the Youtube Video from Cedar - Future Reclaimed Land. We utilized the Cedar posters showing uses of Reclaimed land and discussed the ones that we had here in our county. We had voted in the pre-planning to open a "mock" restaurant (simulation) on the reclaimed land. Students created menus and recipe cards as we implemented fractions into our area. We came up with D.I.G. Sweet Shop where we would utilize reclaimed land and also include the history of our mining community. The recipes we created were a Moon Pie Sundae available in $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ portions and a RC Cola float to have the mining heritage. Students took this activity to another level by deciding to have job applications where they had to apply for the position of chef or waitress. This was one of the most meaningful activities within the unit. They practiced so many skills such as how to wait tables and communicate with customers.

Activity 14



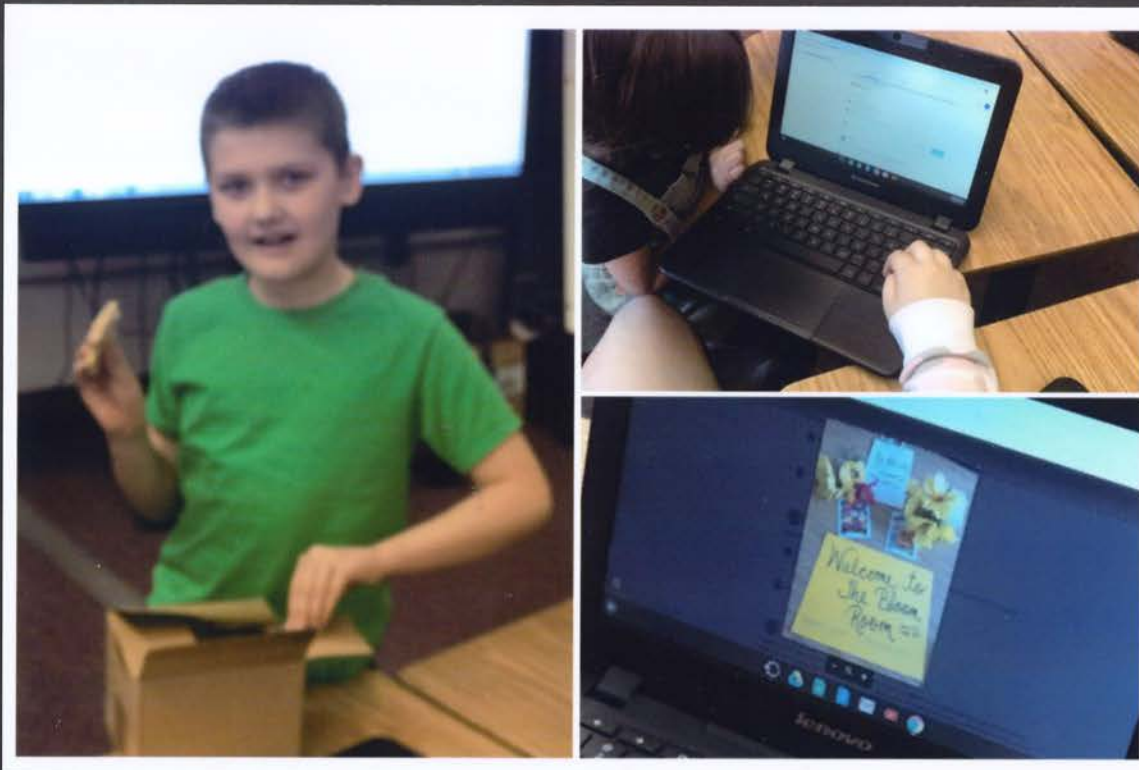
Students completed job applications and resumes for the jobs at our “Mock Restaurant” D.I.G. We discussed skills needed to be a chef and waitress in the real world. Students were chosen for the positions and hired to work at the D.I.G. Sweet Shop on reclaimed land.

Activity 15



Students researched career books during Library class to decide a possible future career choice for our area. They had to determine if it was a job that would utilize resources from coal such as it could be built on reclaimed land. We discussed how we live in an area of mountains and valleys and also a lot of land is in the flood zone so we benefit from the reclaimed land sites in many ways. Students also discussed how the career they chose would benefit our area.

Added Activity



Critical Thinking Activity- We added this activity after our regular "Market Day" we discussed having online shops and how that could benefit their businesses. We used our google classroom to create a place for the business owners to host their advertisements and then students could "order" the product. We then talked about the added job responsibilities such as packing and shipping and well as the extra cost of shipping the items. They loved the online store simulation!



Activity 16

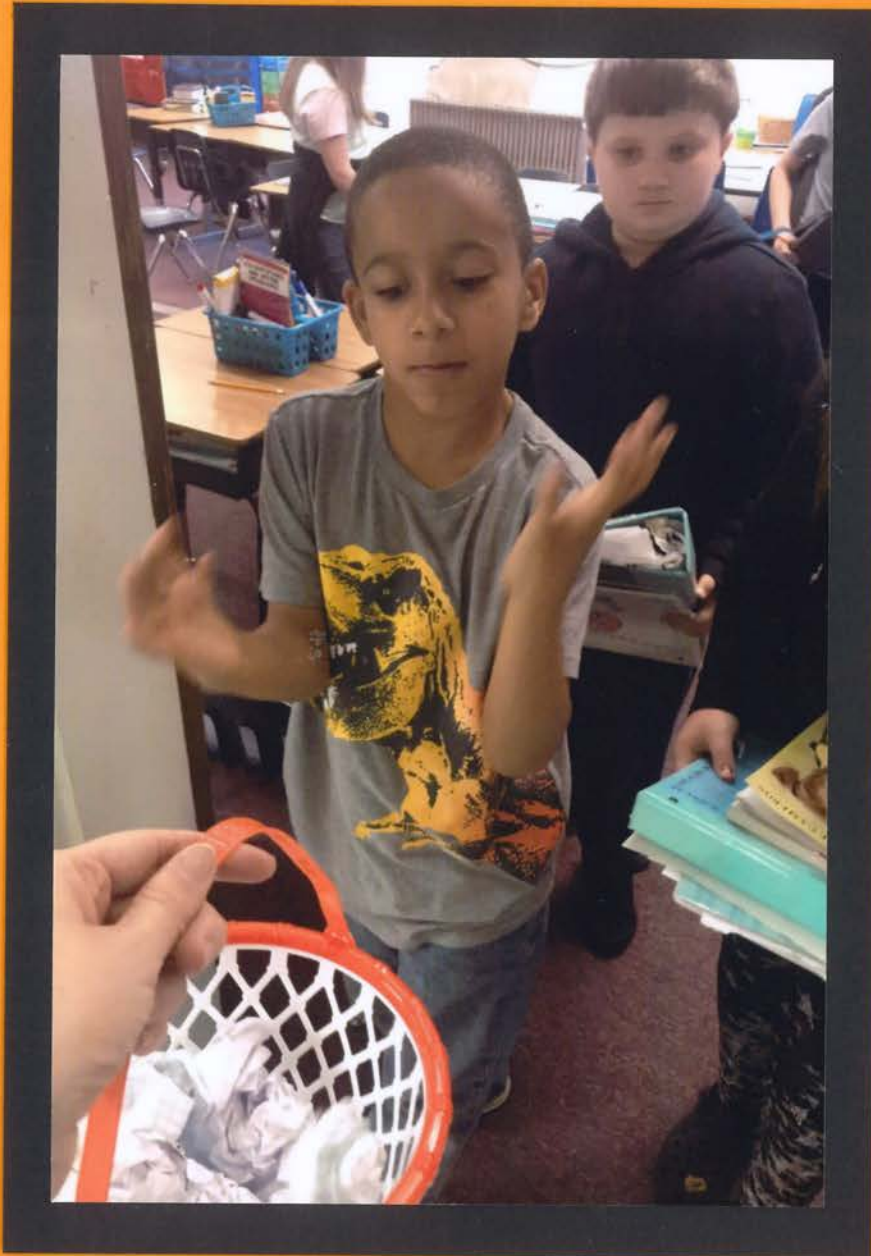


Students opened a small business based on their interest, talents, and hobbies. They thought of ideas that would fulfil a need in our area and could possibly utilize resources from coal. Students created business plans, brochures, business cards, signs, commercials and more to showcase their business. Students completed a critical thinking sheet here they had mathematical situations that they had to look at to determine their overall profit after business expenses. This activity also led into the following activity which was added to the unit. My students drive our unit so we have added things along the way to help reach our essential questions or develop a better understanding of the content.

Added Activities

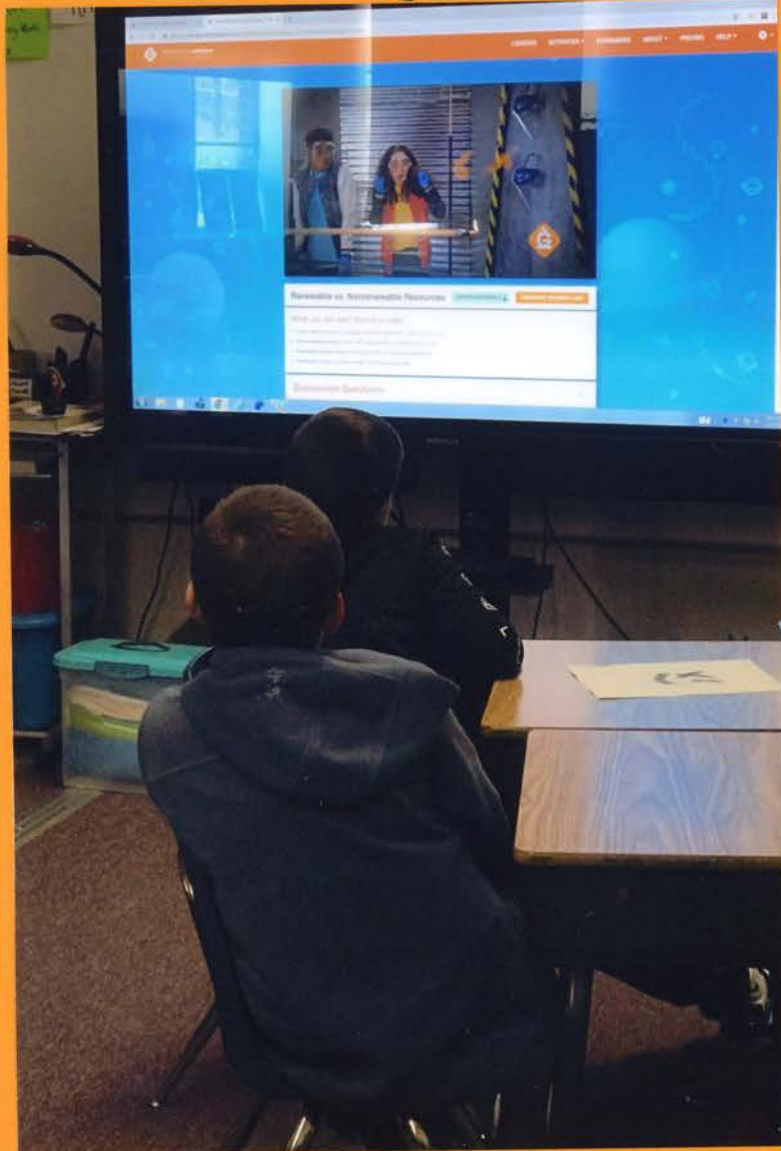
The activities on orange paper have been added into our unit to increase the overall effectiveness and help us reach our overarching goal.

Added Activity



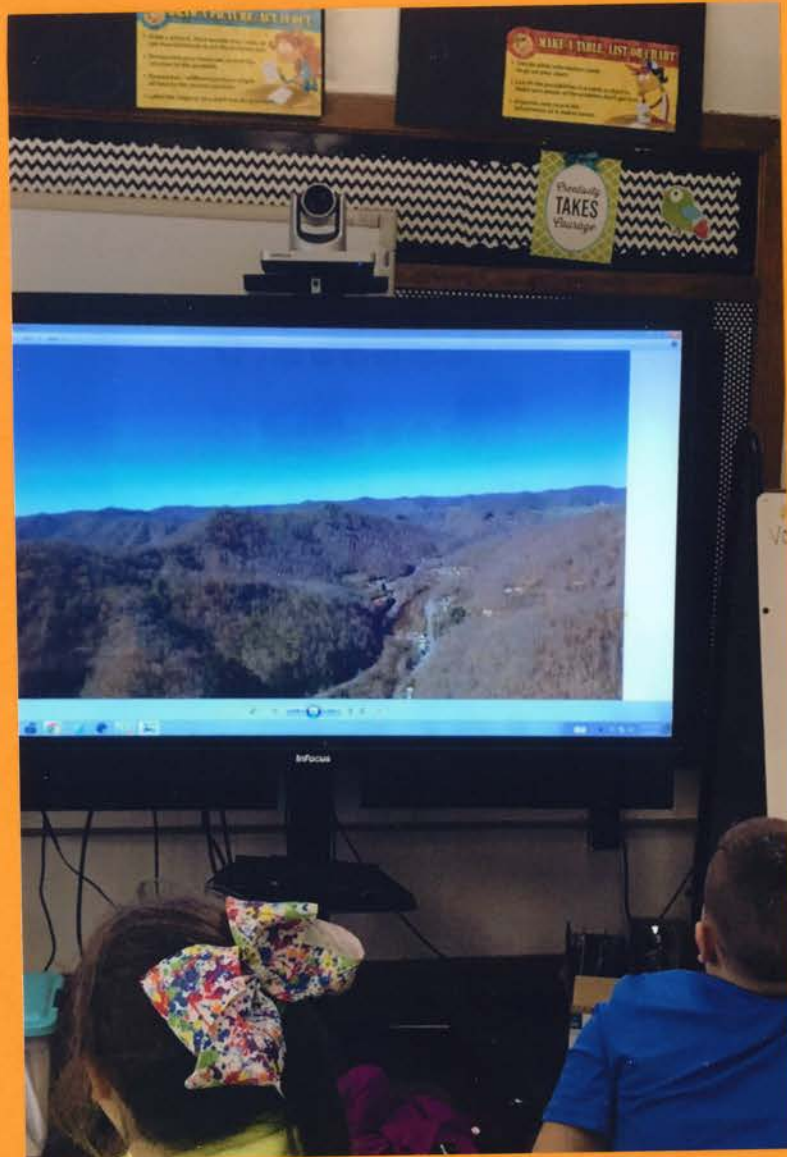
Since it's March Madness and Kentucky is serious about coal and basketball I decided to use a basketball goal to let them "slam dunk" their exit ticket for the day. They wrote one "glow" and one "grow" from the lesson that day and I used those to guide the following day's lesson/activities.

Added Activity



Through observation and progress toward the learning targets, I discovered that my student's prior knowledge of coal was very little. They didn't understand that it is a fossil fuel and a non-renewable resource so we implemented some extra science lessons to help them develop a better understanding of what coal is. This was a very important addition to our unit because they can't understand the importance of something that they don't truly know about. These added activities are examples of letting my students lead the learning of our unit. We often add things or tweak things based on their knowledge and level of understanding.

Added Activity



Students had learned through the reclaimed land video from CEDAR that we mostly have mountains and valleys and a lot of our land is in flood zones so reclaimed land really benefits us for expanding our community. It is hard for us to gain an understanding of this from the ground so we used a drone to capture footage of our community and footage of reclaimed land so that we could get a bird's eye view and gain a true understanding of how much we can benefit from reclaimed land.

Added Activity



This is our classroom self-assessment chart that students use to self-assess their progress during our instruction. They place their exit tickets in the appropriate pocket to reflect how they are doing with the unit. Then as I pull them out this allows me to get a tally and adjust the next lesson as necessary.

CSU #
01-10-19

Conclusion

Conclusion
Summary

3. Summary

As we concluded the 2018-2019 coal study unit in our classroom, we walked away with a feeling of accomplishment. My purpose of the unit was for my students to understand how to "Bloom Where They're Planted"! Coal has given so much to our community and we have a wealth of resources provided by coal. I wanted my students to develop an understanding of how to utilize those resources while incorporating their interest and talents in effort to grow to their fullest potential while also helping their community to grow to its fullest potential too!

To conclude our unit and to evaluate our success, we created a fingerprint flower which actually rated how each student felt about their overall unit accomplishments. Each color print symbolizes the success of each student. (Pink- Students felt they fully answered all three essential questions and met the overarching goal of the unit. Purple- The students felt like they answered the questions and met the goal of the unit but are still unclear of something and would have like to extended the unit. Yellow- The students felt they did not answer all of the questions or are still unclear of the overarching goal of the unit. You will find our fingerprint flower self-assessment at the beginning of our reporting binder.

Teacher observation has been MY biggest indicator of the success of our unit. I really wish I could have invited you in to experience first-hand as my students were transformed into various roles of possible future positions. Our restaurant simulation on reclaimed land was my absolute favorite to watch. Our "chefs and waitresses" truly

transformed into their roles as they put on their aprons and chef hats. As I listened to the waitresses take the orders, I overheard them saying, "Welcome to Dig, Sweet Shop, we hope you "DIG" your dessert." They were super serious about their job positions! It wasn't until I had gotten one of the pictures developed when I saw the smile on a particular student's face that really shown me the success of this activity!

My students also felt successful as they evaluated their learning. They covered all content areas through the unit including: technology, science, social studies, reading/language arts/ arts and humanities, and math! They had multiple opportunities to reflect upon their activities and evaluate the unit. I actually came back to edit the summary after we decided to use our evidence binder and create a sticker evaluation system where we looked at each essential question, activities, and our pictures for each EQ and evaluated each deciding which activities were most effective in answering the questions and reaching our goals. Students discussed which activities were the most meaningful, the "coolest" (in their words), and the ones they felt like they could have hopped deeper into. I thought this was a very meaningful addition to seeing my students' progress and success with our unit.

"Like a Flower growing through the a crack in the concrete, you must find the best in the situations that you are given." Thank you CEDAR for giving my students that opportunity. Through this year's CEDAR unit it is evident that my students are definitely "GROWING WHERE THEY'RE PLANTED!"

CSU #
01-10-19

*Planning
and
Evaluating
Our Unit*

Planning
Evaluating

Pre-Planning

Before/After Cards

Students were given a statement and they had to decide if that was something our area had before or after coal became the way of life in our state. They used before/after cards to clip their responses.



Sample

Name-

Three new facts I learned...

1. Reclaimed mine is helping to bring back extinct animals.

2. Reclaimed land can be used for trails to bring in visitors and money for our state.

3. Industrial parks can be put on reclaimed land and give miners new jobs.

Two ah-ha's that popped into my mind

1. Our area is mostly made up of mountains and valleys so reclaimed land gives us the thing we need to bring new things to our community.

2. Reclaimed land has to be fixed back better than it was.

One big question that I still have:

1. What could we put on reclaimed land to give our area the most jobs?

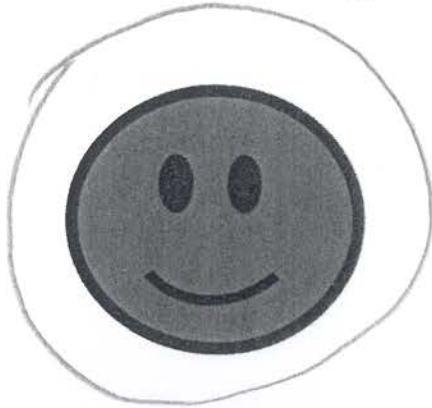
This is a student evaluation of a video that we watched about reclaimed land.

Nc

Sample

- Date: _____

How did you feel about the lesson?



What was your favorite activity?

What was your least favorite activity?

Opening the Dig
Restaurant

I didn't have
one

Draw something you learned today!



moon
Pie



moon
Pie

Fractions as
we ordered
Moon Pie Sundaes.



This is a reflection from a student after the D.I.G restaurant on reclaimed land activity.

Question Matrix



is are was	did do does	can	could should would	will	might
Factual – Recall – Lowest level of questioning – DOK 1					
Who is...? Who are...? Who was...?	Who did...? Who do...? Who does...?	Who can...?	Who could...? Who should...? Who would...?	Who will...?	Who might...?
What is...? What are...? What was...?	What did...? What do...? What does...?	What can...?	What could...? What should...? What would...?	What will...?	What might...?
Where is...? Where are...? Where was...?	Where did...? Where do...? Where does...?	Where can...?	Where could...? Where should...? Where would...?	Where will...?	Where might...?
When is...? When are...? When was...?	When did...? When do...? When does...?	When can...?	When could...? When should...? When would...?	When will...?	When might...?
Application and Analysis – DOK 2					
How is...? How are...? How was...?	How did...? How do...? How does...?	How can...?	How could...? How should...? How would...?	How will...?	How might...?
Why is...? Why are...? Why was...?	Why did...? Why do...? Why does...?	Why can...?	Why could...? Why should...? Why would...?	Why will...?	Why might...?
Evaluating and Creating - Highest Level of Questioning – DOK 4					

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This is the question matrix that our school uses and was a key in creating high level questions for deeper understanding during our coal unit.

K

WHAT I KNOW

Coal is mined, you
can find coal in
Kentucky. Coal is a
black rock. Coal
gives our families
a job.

W

WHAT I WANT TO KNOW

What role has coal
played in the
development of our
region? How has the
demand for coal
production in my
state? How can the coal
resources help us?
How can our interests
and talents help our
state?

L

WHAT I LEARNED

Henry Ford bought
coal company in our
area and built coal
camp houses and
company store. People
moved to our state
to get mining jobs.
They needed things
like better roads
to drive on and
railroads to haul coal.
The first coal mine was
in

This was a KWL chart that was used as a planning tool and then revisited throughout our unit.

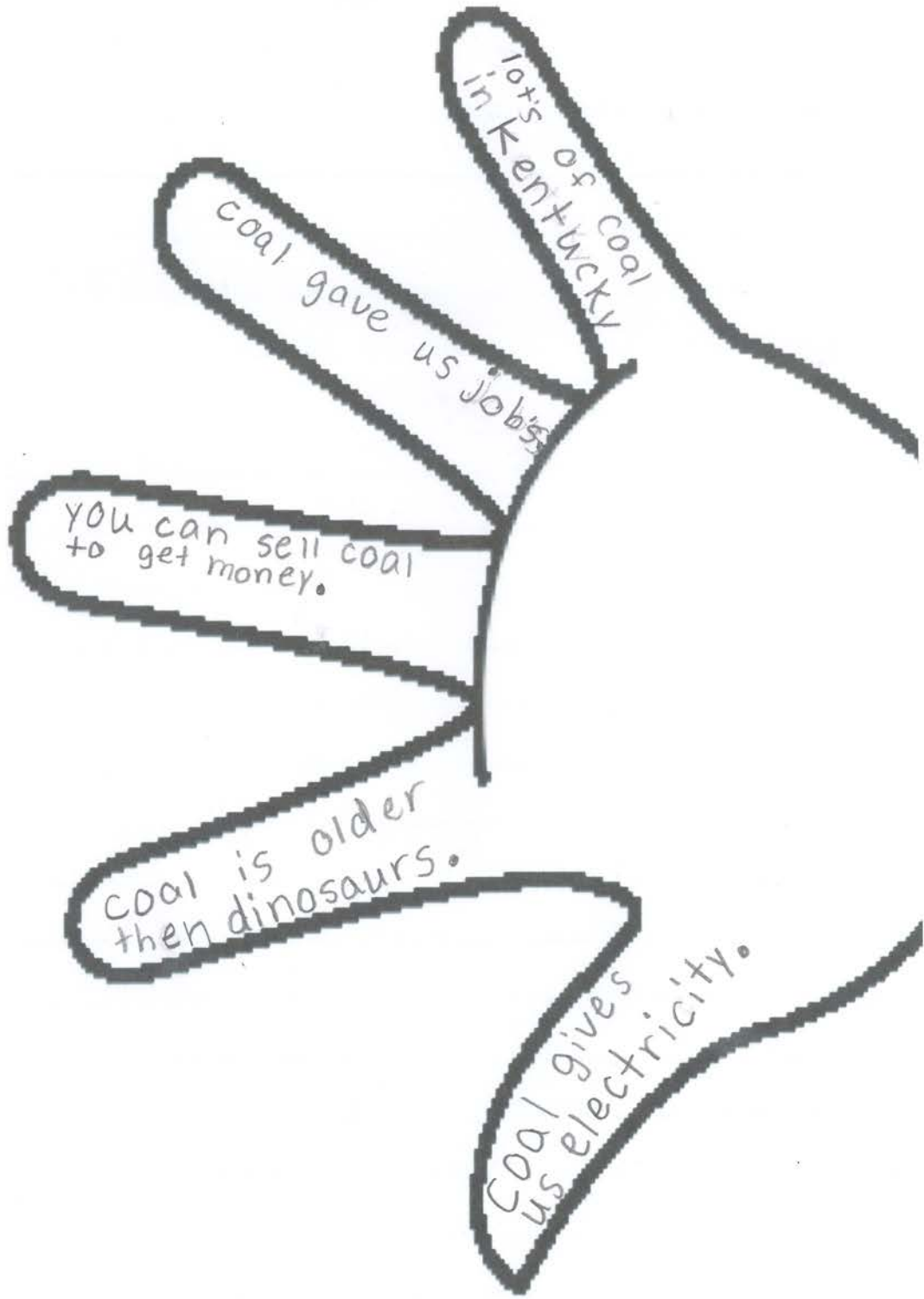
What I Learned

Over the years coal jobs dropped people moved. It took money out of the community and made a problem. We can fix the problem by building new things on reclaimed land.

We can build more coal related jobs and bring more money to our community. If you are good at something you can build a job on reclaimed land.

5 Things I Know About Coal Before our Coal Study

Sample



This is a pre-planning activity that students noted 5 things they knew about coal already.

My Goals

Goal:

Date: 2/4

To find out new things about
coal and how it has helped our
community

How I will meet my goal:

Research on my chrome
book. Whatch video's

I MET
MY GOAL!



Goal:

Date: 2/4

Understand how reclaimed
land help's us.

How I will meet my goal:

Guest speaker's
reclaimed land field trip.

I MET MY
GOAL!



These are some of the goal setting sheets that we used through our unit.

I'm a goal getter, and I set SMART goals!

S Specific	M Measurable	A Action	R Realistic	T Timely
Know exactly what you want to accomplish!	How will you know you have met your goal?	What do you need to do in order to meet your goal?	Make sure you can achieve your goal, but it is still a challenge!	When do you want to meet your goal?

Specific: What exactly do you want to accomplish?

How to use resources from coal like reclaimed land.

Measurable: How will you know that you have met your goal? What will you be able to do?

When we can answer questions and teach other students

Action: How will you meet your goal? What do you need to do to meet your goal?

research and talking about it and coming up with ideas to use the land.

Realistic: Is the goal reachable? How do you know?

yes because we have lots of ways to learn about our topic.

Timely: When will you reach this goal? Make a deadline!

March

My Goal

My goal for Our coal unit is
to learn why coal is important
to me and find more about
it.

Things I'm going to do to reach my goal:

1. Have guest speaker's,
2. GO to reclaimed land,
3. Research
4. Interview miners

Did I reach my goal? Yes date: 3/29/19 Not yet

Date: 3/15/19

Learning Goal	To Find out How coal is transported Using barges.
☺	The guest speaker showed pictures and explained his job.
?	Where is he taking the coal to
Effort	1 2 3 ④

This is a reflection/evaluation slip used after a guest speaker.

What activity best helped you to answer essential question 1?

Several activities helped me. The guest speaker taught us about living in coal camps. The fact swap taught us lot of things to.

What activity best helped you to answer essential question 2?

The cookie mining let us see that coal is harder to mine in Ky.

What activity best helped you to answer essential question 3?

Market Day and D.I.G. Sweet shop let us see how we could open our own businesses using coal resources like reclaimed land.

What would you change about our coal study unit?

Nothing I learned alot and it was fun.

This is a end of unit student reflection. This particular paper had students to reflect on each essential question and note what they would change about the unit.



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Utilizing CEDAR resources to gain a better understanding of coal.



Guest speakers- Top (Discussing reclaimed land and how it benefits our community)

Bottom- Discussing life on a barge and coal transportation.

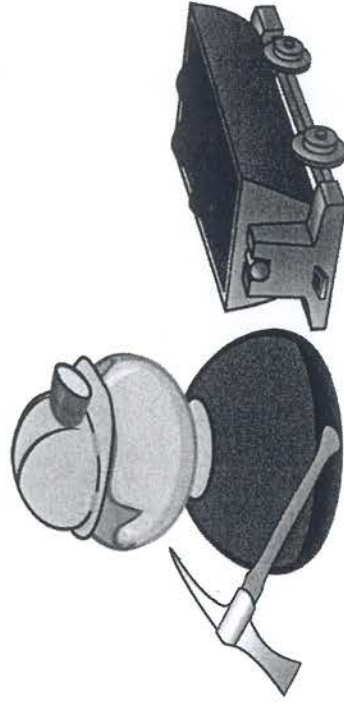
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Work Samples

Work
Samples

Facts That I Dug Up on Coal

1. Coal is second only to oil as a source of energy.
2. Coal is used in a lot of places in the world because it's easy to get.
3. Coal generates approximately 40% of the world's electricity.
4. Coal is also necessary for the production of iron and steel.
5. Coal is our largest export to Japan, which is our second largest partner in trade.

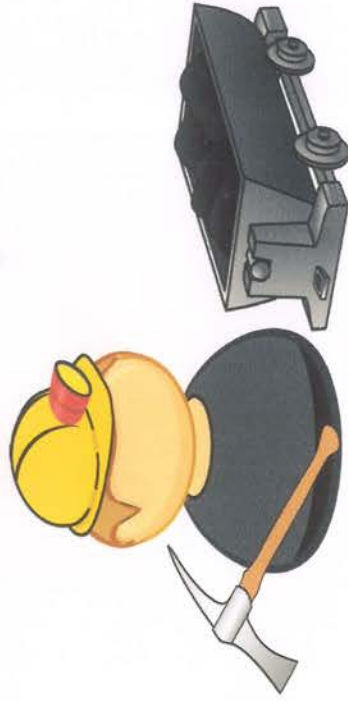


Students researched coal and the history of coal in our area and made fact sheets for their fact folders.



Facts That I Dug Up on Coal

1. 1922 Fordson coal company was founded in Ky.
2. Ford need coal to use for steel to mass produce the Model-T.
3. Miners lived in coal camps so they could walk to work.
4. 1960 railroads began using unit coal trains.
5. C40 Railroad constructed in our county in 1966.



The Miner in Me Interview

Person I am interviewing: Dad

Do you work in a coal related job? Yes

Have you worked in a coal related job in the past?
Yes

Why do you feel coal is important to your family?
It provides a way of life.

How do you think coal has impacted our community?
Coal helps with roads and helps to keep jobs in our community with the local business stores.

Interview someone in your family by asking them the questions on this page and record their answers. We will use the information to create a poster in class. Please return this sheet on Monday with your math homework so that we can use the information in class.

Students interviewed someone in their immediate family impacted by coal and completed a poster for our "Miner in Me" activity.

Guest Speaker Notes and Reflection

Speaker's N^o**-Sample-**

Topic

Life in a Coal Camp
as a Coal Camp Kid

Notes

Life back in
Coal Camps
miners bathed
in wash tubs,
Women washed
clothes on wash
boards, to some
kids lived in there
Coal Camps and
played together

Questions

Did you go to
School or learn at
home? Did your
family have electricity
or a car?

Important Points

Life was very
different then.

What did you like about the speaker's presentation?

It taught me about how they lived a long

What do you wish you knew more about?



time ago
what they play with

Did this speaker help change your mind about anything?


They taught us that life was a lot different

This is a reflection that a student completed after the activities with the guest speaker. She took us back in time by sharing antiques from that time period and telling her story of growing up in a coal camp. She shared the story, Life in a Coal Camp with us. This was a very important activity to show us the historical impact of coal on our families and our community.

Family Jobs

Coal Job	
Non-Coal Jobs	

Students created pictographs to show the number of parents with a coal related job. I was truly amazed at how many coal related jobs that the student's families have. Most of the student's parents either work in the mines or on the railroad.

Key
 = 1 job

- Work Sample -

Name: _____

Date: _____

Henry Ford

-0 4/4

Henry Ford was born on a farm in Michigan. He was always interested in machines and how they worked. He loved to take apart and then reassemble the watches belonging to his friends and neighbors. In 1891, he was hired as an engineer for Thomas Edison's company. Up until then, most people used a horse and carriage for transportation. Ford wanted to develop a "horseless carriage." By 1903, Ford had created his own company. His dream was to have inexpensive cars made by skilled workers who were paid steady wages. This was a radical new idea at the time. In 1908, the very first Model T car was introduced. This car was the first to have the steering wheel on the left side. A new car cost only \$825. The Model T was easy to drive, and cheap to repair. All the cars were black, because the assembly line required a quick drying time. Soon, more than half the people in the United States were driving Ford's cars.

1) The suffix -less helps the reader know that the word *horseless* means ---

- A) like a horse
- B) without a horse
- C) full of horse
- D) not a horse

2) Based on information included in the paragraph, the reader can conclude that Ford became an engineer because ---

- A) It was the only job available.
- B) He grew up on a farm.
- C) He wanted to get rich quick.
- D) He was interested in how things work.

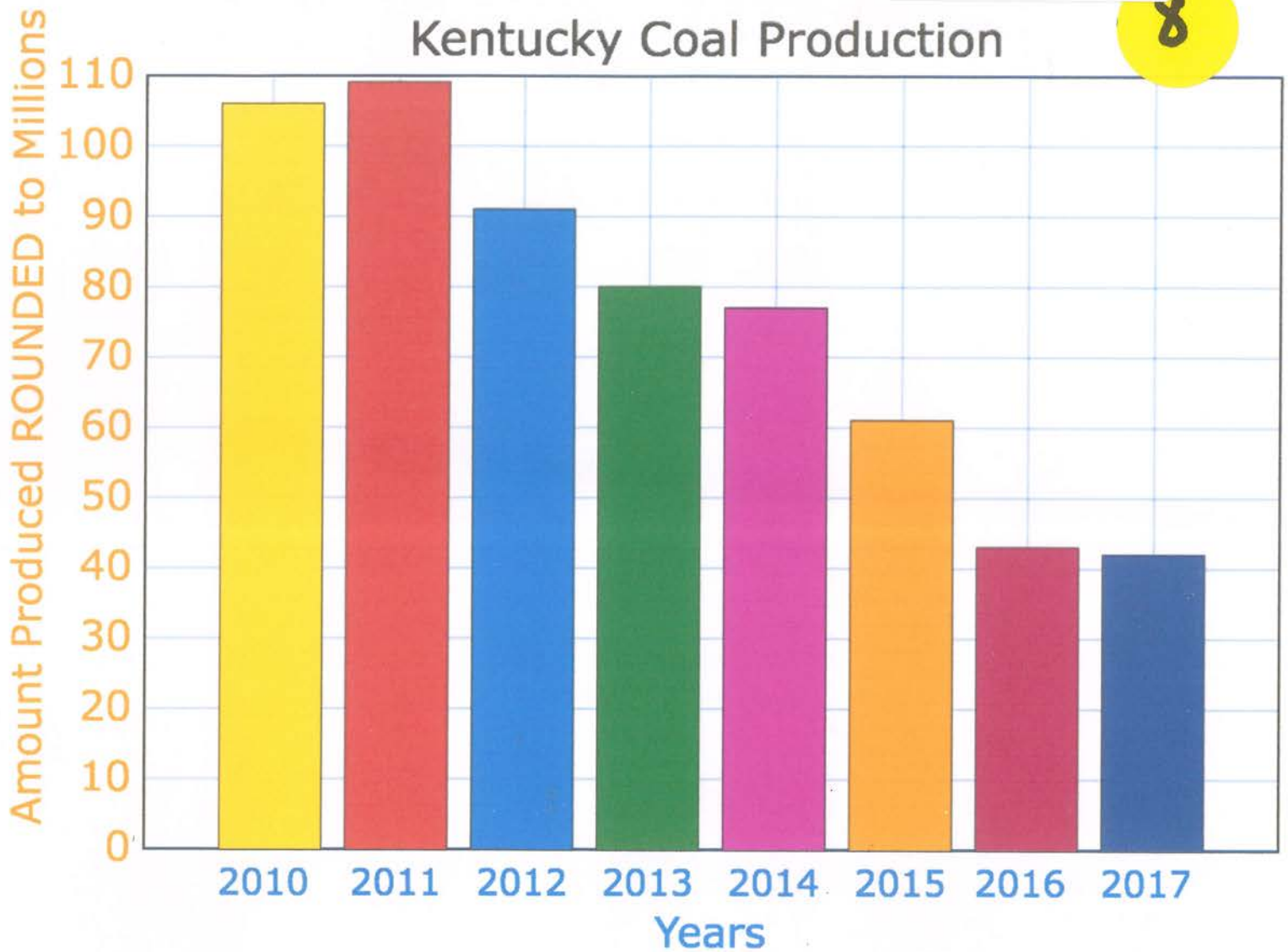
3) Which is the most likely reason Ford started his own company?

- A) He had many new and different ideas he wanted to try out.
- B) No one else would give him a job.
- C) He was too smart to work for somebody else.
- D) He wanted to keep all the money for himself.

4) Why were all the Model T cars black in color?

- A) Black was the most popular color.
- B) Black was the fastest drying paint.
- C) Black was Ford's favorite color.
- D) Black cars stayed warmer in the winter and cooler in the summer.

This was a reading/history passage that we used on an NTI day that corresponded with our coal unit.



We researched coal production during my student's life. They utilized technology to create a bar graph and then created bar graphs on their desk using this graph as a visual (numbers were in millions).

<u>Problems</u>	<u>Solutions</u>
Not many coal jobs.	Open new businesses and make new jobs for people who need one.
A lot of people had to move to get better jobs.	Train people and have college so people can make more money.
Lots of empty homes and shut down businesses.	Open businesses to get people to move to our community.
Coal mines just sitting - not being used.	use old coal mines to make new jobs.

Students helped me brainstorm problems that our area is facing after the decline of coal. We then created a class chart. They discussed possible solutions and students added solutions to our charts.

PRIMARY/ELEMENTARY Activity: Chocolate Chip Cookie Mining

Concepts

- Coal is an energy resource that is mined from the earth.
- Coal is a nonrenewable resource.
- Some places have more coal than others.
- Some places have coal that is easier to mine than others.
- Coal on the surface is easier to mine than coal that is underground.



Time

One 45-minute class period

Materials Needed Per Student

- 2 different kinds of chocolate chip cookies
- 2 toothpicks
- 2 napkins
- 1 piece of paper



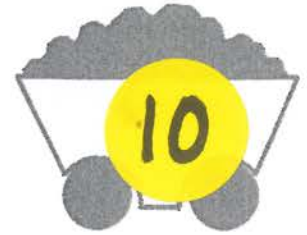
Procedure

1. Explain that coal was formed from plants that lived millions of years ago. When the plants died, they were buried under sand and silt. Over time, the sand and silt built up, putting heat and pressure on the thick layer of dead plants, and changing it into coal.
2. Ask the students how we use coal. Discuss the ways in which we use coal every day. Remind the students that coal is a nonrenewable energy source. Once we use it, we cannot make more of it in a short period of time.
3. Explain that coal is buried underground and it is harvested through the process of mining. When coal is mined, the land that the coal came from must be reclaimed so that people can use the land again.
4. Explain to the students that they will be comparing two different land sites containing coal. They will mine the coal from each piece of land.
5. Show the students their “land” (cookies) and “mining equipment” (toothpicks). Emphasize that the cookies are not to be eaten during the mining, but may be at the end. Make sure all students know which cookie is A and which is B.
6. Explain the mining process to the students, using the directions on the worksheet.
7. Make a chart on the board with class totals from cookies A and B. Compare the results.
8. Eat the cookies!
9. Ask the students which type of cookie was easier to mine and which type of cookie contained the most coal (chips). Discuss with the students how this compares with coal resources. Do some areas have coal that is easier to mine than others? Do some areas have more coal than

We completed a cookie mining activity. This was the original activity and we molded it to fit our situation. We had one cookie represent our state and another soft cookie with an abundance of chips representing another mining state so students could see that our state's coal is more timely and costly to mine.



Student Worksheet
Chocolate Chip Cookie Mining



Name _____

Sample _____

1. Trace the outline of COOKIE A on a piece of paper. Map the location of the chocolate chips you can see on the top.
2. Count the number of chips you can see on the top and sides of the cookie. Record this number on the chart.
3. Using the toothpick, carefully mine as many chocolate chips as you can from the cookie. Set the chips aside in a pile.
4. Count the number of chips mined from the cookie. Record the number on the chart.
5. Put the cookie back together without the chocolate chips. Compare to your map of the cookie.
6. Repeat the procedure for the other cookie.

My Totals

Class Totals

Cookie	# of surface chips	# of chips mined	Cookie	# of surface chips	# of chips mined
A	6	5	A	55	83
B	10	16	B	87	155

Which cookie was easier to mine and why?

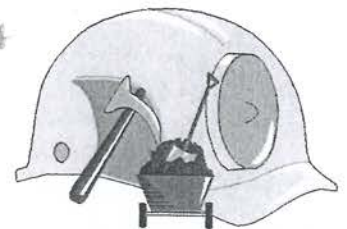
B Because the coal was easier to get out.

What is reclamation and why is it important?

It means to fix the land back so that it can be used again. It gives us places to put new things we need.

List two ways we use coal today.

for electricity for making steel and other stuff we need.



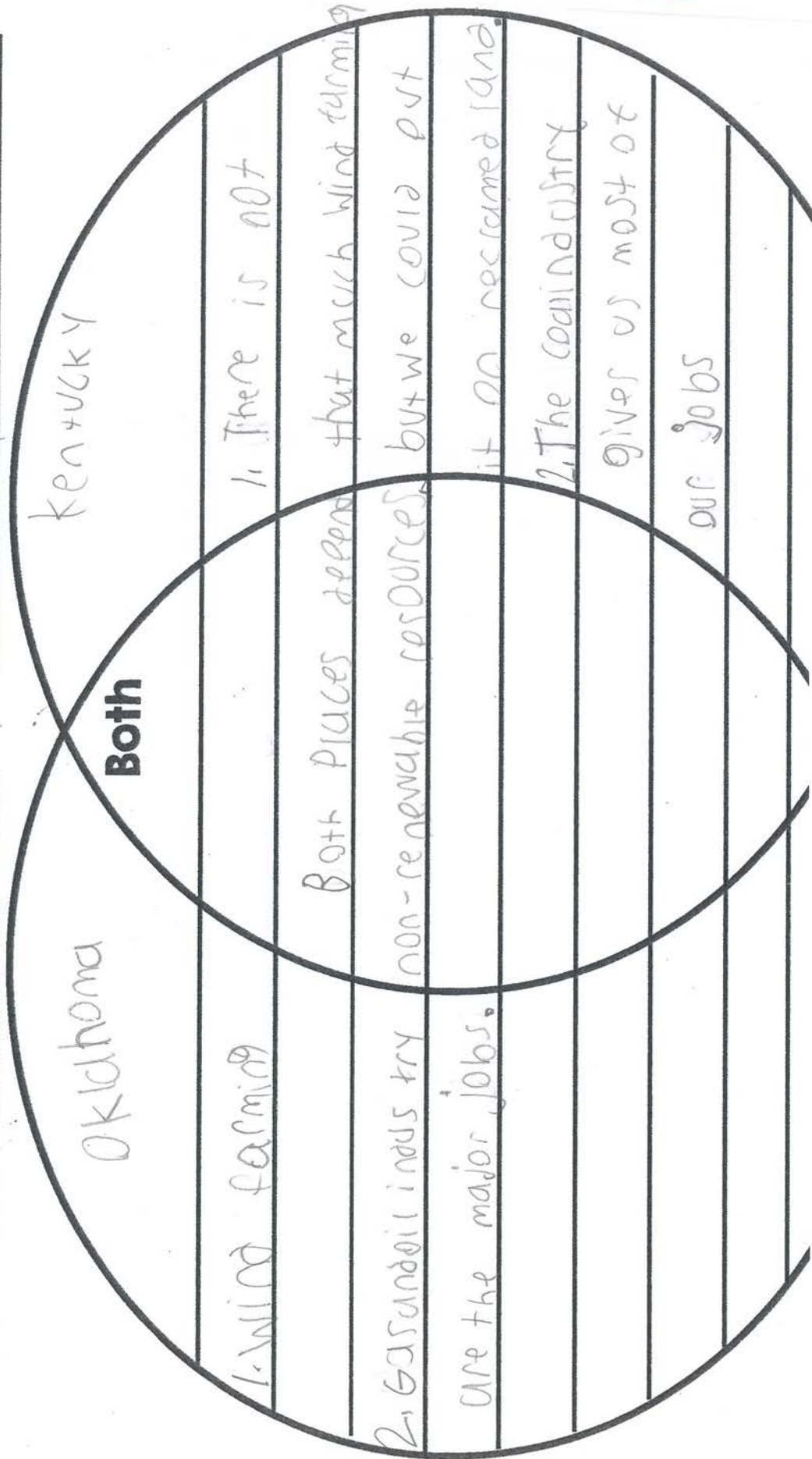
Name: Sample

Date: _____

This Venn Diagram helps me to compare and contrast

Oklahoma City

& My City



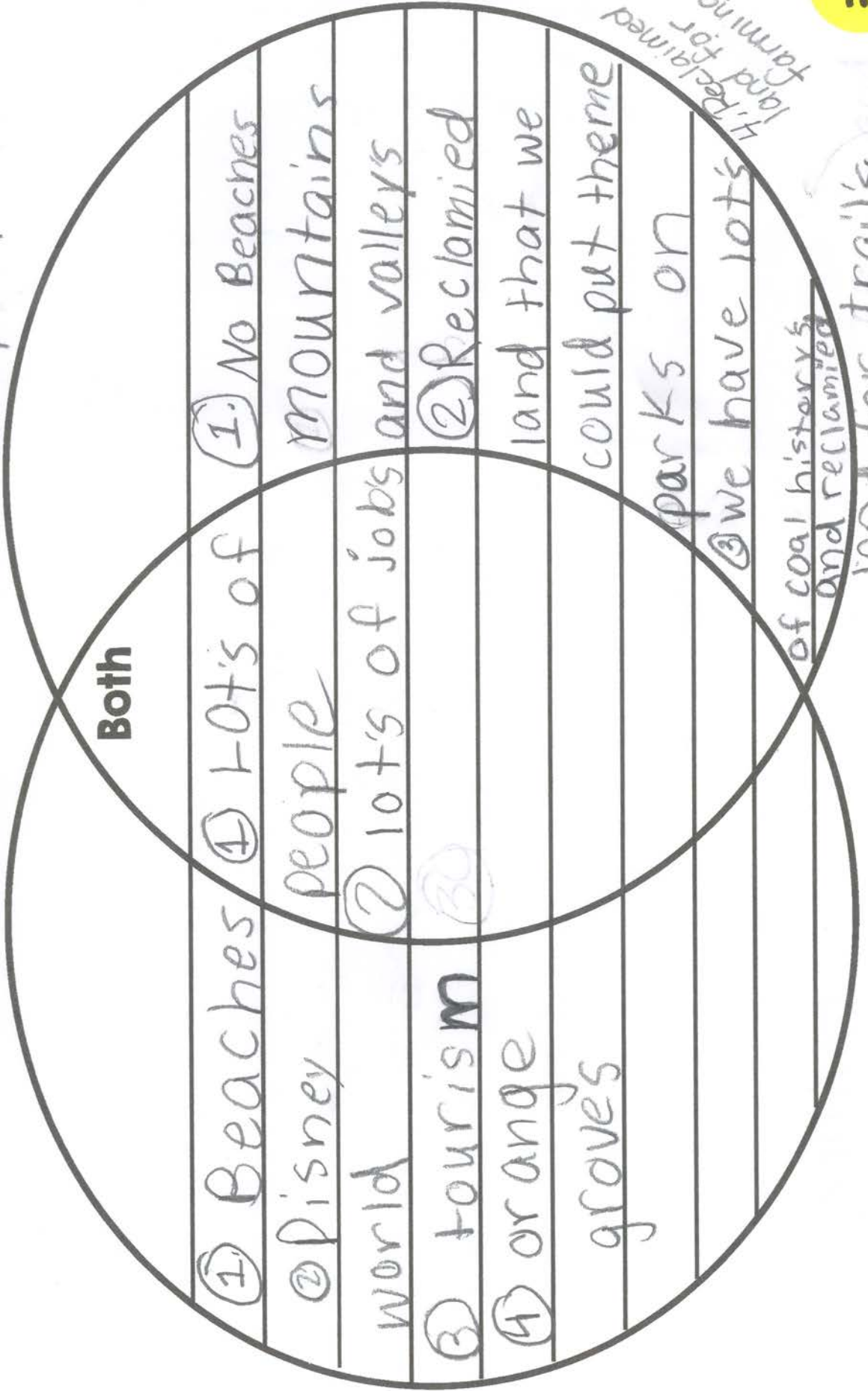
We compared and contrasted our city with other cities that have possible industries that we could have on reclaimed mine land.

Name: Sample

Date: _____

This Venn Diagram helps me to compare and contrast

Melbourne Florida & Kentucky (My town)



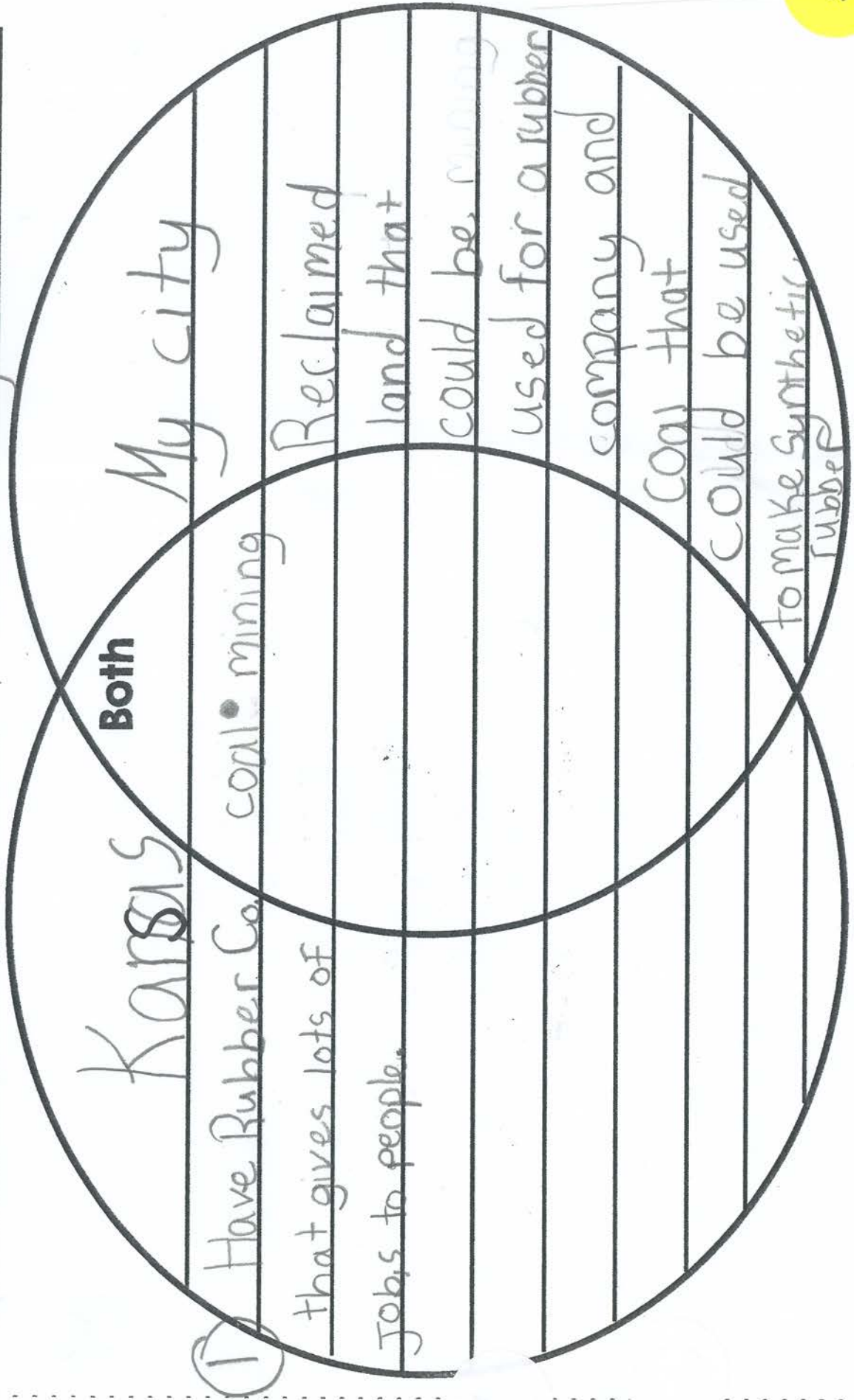
N- Sample

Date:

This Venn Diagram helps me to compare and contrast

Kansas

& Ky



Flat Stanley travels



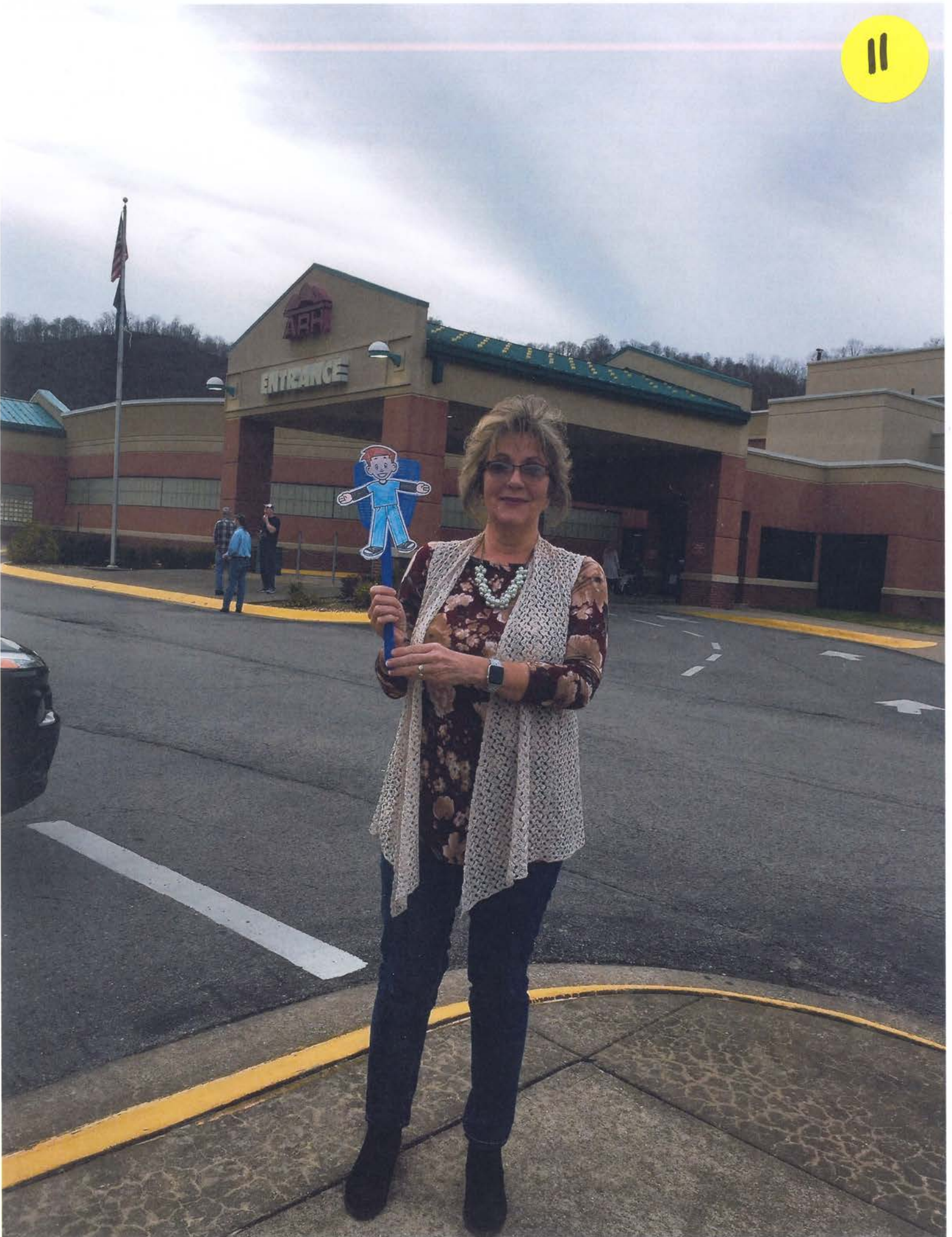
Flat Stanley travels near and far to see the important aspects of our community as well things in other cities that could help our area develop a sustainable economy.

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DAYS
19
APRIL
6-27-28
TS GET
PARTY







We are participating in a Cedar Coal Study Unit in class. We are wanting to learn more about other places and how they compare/contrast with where we live. Please color Flat Stanley and send him to a family member or friend that could teach our class about the importance of coal to our area or send him to someone in a different city that can show us what there area is like. Have them to take a picture of Flat Stanley and answer the questions below. They can mail you the things back or just email you the picture and answers and then you can print them off and write them below. Please return Flat Stanley adventure information by Monday, March 11th. I can't wait to see all of his adventures!

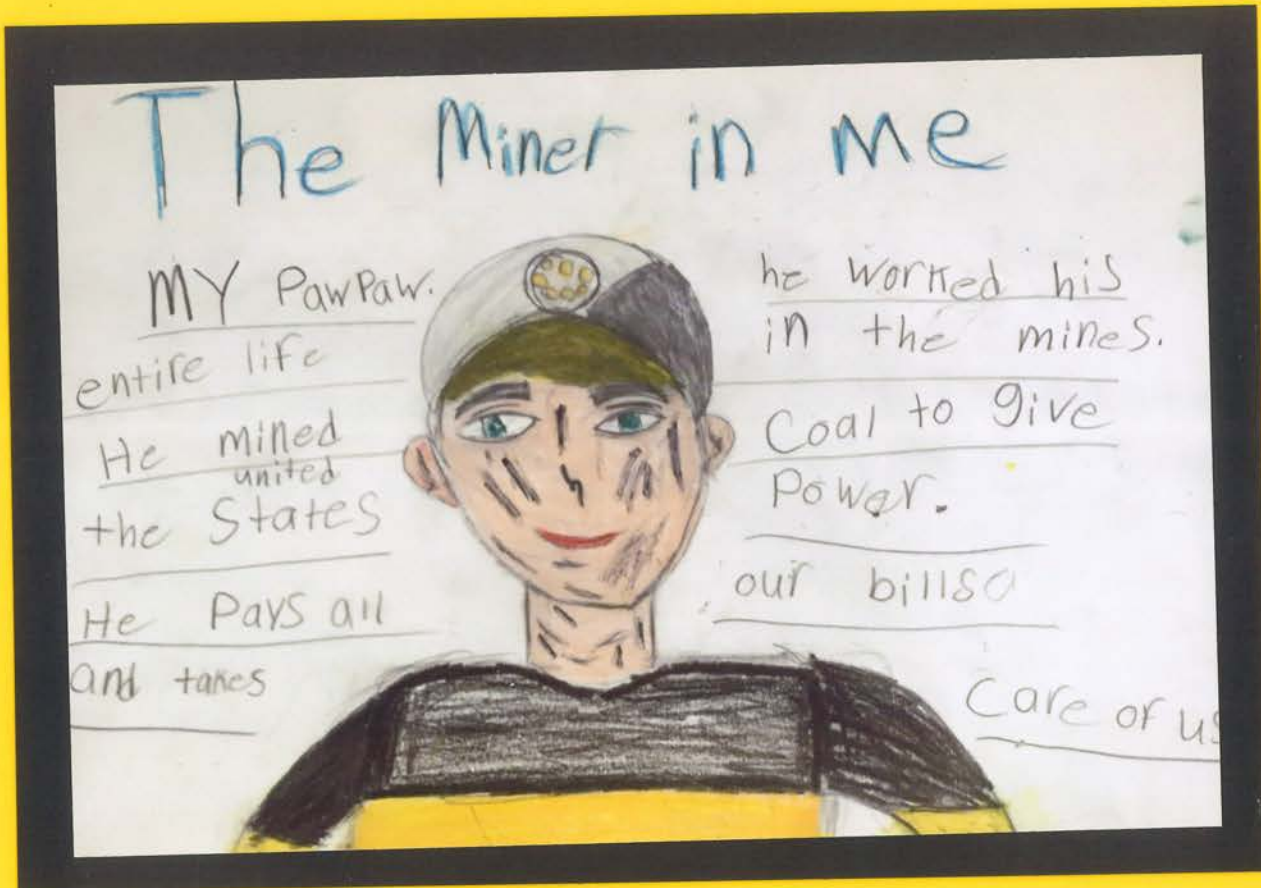
Where is Flat Stanley's Destination? Sample West Virginia Ky
Sample

If local how does his destination show the impact of coal?
The coal house was constructed in 1933 from 65 tons of coal
The ARH was dedicated by the UMW in 1956

If not local, where is Flat Stanley and what are some important jobs in that area?
Coal severance tax money helps finance public libraries.

What are some interesting facts about Flat Stanley's destination?
Hatfield McCoy feud was fought on the West Virginia
Ky borders.
In 1922 Henry Ford went into Coal Buissness in ~~the~~ Ky.

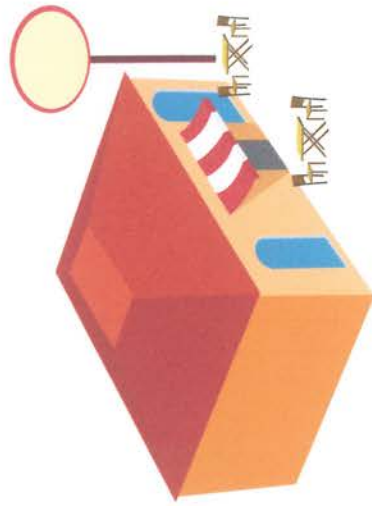
What is your area known for?
Coal Mining jobs
location



This is a work sample of a poster that a student created after interviewing a family member that coal has impacted.

Community Needs

Places to eat	Stores
gas station	lower prices



Students pretended they were given a vacant building next to our school to help our community. The next few pages show parts of this activity. Here it shows a student's perspective of our community's needs.

Building Up Our Community

You have been selected to renovate the building across the street from the school. Your task is to open a business that will help to create sustainability for our community. Brainstorm a list of needs that our community has. Draw the blueprint of your business on grid paper labeling the area and perimeter of all the needed components of your business.



- Sample -
My Building Blueprint

Building Area: 176 sq. feet Perimeter: 54 feet

Parking space: 0 sq. feet Perimeter: 10 feet

Sign Area = 9 sq ft P = 20 Ft

table A = 4 sq ft P = 8 Ft

Patio A = 33 sq ft P = 28 Ft

Staff ONLY A = 22 sq ft P = 28 Ft

Building blue prints using area and perimeter.

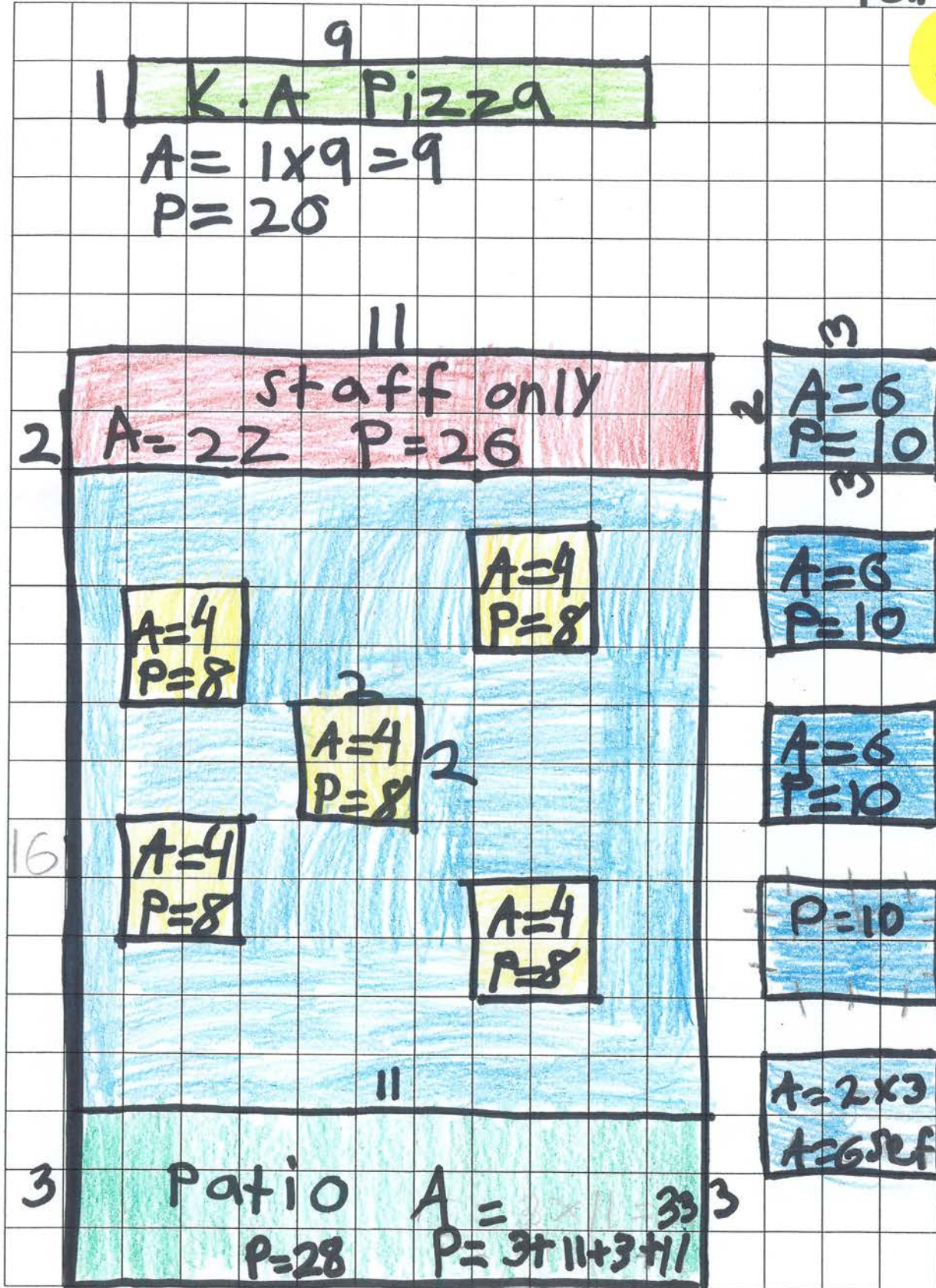
*Student explanation of how their business would benefit our
community.*

■ = sign
■ = tables

■ = Parking space
■ = patio
■ = staff only

12

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parking

11
1cm GRID

My business would help our community by:

Giving places to eat that is
closer to our home. It will also
give people jobs in my community.
More money would be spent in my
community.



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Outdoor Learning Schedule of Events

9:00 - Load Buses for reclaimed mine site visit

9:10-9:20- History Lesson on Wheels- Bus tour through the historic area where Henry Ford's house is located along with the coal camp houses and Company Store for the former Fordson Coal Company, owned by Henry Ford.

9:20 – Arrive at the reclaimed land site and set up

9:30-9:45- Guest Speaker 1- Caring for Reclaimed Land

9:45-10:45- Folklore/Story Teller- The History of our area and the impact of coal

10:45-11:00- Music

11:00-11:30- Guest Speaker 2 – Life on a Barge

11:30-12:00 – Lunch

12:30- 1:00- Cookie Mining

1:00-1:30- Fractions Recipes

1:30- 2:00- Exploring Reclaimed Land

2:00-2:15- Load Buses

Outdoor learning schedule for our day on reclaimed land. No better way to understand the importance of something to our community than to experience it first-hand.

- Sample - • Sample - Sample • Sample -

On Friday, Sample, we will be going to Sample park for an outdoor learning day. We will leave school around 9 and will return before dismissal. The cafeteria will be providing a packed lunch and students may pack their own lunch if they wish. We will be having learning centers at the park as part of our Cedar Coal Unit Study. Please sign and return this sheet giving your child permission to travel by bus to Reclaimed land

_____ has my permission to go to Sample on Friday, March 15th 2019.

Parent Signature

Emergency Contact Number

Parent letter for our field trip to reclaimed land.

Classroom Job Application

Last Name

First Name

Sample	Sample
--------	--------

Strengths (*things I'm good at*)

Weaknesses (*things I'm not so good at*)

Cooking, making stuff fast,
nice, honest, responsible

never mean, lazy, scenic

1st Choice Job (*circle*)

Waiter/Waitress

chef

Why I Think I Would Be Good At This Job:

Because I'm careful,
helpful, nice.

2nd Choice Job (*circle*)

Waiter/Waitress

chef

Why I Think I Would Be Good At This Job:

because I'm good at cooking
nice, fast, careful.

Skills I have that would help with this job:

Cooking, careful,
helpful, nice, fast

For our "Mock Restaurant" students had to complete a job application and resume.



My Resume

Name Sample

I am seeking the position of: (Circle One)

chef waitress/waiter

My skills/Strengths:

1. cooking
2. putting out a fire
3. good memory

I will be a good worker because:

I will be a good worker because I am good at cooking
I have good memory so I can remember what
people ordered.

Classroom Job Application

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Last Name

First Name

Sample

Sample

Strengths (things I'm good at)

Weaknesses (things I'm not so good at)

math and I am responsible and friendly,
and I like to clean.

not talking.

1st Choice Job (circle)

Waiter/Waitress

chef

Why I Think I Would Be Good At This Job:

I am very Reliable, and nice and Honest.
I am careful and trustworthy.

2nd Choice Job (circle)

Waiter/Waitress

chef

Why I Think I Would Be Good At This Job:

I am very Reliable and nice and Honest.
I am careful and trustworthy.

Skills I have that would help with this job:

I like to cook, and to be friendly, and I like to clean.

Classroom Job Application

14

Last Name

First Name

- Sample -

- Sample -

Strengths (*things I'm good at*)

Weaknesses (*things I'm not so good at*)

talking and getting
people's orders
trustworthy

COOKING

1st Choice Job (*circle*)

Waiter/Waitress

chef

Why I Think I Would Be Good At This Job:

I'm trust worthy, Dependable, honest,
Responsible, friendly, Careful, Reliable

2nd Choice Job (*circle*)

Waiter/Waitress

chef

Why I Think I Would Be Good At This Job:

I will follow directions.

Skills I have that would help with this job:

I'm friendly, trust worthy, Reliable,
Careful, Responsible, dependable.

DIG Sweet Shop Order Form

Waitress Name Sample -

Table # _____

Customer Name	1/2 Moonpie Sundae	1/3 Moonpie Sundae	1/4 Moonpie Sundae	RC Cola Float	Add Sprinkles
1. Names removed for Sample			✓		
2. Names removed for Sample				✓	
3. Names removed for Sample			✓		✓
4. Names removed for Sample				✓	



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This is a sample order form that our waitresses used.

Coal Miners favorite treats!

Desserts

Ice Cream

Gummies



Welcome To Dig!

You're one stop Sweet Shop!

This is our menu that students created for our mock restaurant.



This was a tag for the table at our mock restaurant.

Recipe: RC Cola Float

Prep Time: 3 min.
Cook Time: _____

Ingredients:

RC Cola
ice cream
cool whip
Straw
cheerios

Directions:

1. Pour RC Cola.
2. add one scoop ice cream
3. add cool whip
4. add straw
5. add cheerie on top

Students created recipes for two deserts that they would feature at their mock restaurant on reclaimed land.

Recipe: Moonpie Sundae

Prep Time: 3 min.
Cook Time: _____

Ingredients:

- moonpie
- whip cream
- choc. syrup
- sprinkle
- cheerios
- ice cream

Directions:

1. Cut moonpie $\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$
2. put ice cream on pie.
3. 2 squirts of whip cream
4. 2 squirts of choc. syrup.
5. 2 snacks of sprinkles
6. add 2 cheerios



Building a Sustainable Economy Business Plan

Sample

Business: classy sunglasses

Description of the products you will be selling at your business?

Sunglasses, uv rays, cleaning kits, and glasses cases.

How would your business benefit your community?

It provides jobs and protection for the eyes from the sun's
uv rays

How would your business utilize the resources that coal has provided us with?

The electricity and the materials my products are made from utilize coal in
several ways.

What services does your business need? water electric

How would building your business on reclaimed mine land benefit the community?

It will bring in money for the economy and jobs to the locals.

Building a Sustainable Economy

Small Business Planning Sheet

Name of Busi

Sample

Classy Sunglasses

Cd = C 0 0 1 dollar

Products I will sell:

Sunglasses cleaning kits
visors
cases

Prices:

1.00
1 cd each

I will need: water

electric:

other:

I will need employees:

I will run my own business:

How will I advertise my business:

commercial

brochures

signs

My business will offer products online:

yes

no

Business Slogan:

MAKE YOUR EYES HAPPY



Building a Sustainable Economy Business Plan

Business Name_ **Sample**

-yis **Art Supply Store**

Description of the products you will be selling at your business?

art+supplies like color pencils, pencils, paint, Scissors,
Markers, Paint Brushes, and paper, and a apron.

How would your business benefit your community?

because It will be from Recycling.

How would your business utilize the resources that coal has provided us with?

the electricity + comes from the coal fired
power plants.

What services does your business need? water electric

How would building your business on reclaimed mine land benefit the community?

because it utilizes lands that has been mined.



Goods and Services

Our business sells... goods services

We will sell eye wear.

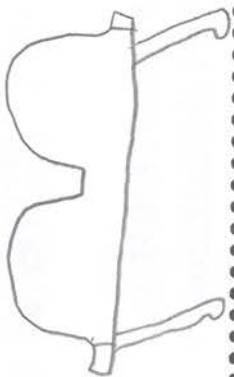
It is a...

want

need

Both

Draw a picture.



Producers and Consumers

Our business will produce Sunglasses,

Cleaning kits cases visors lenses

Our business will consume Water

Electricity

Market Day Mathematical/Critical Thinking

Business Owner: **Sample**

Business Name: **Sample** Sunglasses

Cd = Coal dollar

List Your Products, Cost, and Quantity in stock below:

Products	Quantity	Cost	Total amount if all is sold
Sunglasses	18	1Cd each	18
CASES	3	1Cd each	3
CLIPS	4	1Cd each	1
Cleaning Kits	2	1Cd each	2

Total Items sold:

Amount of money made:

Rent: 2.00

Water: 1.00

Electric: 1.00

Start-Up Taxes/Fees: \$2.00

Employees: 6.00

Total Bills:

24

8.40.

Profit: (After Bills)

24.00 - 8.40 = \$15.60

Were there duplicates of your business? NO If so how did the competition affect your sales/profit?

Coat = COAT - dollar
Sunglasses - ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~

Cases - |||

Cleaning Kits - ||

Visorclips - ||||

Star rate



This is a student's tally of his items he sold and the rating that he gave his business.

Market Day- Customer Satisfaction Survey

How would you rate the customer service provided to you during market day?

5 4 3 2 1

What was your favorite business?

I loved the Spa! The student had various bath balms,
Candles and bath bubbles.

Comments: She did an excellent job!!

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This is a shopper's satisfaction survey.



Business Start-Up Cost

Storefront: \$ 2

Online Set-Up Cost: \$2

Commercial Cost: \$2

Billboard Space: \$2

Water: \$ 1 Electric:\$1

Employees: \$2

Business Tax: \$2 plus 10% of profit

Sample

coal
I learned that coal can be dug up
fast by a contous worker and
a coal car. coal goes into a
conver belt after the worker is gone.
They used rods under it holds up a piece
of the mine.

Students demonstrated a lack of understanding of coal as a resource and fossil fuel. We utilized google classroom to assign videos and articles for students to do during extra time.



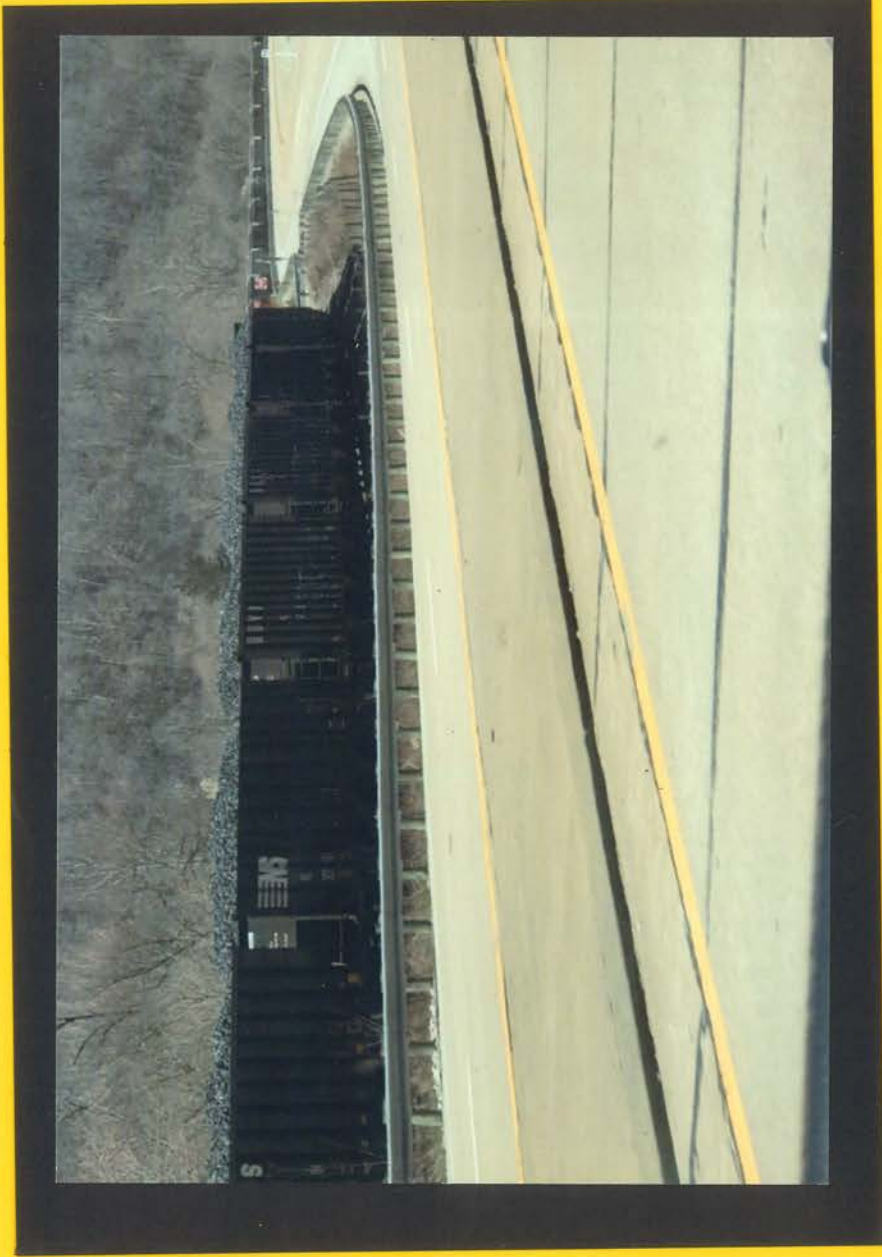
Sample

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The career book was a coal miner. The coal mines can be used on reclaimed land. The coal mines give us power and you can burn coal to get steel. and The job can still be done because my dad is still a coal miner and coal gives us heat and a house and money to pay the bills.

Here a student reflects on his career book that he chose from his research in the library.



This picture and the let's brainstorm page are an added activity. Students studied pictures that the teacher took throughout the area and then discussed the 5 w's. This was a questioning activity to gain content knowledge on our topic.

Sample

Name

Let's Brainstorm!

Who?
All of Kentucky
will benefit
from the coal
in this train

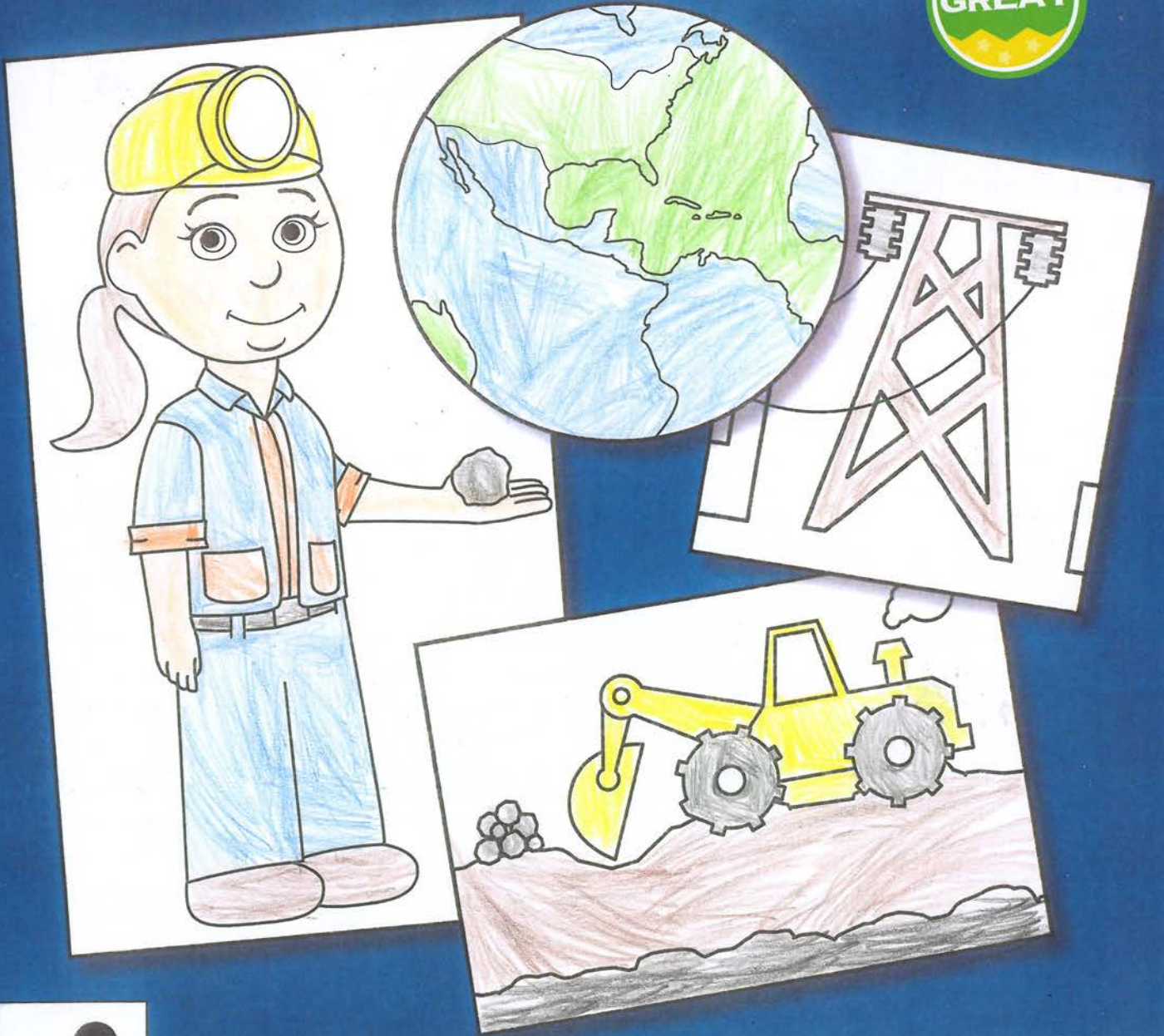
What?
A train loaded
with coal

Where?
In Kentucky
on a rail road
track

When?
This year
2019

Why?
The coal in Kentucky
need to be transported
to other places.

ALL ABOUT COAL



American Coal
Foundation

This activity book belongs to

Sample



Fossil Fuels

fossil fuel, oil, coal, carbon dioxide

Earth and Life History Unit

Everyday we use living things from millions of years ago. They help us drive cars, heat our houses, and even turn on the lights. No, this is not like a stone age cartoon where dinosaurs cook food with their fire breath or run on little tracks to keep our cars going. The parts of these old living things we use look nothing like the animals and plants they came from.

Under the earth lie the bodies of things that lived long ago. Some of them were kept safe in rocks or mud and still look like the animals and plants they once were; we call these fossils. The rest of them had more and more layers of dirt and rock put on top of them that changed them. This change came from a lot of heat and pressure that made their bodies break down and change into oil, coal, and gas.

While they were living, these plants made food from sunlight and animals ate food that went into their bodies to make them grow. They may be dead now, but all of the energy from this food stayed around as energy we can use. **Fossil fuels** are oils, gases, and rocks made from ancient organisms that we can use for energy. Without them, we would not have many of the things you use everyday.

This is an additional article that students read to help with their understanding of fossil fuels.

it to do many things that keep our world running.

You will not see a lot of coal these days, unless it's in old movies, in a Christmas stocking, in train cars, or in an old heater. But it does play an important part in your everyday life. **Coal** is another kind of fossil fuel found under the ground that looks like black chalk. We can use it for heat and to make electricity. The energy used to power the lights in the room you are sitting in right now was likely made from coal. By breaking it up into dust and burning it, we heat water. The water makes steam which turns gears to make electricity.

Even though fossil fuels are an easy way to get a lot of energy, using them comes at a price. When we burn them to use their energy, we let out gases that make our air dirty. Have you ever seen smoke pouring out of factories or from behind a car? Do you live in a city where some days the air is brown, gross, and hard to breathe? **Carbon dioxide** is a gas released by the burning of fossil fuels. It makes the air more dangerous to breathe and hurts our world. It's not easy to stop using them because we need to burn these fuels to drive our cars and keep our cities working.

Lucky for us, the last kind of fossil fuel is not as dirty as the others and works just as well, sometimes even better. **Natural gas** is a fossil fuel we get from the ground that can catch fire and is cleaner than other fuels. We use it to heat our homes. So why do we not use it all the time instead of coal and oil? Gas is hard to get and hard to move. When digging through rock, we have to be careful not to let it escape and not to let it catch fire because it will explode. If you carry gas in anything that has even the smallest hole, all of the gas will leak out like air from a balloon. Still we use natural gas wherever and however we can to keep our air clean and save the other fuels.

We use fossils everyday. Without them, we could not drive cars, heat our houses, or use as much electricity as we do. By burning what's left from things that lived long ago, we are also making our air harder to breathe. Other kinds of fuels cost a lot more money and do not work as well, so we will not stop using fossil fuels soon. It's a hard situation with no easy answer. What would you do?

References:

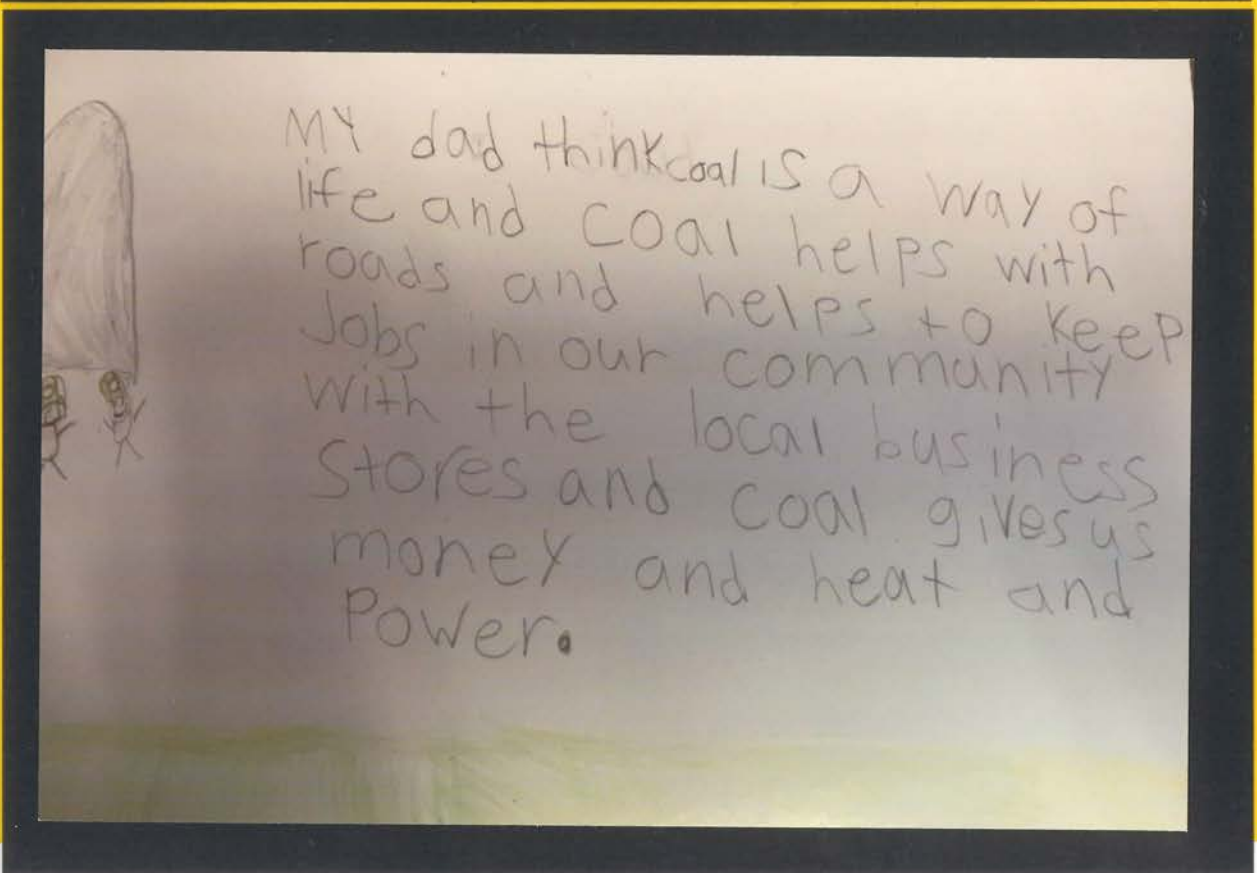
eHow Mom. "Fossil Fuel Information for Kids." eHow, 2011.
<http://www.ehow.com/facts_7212224_fossil-fuel-information-kids.html>

eHow. "How Fossil Fuels Work." eHow, 2010.
<http://www.ehow.com/how-does_5197596_fossil-fuels-work.html>

Teach Engineering. "Dinosaur Breath." Teach Engineering, 2010.



Students brought in pictures as a reminder of how near and dear to our hearts that coal really is. We made this board and had it in our room throughout our coal unit.



These are some samples from the miner in me posters. They were too big to put in our binder :)

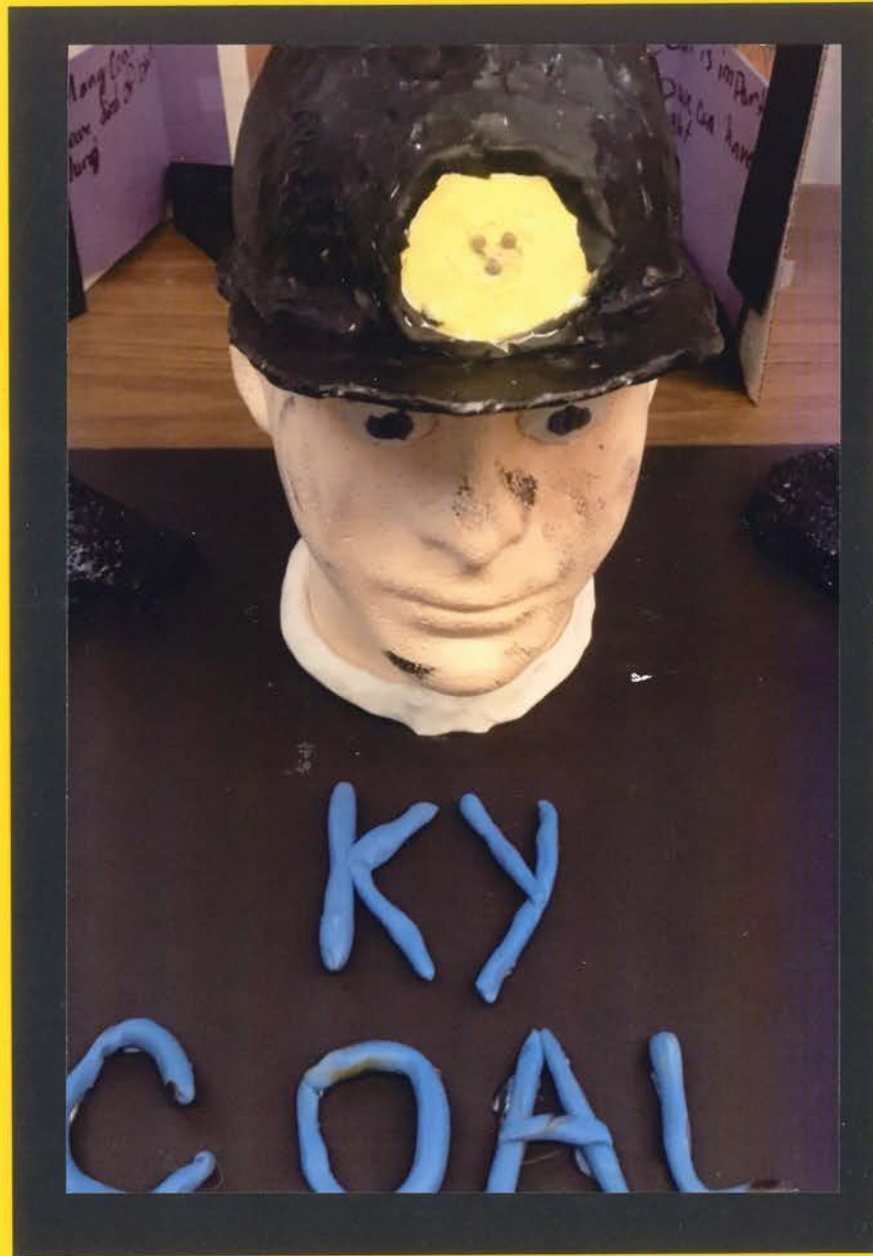
The Miner in Me
Coal used to give my dad a job



Coal helps my family have money. But if your a
Miner you get hurt some times and you get
dirt and my dad works in the mines And you get
tired in a car time and my dad works night shift
and he comes home at 9:00 and some times he work
MORNING shift

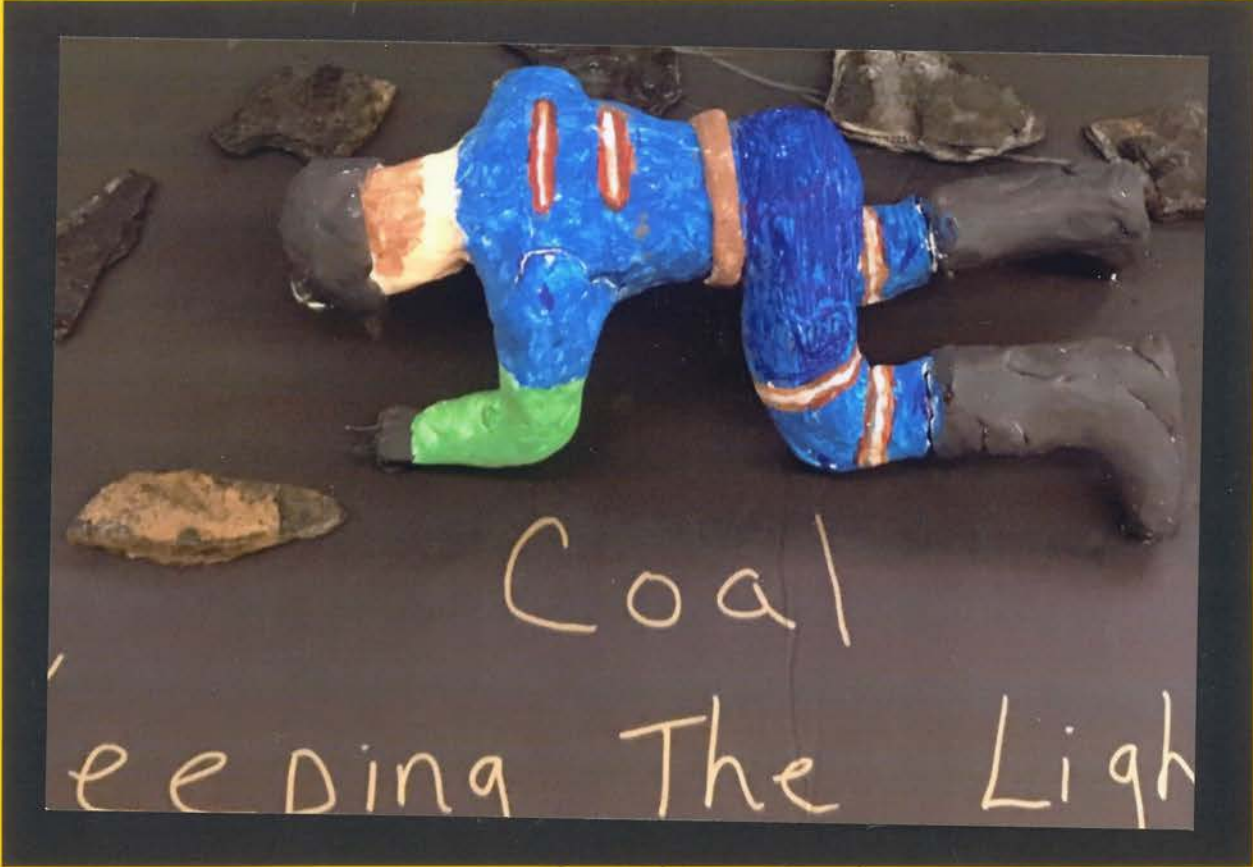


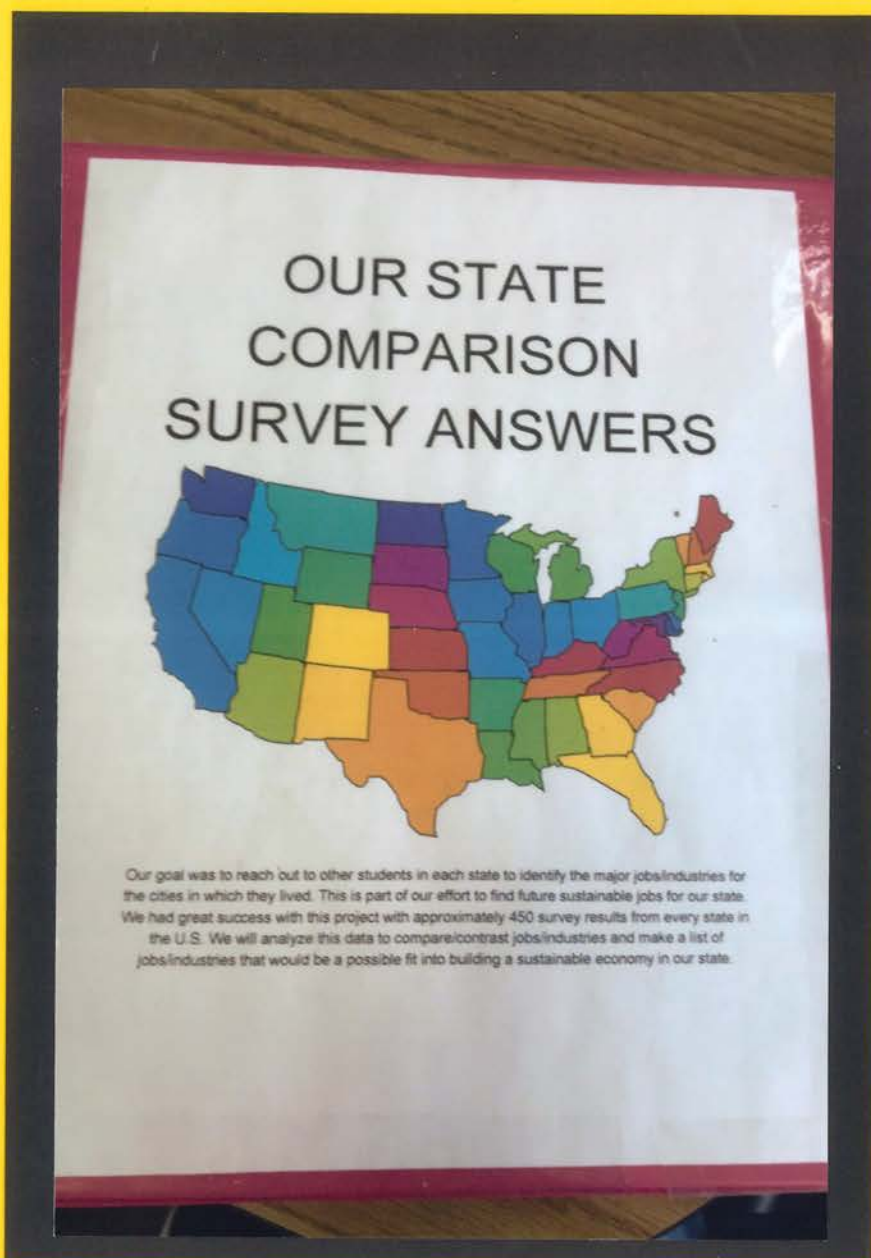
Work Sample of the miner in me project showing the current value of coal in their families/lives.



These are some CEDAR coal fair projects from students in our classroom.

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This is a binder that we created with school interviews, county interviews, and interviews from every state in the U.S. We used this data to analyze problems and solutions with our region seeing a decline in coal jobs. We used the state results to look and see if it was a possible solution that we could utilize reclaimed land for. I would have loved to shared the binder but it was full of identifiable information so I just included a picture.

*Images from google images

Kentucky Takes Action to Build a Sustainable Economy...

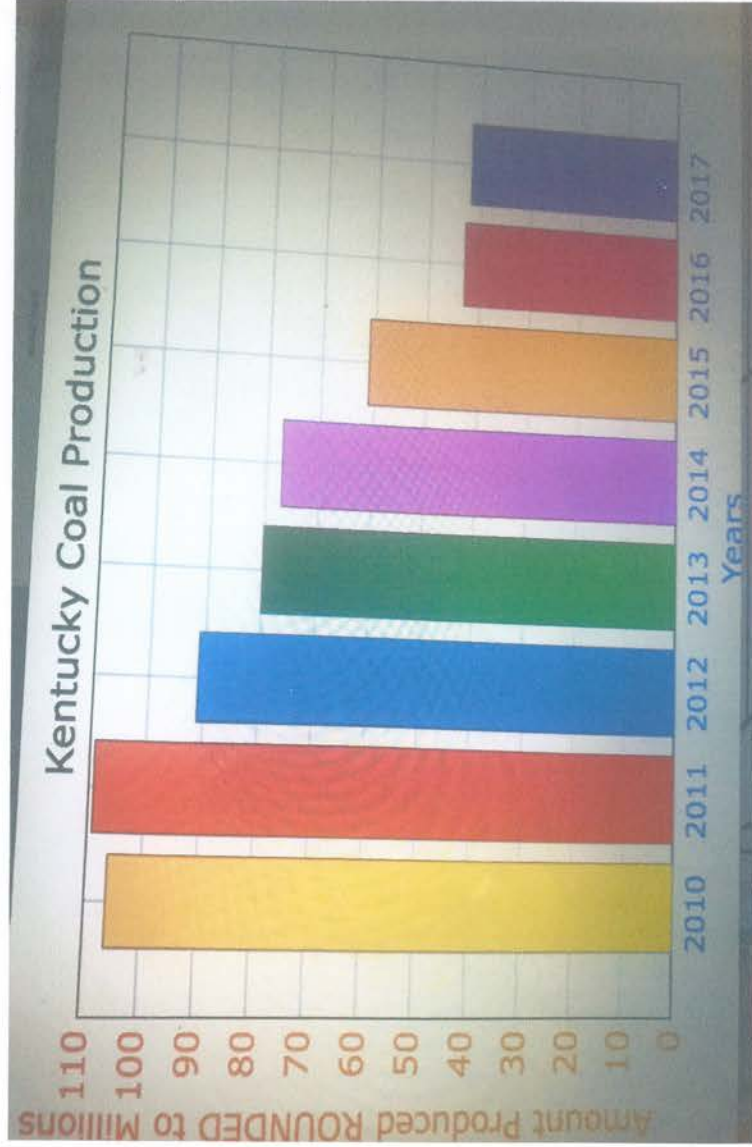


This is the slides we made for our class news broadcast where they broadcasted the problems and solutions that were developed during the unit.

*Images from google images

BREAKING NEWS

KENTUCKY SEES DECLINE IN COAL over past 6 years



What does this mean?
Less Jobs

Higher priced coal

What can we do?
Take action

Look for ways to utilize coal resources such as using reclaimed Land to create more jobs

Build a sustainable economy through balance of coal and other jobs!.

*Images from google images

BREAKING NEWS

Reclaimed Land Home to New Restaurant...

D.I.G. Sweet Shop opened its doors on reclaimed land. Serving up Miner's classics with a twist; on land with a story to tell! They hope you "DIG" your dessert!



Welcome to The Bloom

Small: \$3
Large: \$5

Room

Flowers grown on Reclaimed Land

These are some of our market day samples.

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The Bloom
Room!

flowers grown on
Reclaimed land!



This is the sign that was the inspiration for our unit! We ended up changing our unit title as this became the theme to our unit.

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Thank you to our guest speakers for helping us grow!!

Thank you for
helping us grow!



***Thank You for
reviewing our
unit!***

***We hope you enjoyed it as much as we
have!***