

Question #4

Extension Examples

November 28, 2022

Multiplication of Multi-Digit Numbers- Smous (5)

Lily
Regan
Julia
Alexis
Megan

Divide Whole Numbers- Pinter (11)

Kenna
Colton
Wyatt
Nathan
Carriana
Ryan
Basil
Colin
Anna
Lizzy
Autumn H.

Adding Decimals- DeShone (20)

Jamin
Molly
Kace
Isaac
Cameron
Madalynn
Liam
Deliah
Keira
Ricky

Mason K
Kamryn
Ethan
Kathrin
Charlie
Phoenix
Lucas
Jackson D
Emma
Jackson G

Subtracting Decimals- Mills (11)

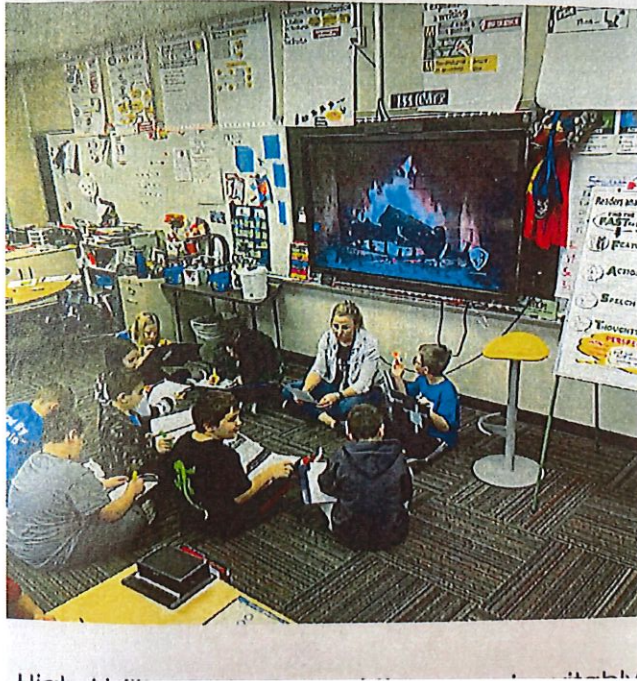
Maekaylie
Lucy
Remington
Samantha
Zayleigh
Miranda
Albert
Jaxson
Noah
Mason
Rylen

Extension- Wojtysiak(29)

Brady
McKenna
Sophia
Austin
Parker
Vander
Kaydance

Makiyah
Alice
Abby
Sam
Mason J
Owen
Wyatt
Dexter
Tim
Jenna
Noah
Eli
Reid
Ellie
Rowan
James
Braxton
Autumn S
Addy
Orbie
Marley
DJ
Noah

▾ fX Cloonan					
A	B	C	D	E	F
Cloonan	Horvath	Spence	Livinghouse (Extension)	Hale (Extension)	
Ella - H	Paris - H	Mason - H	Jayden-S	Travis - H	
Colton - H	Greg - H	Caito - H	Breckyn-S	Kooper - H	
Mya - H	Kaydence - H	Ana Maria - H	Katelynn-S	Amella-S	
Sophia - H	Valeria - H	Jalzyn - H	Avery - H		
Cristal - H	Madelyn-C	McKenna - H	Juan - H	Liliana-S	
Blake - H	Miles-S	Oliver - H	Gracie - H	Gunner-S	
Skyla-S	Izzy-S	Ilana - H	Lauren - H	Mason-S	
Weston-S	Nikolai-S	Max - H	Adalyn	Troy	
Japheth-S	Noel-S	Weston-S	Olivia	William	
Yami-S	Barron-S	Emily-S	Travis	Bradley	
Yoki-S	Eli-S		Riley	Almon	
Gabriel-S	Elias-S	Abria-S	Austin	Owen	
Jeanney-S	Parker S. -C	Nolan-S	Addison V.	Angellina	
Noelle		Charley	Anna Z.	Hayden J.	
Ethan		Quentin	Parker K.	Lillian	
		Hadley	Reid H.		
		Landen			
		Hunter			
			Adding 3: 2 digit numbers		
				Double regrouping	
				Extending the place value into thousands	
			83% +		



Our students are identified as high ability through our district wide district benchmark testing and CoGat. In the classroom, we use our mastery data of learning targets from our essential skills in ELA to focus on Question #4 to provide extensions. These students are grouped together to extend beyond the essential skill. During our reading RTI time, these students are engaged in lessons that utilize resources provided through our high ability funding to target the extension of specific standards. This provides a deeper understanding to extend our essential standards. For example, in this photo, students are reading an excerpt from a 3-part short story called, The Traveler, in class. In class, these students have mastered the inference of character trait. These students are now tracking and inferring character traits of different characters to compare and contrast the characters once we are at that point.

Escape Room EDU

Teacher Instructions

Print out question cards and decoder cards for each level
Important Note: The final level (Level 5) comes in two versions (Normal or Hard). Use either one, both end with the same code. The digital escape room uses the normal difficulty only.

Make copies of the recording sheet for each student or group

Print answer key to check student answers

Digital Escape Room

Digital Escape room: <http://bit.ly/2CBuLne>

Students will receive a completion code when they have successfully broken out

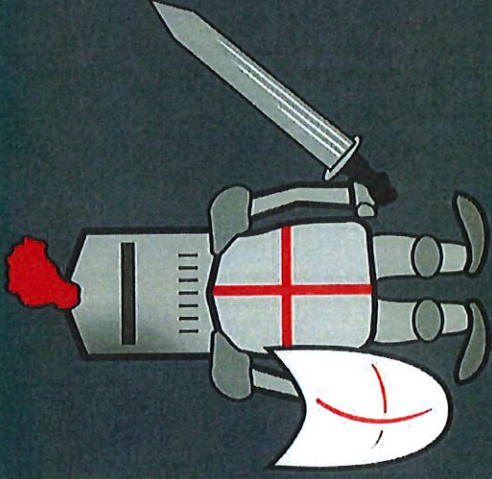




The Crusades

...

A deep dive into the battles for the Holy Land!!



CREATE YOUR OWN MINI CIVILIZATION



Have fun and use everything you have learned about civilizations so far!!!

Everything is completely made up and from your imagination!!

Extension Activities:

- Types of Conflict Extension Activity- Students that have mastered the standard work examine short stories that we have covered for types of conflict. -Gallery Walk/Sorting onto Posters -Discussions in small groups - Characteristics that define
- Figurative Language - Fig lang "hunt" using various types of text/sources
- Jeopardy Games - Both Teacher AND student created [Fig Lang Jeopardy](#)
- Color Coding for Fig Lang within texts outside of our unit of study.
- Written Response (Citing text evidence) Extension - Students "grade" other student's responses checking for mastery of the RACE/Written Response format/Rubric
- "Bullseye Activity" - Will begin semester 2
 - "Bullseye" (Smekens) Creating Multiple Choice Questions - Students are given a question from the teacher. They then work to locate 5 pieces of text evidence from the story to use as possible answer choices (1 perfect/bullseye, 1 near bullseye, 2 outer ring pieces)
- Socratic Seminar/Shared Inquiry Discussion -Great Books Roundtable
- THEME - Ted Talks - Students search for a Ted Talk related to a particular THEME. Complete a Ted Talk Response Sheet
- Sell This Haunted House - Creative Writing Activity (see packet)
- Red Scarf Girl - Using Visual Images...students make INFERENCES - Small Group Discussion -Making connections between the Memoir and the Historical Documents. (What information do I need from the historical documents to better understand the memoir?)

Miss Serry's First Grade
Math Lesson 16 – Counting to 120
Lesson presented December 8, 2022

Our class has been studying counting to 120 both aloud and with the aid of a 100s chart. Students were also required to find patterns within the 100s chart and count on from any given number. One of the tasks they had to demonstrate mastery of, was filling in missing numbers within the 100s chart. My class had mastered filling in the chart when given several anchor numbers and only having to be able to count forward or backward by 1s as demonstrated in the first worksheet.

As an extension, I found worksheet #2. This page required them to use only one given anchor number and utilize their knowledge of counting forward and backward by 1s as well as forward and backward by 10s as they moved up and down the columns. The sections of the chart given to them were also very random in shape creating gaps in their counting for added challenge.

Worksheet #1 – On level

Worksheet #2 - Extension

Attached is the work used for our 2 extensions groups following our double digit addition/subtraction regrouping units.

Students who scored at least 83% were placed into these extension groups based on kinds of mistakes made and overall readiness.

Mrs. Hale had the group with 2 digit column addition/ story problems and Miss. Livinghouse had the group with double regrouping (subtraction across zeros). Sometimes a teacher takes this highest group, but we had too many students who needed reteaching with standard regrouping in smaller groups. Miss Livinghouse has been in second grade for several years and we felt she would be fully capable to teach this extension.

We group our students based on data and switch classrooms to make sure students needs are met.

Attached is our most recent groupings. In the 200+ group kiddos come to room 130.

I service them in different ways based on most recent data.

Some of our kiddos use ALEKS to enrich above grade level standards. If they utilize ALEKS they have shown mastery of the standards being addressed.

We have an older student who mentors the ALEKS kiddos and Mrs.Kleist also does to help teach new concepts.

Also attached is our enrichment supplemental materials. We use higher rit bands to enrich these students. We use RIT bands above where they are to make sure we are enriching students. The questions are based on NWEA, and meet all spectrums of the standard at RIT levels.

We also utilize Mobymax for students who have shown mastery but do not have ALEKS. It is a free program that allows students to work at their grade level on concepts/skills. This is mentored by our assistant.

This is an example of how we meet question 4 in math.

1. Aleks math program (attached example)
2. ixl action plan individualized with several skills above (attached example)
3. Junior Great Books with activities (photos attached)
4. Independent research activities

Here is student evidence of Powerpoint of Christmas Around the World:

Ms. Cheryl Karczewski - Dashboard

Instructor Information

Ms. Cheryl Karczewski

Last Login Date: 01/04/2023
 Email: ckarczewski@npsc.k12.in.us
 Total Students: 5 Total Classes: 2

Authorize Students **1**

Account Summary »

Students Not Recently Logged In

More than	-	7	+	days
Level 6				12/20/2022
Level 6				12/20/2022
Karczewski LV 5 2022-2023				12/20/2022
Karczewski LV 5 2022-2023				12/20/2022
Karczewski LV 5 2022-2023				12/20/2022

Recently Viewed Classes

Karczewski LV 5 2022-2023 **3** # of Students

Announcements NEW

Now Available: Custom Question Authoring and Enhanced Resources



You can now include your own questions (including free response questions) in assignments and create your own resources to include in the learning path or assignments.

View All »

Learn More »

Activity Time Breakdown

Average Time Spent Per Activity

No data to display.

Avg. Pie Progress by Class

Highest Lowest

89% Karczewski LV 5 2022-2023 Mathematics - LV 5 (with QuickTables)

66% Level 6 Middle School Math Course 1 / LV 6

IXL Diagnostic Action Plan



Your most recent levels and recommendations as of January 4

Student:

The IXL Real-Time Diagnostic shows you what you know and what you're ready to learn next. Work on your personalized skill recommendations until you reach excellence (90+). Visit the Real-Time Diagnostic often to see how your stats change and to get new recommendations!

Have questions about the Real-Time Diagnostic? Visit www.ixl.com/diagnostic-help.

Overall math level



Math strand levels and recommendations

Numbers & Operations



2 recommended skills

- Multiply three or more numbers up to 2 digits each (Fifth grade) >> CKE
- Prime and composite: up to 100 (Fourth grade) >> L9R

Algebra & Algebraic Thinking



5 recommended skills

- Compare patterns (Fifth grade) >> XPM
- Compare numbers using multiplication: word problems (Fourth grade) >> QKB
- Write variable expressions: word problems (Sixth grade) >> 6LQ
- Write variable expressions (Fifth grade) >> UZZ
- Identify terms and coefficients (Sixth grade) >> 9KE

Fractions

100


520

800

 4 recommended skills

- Write fractions in lowest terms (Fifth grade) >> A76
- Multiply unit fractions by whole numbers: sorting (Fourth grade) >> VGC
- Multiples of unit fractions: find the missing numbers (Fifth grade) >> MR5
- Multiply fractions by whole numbers using models: complete the equation (Fifth grade) >> VXF

Geometry

0


550

1300

 1 recommended skill

- Graph points on a coordinate plane (Fifth grade) >> AST

Measurement

0


570

700

 2 recommended skills

- Compare and convert customary units of volume (Fourth grade) >> GAA
- Compare and convert customary units of length (Fifth grade) >> 7E8

Data, Statistics, & Probability

0


670

1300

 4 recommended skills

- Find the range (Fifth grade) >> 2T8
- Identify statistical questions (Sixth grade) >> PT7
- Changes in mean, median, mode, and range (Sixth grade) >> 2G9
- Interpret bar graphs (Seventh grade) >> YYE

Overall language arts level



Overall reading level



Language arts strand levels and recommendations

Reading Strategies



5 recommended skills

- Use key details to determine the main idea (Third grade) >> NHQ
- Determine the meaning of words using synonyms in context (Sixth grade) >> GYH
- Use actions and dialogue to understand characters (Fifth grade) >> LZ7
- Use context to identify the meaning of a word (Fourth grade) >> DC8
- Compare and contrast in informational texts (Sixth grade) >> QZW

Vocabulary



5 recommended skills

- Choose the synonym (Seventh grade) >> SXV
- Use dictionary entries (Eighth grade) >> QZN
- Which sentence matches the definition? (Seventh grade) >> 5PR
- Positive and negative connotation (Eighth grade) >> XY6
- Words with sub- (Eighth grade) >> 7Z5

Writing Strategies

200


1010

1300

 5 recommended skills

- Show character emotions and traits (Third grade) >> SCZ
- Order topics from broadest to narrowest (Eighth grade) >> JBM
- Evaluate counterclaims (Tenth grade) >> B8W
- Organize information by main idea (Tenth grade) >> 8VC
- Classify logical fallacies (Eighth grade) >> FZ9

Grammar & Mechanics

0


800

1100

 3 recommended skills

- Correct errors with frequently confused words (Eighth grade) >> PH9
- Correct errors with subject-verb agreement (Seventh grade) >> 94Y
- Misplaced modifiers with pictures (Seventh grade) >> J89

Charles :

Before story: Who is Charles? Unsolved: Infer that Laurie is Charles

Why is it (Charles) the title? He is repeatedly brought up.

Why is Charles important? He became a tradition in the household

Is He old or young? Supposed to be in Kindergarten but he's bigger than Laurie

Why is Charles so bad?

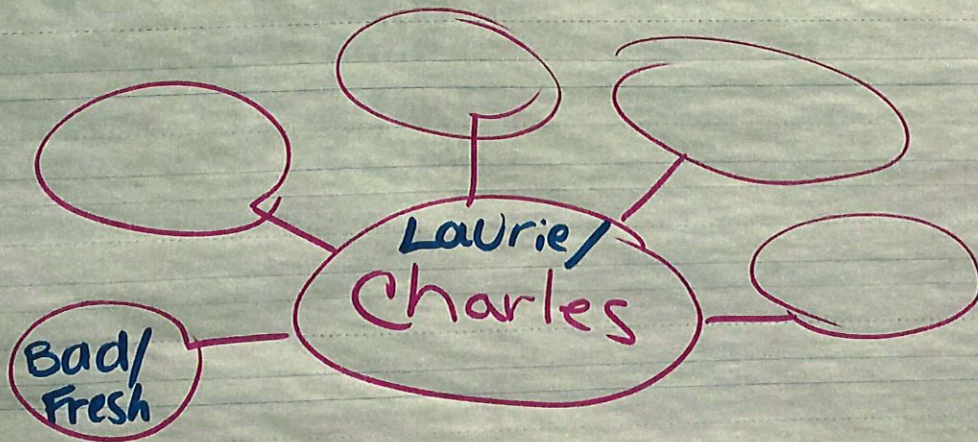
Why is Laurie acting badly? Charles is a bad influence

• We think Laurie and Charles are friends

• Charles says bad words

Why did the kids stay to watch Charles?

Laurie used it as a cover up to why he was late home.



Junior Great Books

Series 5
Book Two



Story Charles Date: 12/9/22
Page started: _____ ended: _____

Vocabulary:

Questions:

Notes: Kids might misbehave in school because something someone might be bothering them? could've wanted attention, boredom. The children are responsible for misbehavior in class someone bad influences parents/guardians start at school

If someone has mastered the first four activities then we move on to the reading passage which is our response to question 4.

We have attached the sequence of activities.

1. Letter fluency
2. CVC fluency
3. CVC and heart word fluency
4. Nonsense words
5. Reading Passage

Kdg. Team

Schedule ID	Schedule	Schedule Begin Session ID	Session	Type	Grades	Session Instruct	Instruc Room	Enrolled	Capacity	Open/Closed	Priority	Course	Course ID	Session Created By
35980433	Success Wednesday, August 31st	8/31/22	36023554 Extension - French reading	Extension		Deborah	W155	15	30	Open				deborah@nphs.k12.in.us
36029210	Success, Wednesday, Sept 7	9/7/22	36075238 APES Chrs Field Trip	Extension		Spite	W139	15	15	Closed				mhuang@nphs.k12.in.us
36029211	Success, Thursday, Sept 8	9/8/22	36097430 College App Essay Help	Extension		Bus	W139	7	15	Open				twilkinson@nphs.k12.in.us
36029212	Success, Thursday, Sept 8	9/8/22	36069793 Spanish Conversation and IHS Cultural Hours	Extension		Pietrak	W153	17	30	Open				pietrak@nphs.k12.in.us
36029213	Success, Thursday, Sept 8	9/8/22	36094469 Econ Discussion	Extension	11.12	Song	N175	10	30	Open				arturosong@nphs.k12.in.us
36029214	Success, Thursday, Sept 8	9/8/22	36092449 Let's Watch the News	Extension	11.12	Hooks	N172	24	25	Open				kayleehooks@nphs.k12.in.us
36029215	Success, Thursday, Sept 13	9/13/22	36091366 Poetry Writing	Extension	11.12	Shika	W92	20	20	Open				shika@nphs.k12.in.us
36029216	Success, Tuesday, Sept 13	9/13/22	36144868 Making a Basic Video Game	Extension		Clines	W126	18	15	Open				terrencelines@nphs.k12.in.us
36029217	Success, Wednesday, Sept 14	9/14/22	36146503 Inventing	Extension	10.11.12	Dermsdy	E339	24	30	Open				terrencelines@nphs.k12.in.us
36029306	Success, Wednesday, Sept 11	9/11/22	36147946 Dave Ramsey	Extension	9.10.11.12	Dermsdy	E339	20	75	Open				terrencelines@nphs.k12.in.us
36029307	Success, Wednesday, Sept 21	9/21/22	36203824 Pett Price reading	Extension		Spite	W155	23	30	Open				terrencelines@nphs.k12.in.us
36029308	Success, Thursday, Sept 22	9/22/22	36147077 Dave Ramsey	Extension	9.10.11.12	Dermsdy	E339	24	75	Open				terrencelines@nphs.k12.in.us
36029316	Success, Thursday, Sept 22	9/22/22	36210566 Econ Discussion	Extension	11.12	Song	N175	6	30	Open				arturosong@nphs.k12.in.us
36092524	Success, Thursday, Sept 27	9/27/22	36235562 Cell wans/AP lab and math work	Extension	9.10.11.12	Smith	W137	9	30	Open				smith@nphs.k12.in.us
36092526	Success, Wednesday, Sept 28th	9/28/22	36107895 Spanish Conversation and IHS Cultural Hours	Extension		Pietrak	W153	11	30	Open				pietrak@nphs.k12.in.us
36092528	Success, Thursday, Sept 29th	9/29/22	36237066 Anime Topic Talk Hero's Journey	Extension		Bariden	W94	10	32	Open				kbarden@nphs.k12.in.us
36092529	Success, Thursday, Sept 29th	9/29/22	36235588 Cell wanz/ cell analogy work help	Extension	9.10.11.12	Smith	W137	17	30	Open				smith@nphs.k12.in.us
36092530	Success, Thursday, Sept 29th	9/29/22	36202893 Plant Propagation	Extension		Stone	E553	22	30	Open				marstone@nphs.k12.in.us
36161239	Success, Thursday, October 4th	10/4/22	36270653 Preschool Prep	Extension		Young	E344	16	30	Open				hayednyoung@nphs.k12.in.us
36161239	Success, Tuesday, October 4th	10/4/22	36282621 9H Narrative Voice Workshop	Extension		White	W098	5	25	Open				erwhite@nphs.k12.in.us
36161243	Success, Wednesday, October 5th	10/5/22	36282383 Phiar Shorts-Real World Connections	Extension	10.11.12	Shika	W92	15	18	Open				shika@nphs.k12.in.us
36161244	Success, Wednesday, October 5th	10/5/22	36201975 Spanish Conversation and IHS Cultural Hours	Extension		Pietrak	W153	31	32	Open				pietrak@nphs.k12.in.us
36161245	Success, Wednesday, October 5th	10/5/22	36280608 AP FRZ/ General Biology cell part analogies-make up	Extension	10.11.12	Smith	W137	10	30	Open				smith@nphs.k12.in.us
36161246	Success, Wednesday, October 5th	10/5/22	36282638 AP Human Geography Test Practice	Extension		Chase	N177	5	15	Open				niclechase@nphs.k12.in.us
36161247	Success, Wednesday, October 5th	10/5/22	36283802 Syllogism Extension Activity	Extension		Soos	W120	10	20	Closed				jenifsoos@nphs.k12.in.us
36161248	Success, Wednesday, October 5th	10/5/22	36282746 Fairy tale reading in French	Extension	10.11.12	Spite	W155	10	30	Open				deborah@nphs.k12.in.us
36161249	Success, Wednesday, October 5th	10/5/22	36283999 Dice Games and Probability	Extension		Clines	W126	16	20	Open				terrencelines@nphs.k12.in.us
36161249	Success, Wednesday, October 6th	10/6/22	36267744 Dave Ramsey	Extension		Dermsdy	E339	15	30	Open				terrencelines@nphs.k12.in.us
36161407	Success, Tuesday, October 11	10/11/22	36306189 AP Biology case study review	Extension	10.11.12	Smith	W137	7	30	Open				smith@nphs.k12.in.us
36307794	Success A	10/12/22	36330738 Fhatops - Spanish Vocab Review	Extension	9.10.11.12	Ruiz	W154	11	30	Open				angelarub@nphs.k12.in.us
36307794	Success A	10/12/22	36330839 Band Jam	Extension	9.10.11	Jaggi	Band Room	10	40	Open				jaredjaggi@nphs.k12.in.us
36307800	Success B	10/12/22	36333533 water lab- Inquiry/HB Independent Inquiry Lab	Extension	9.10.11.12	Smith	W137	10	40	Open				smith@nphs.k12.in.us
36307800	Success B	10/12/22	36307739 Booklet Spanish Youth Review	Extension		Ruiz	W154	7	30	Open				angelarub@nphs.k12.in.us
36307800	Success B	10/12/22	36316694 Mat Ball	Extension		Status	Gym	19	20	Open				jordanstatus@nphs.k12.in.us
36307800	Success B	10/12/22	36330313 French fables	Extension	10.11.12	Spite	W155	10	30	Open				deborah@nphs.k12.in.us
36307800	Success B	10/12/22	36330727 Recess vs No Recess in Schools Discussion	Extension		Young	E344	21	30	Open				hayednyoung@nphs.k12.in.us
36307800	Success B	10/12/22	36330848 DQ/RDA Band Extravaganza	Extension	9.10.11	Jaggi	Band Room	14	40	Open				jaredjaggi@nphs.k12.in.us
36307877	Success Tuesday, October 18th	10/18/22	36315409 Career Connection: Physical Therapy- meet with NPHS alumnaus Kyle	Extension		Aerts	Cougr Den	26	40	Open				taerts@nphs.k12.in.us
36307896	Success Wednesday, October 26th	10/26/22	36315411 Career Connection: Child Life Specialist- meet NPHS alumnae Jessica	Extension		Tonya	Cougr Den	50	75	Open				taerts@nphs.k12.in.us
36307898	Success Thursday, October 27th	10/27/22	36323787 Scary Stories from Mythology	Extension		Bariden	W94	31	32	Open				kbarden@nphs.k12.in.us
36307898	Success Thursday, October 27th	10/27/22	36399911 Improve your writing with grammar/punctuation games	Extension	9.10	Medors	W138	13	30	Open				angelmedors@nphs.k12.in.us
36456448	Success, Wednesday, November 2nd	11/2/22	36456463 StoryMatic-Creative Writing	Extension	9.10.11.12	Shika	W92	9	25	Open				kbarden@nphs.k12.in.us
36426666	Success, Thursday, November 10th	11/10/22	36456604 Indigenous American Folklore	Extension		Bariden	W94	21	32	Open				deborah@nphs.k12.in.us
36439553	Success, Wednesday, December 7th	12/7/22	36421630 Musique Mirendel	Extension		Spite	W155	2	30	Open				deborah@nphs.k12.in.us
36439553	Success, Wednesday, December 7th	12/7/22	36485078 Evaluate Toddler Snack Labels	Extension		Young	E344	25	30	Closed				hayednyoung@nphs.k12.in.us
36439557	Success, Wednesday, December 14th	12/14/22	36464811 Winter Myths	Extension		Bariden	W94	18	32	Open				kbarden@nphs.k12.in.us
36513690	Success Tuesday, December 20th	12/20/22	36613710 Spanish Games	Extension		Ruiz	W154	18	18	Open				angelarub@nphs.k12.in.us
35980535	Success Thursday, September 1st	9/1/22	36033815 Walk in the Woods	Enrichment		Bus	W139	18	20	Open				mhuang@nphs.k12.in.us

INNOVATION IN MINING

Background Information

How does the mining industry use scientific innovation to reduce costs, enhance safety, and increase productivity?

Planning, running, and managing the day-to-day operations in a mine is no easy task! From the largest to the smallest mines, there are many different aspects of mining that need to be taken into account, including the costs of mining. Like any business, when costs exceed income, mines may close and workers may lose their jobs, so expenditures must be balanced against cost savings or production increases. These costs can be placed into three important categories - energy costs, resource (and equipment) costs, and safety costs. The mining industry spends time and money working to increase the productivity of their mines, while reducing the energy costs and ensuring the safety of their workers.

The use of technology in the mining industry has certainly reduced many of these costs when compared to the early days of mining (for example – acid plants on smelters certainly increased the cost of smelting, but provide environmental benefits). Today, various new technologies and innovations such as drones, automated machinery, robots, and even simulation “video games” for training workers continue to change the way we mine our resources, with the goal of making mining cheaper, safer, and more efficient.

Part 1

Dirty Jobs - Coal mucker [video](#)

There are many costs of mining and in this lesson they will be separated into three major categories: 1) Energy costs, 2) Resource costs, and 3) Safety costs.

1. **How did technology (the Coal Mucker) help minimize the costs of coal mining?**

2. **In what ways could the Coal Mucker machine technology be improved to minimize the costs of mining even more?**

Group Activity

1. Use the Student Sheet 1 - Mining Costs
2. Visit the following websites on their device:
 - a. [Nevada Mining Web](#)
 - b. Explore the virtual field trip of the Nevada gold mine, making sure to watch the short video clips at various icons. As you click through the stops on the tour, you should look for and record examples of costs that they view in the appropriate column on the **Student Resource Sheet 1: Mining Costs**. You can then use the VFT videos for additional information
3. **Virtual Field Trip [videos](#) (Chapters 1-4) from Dig into Mining**
4. Share and compare answers from Student Resource Sheet 1: Costs of Mining with the class. Students add new ideas and costs to their Resource Sheets. Brainstorm with partners about ways that might help to lessen these costs in a mine.

Student Resource Sheet 1: The Costs of Mining

As you and your group explore the virtual mine field trip, record the energy, resource, and safety costs in the mining industry.

ENERGY COSTS	RESOURCE COSTS	SAFETY COSTS

Part 2

1. ["Mine Safety: How A Helmet Device Could Save Lives"](#)
 - a. Read through the article with your group, and identify what costs this technology will reduce in mining and how it will achieve this as you read.
 - b. In the next part of this lesson, you will be researching various types of technology that will help to reduce the cost of mining in the future.
2. **Choose one of the following technologies as a group.** It cannot be the same technology as another group's, so check with your teacher before moving on. Innovative mining technologies that student groups will be assigned include:
 - a. Wearable technology
 - b. Drones
 - c. Robots
 - d. Mining simulation
 - e. Alternative energy
 - f. Automated (driverless) machines
3. Use the **Innovation in Mining Background Information Card** to proceed.
4. Think about the answers to the following questions as they begin their research on their mining technology:
 - a. How is/can your technology be used in the mining industry?
 - b. What types of costs will it help to reduce in mining - energy? resources? safety?
 - c. How much will the technology cost?
 - d. What are the concerns with using the technology – new technology is not without risk. A good sales presentation will include a description of risk and how you as the company selling the item will mitigate risk. For example, if you are selling a drone – one risk would be obtaining permits to fly it – you might include help with permitting as a service option.
 - e. What kinds of materials will you need or use to build your prototype model of the technology?
 - f. What scale will be used for you model? Will it be life-sized? Will it be scaled down or up?
 - g. What are some of the aspects of a good presentation? What is important to highlight to a mining company as you create your sales pitch?
5. Complete **Student Capture Sheet 3: Product Research** using your Innovation in Mining Background Information card and online resources.
6. When your group has completed their research, add your information to a slideshow (google slides, PowerPoint, Prezi) or create a video presentation (iMovie, etc.) to pitch your project.

Student Capture Sheet 2: Innovation in Mining Background Information Cards

WEARABLE TECHNOLOGY

What is it?

Wearable technology is a general term for a group of devices that are meant to be worn or kept with you throughout the day. Wearable technology that you are already probably familiar with include things like smartphones, smartwatches, fitness trackers, and google glass.

How can it be used in mining? One example of wearable tech used in mining is a small beeper-like communication device with red and green lit buttons. The device is attached to the bottom front of the miner's helmet and the lights flash when they have a message or warning is sent. The device also has four sensors to detect methane levels, carbon monoxide, diesel fumes and even radiation levels, depending on the mining conditions. The device can warn a miner of potentially harmful or dangerous situations and the company can communicate directly with miners to better manage them. Each beeper also has a radio-frequency identification tag on it so companies know exactly where their workers are.

TASK: Conduct research with your group to discover other ways that this technology is being developed to improve mining practices. Think about how this technology could be used to help reduce specific costs in the mining industry and design or refine a product (existing or new) that can achieve your goal!

AUTOMATED (DRIVERLESS) MACHINES

What is it?

Automated or driverless machines are vehicles without a person on board. Un-crewed or un-manned vehicles can either be remote controlled or remote guided vehicles, or they can be autonomous vehicles which are capable of sensing their environment and navigating on their own.

How can it be used in mining?

Driverless trucks and trains used in mining are cost-effective for mining companies as they can spend more time working, saving companies money and time, and increasing production. The software used to control and guide the vehicles can be more precise than those controlled by humans, and reduce the need for local labor in mining towns.

TASK: Conduct research with your group to discover other ways that this technology is being developed to improve mining practices. Think about how this technology could be used to help reduce specific costs in the mining industry and design or refine a product (existing or new) that can achieve your goal!

DRONES

What is it?

Drones are unmanned aerial vehicles without a pilot aboard that are controlled from the ground. Drones are used commercially, by the government and military, and by hobbyists, and can be the size of a Boeing 737 or small enough to fit in your hand. One of the advantages of using drones is that they can fly for long distances and fly into areas that are dangerous without the risk of human life. They are also useful for aerial photography of large areas.

How can it be used in mining?

As the price of drones continues to drop, it's likely that they will be used more and more for things such as surveying land to aid in mine planning and exploration for minerals in underground mines. Drones require much less fuel than larger vehicles and can go places that would be risky or impossible for humans to go.

TASK: Conduct research with your group to discover other ways that this technology is being developed to improve mining practices. Think about how this technology could be used to help reduce specific costs in the mining industry and design or refine a product (existing or new) that can achieve your goal!

ROBOTS

What is it?

Robots contain sensors, control systems, manipulators, power supplies, and software all working together to perform a task. The type of robots that you will encounter most frequently are robots that do work that is too dangerous, boring, onerous, or just plain messy. Most of the robots in the world are of this type. They can be found in auto, medical, manufacturing, and space industries.

How can it be used in mining?

Robots can be used to explore and map mines and to enter areas and parts of a mine that may be dangerous for humans to test for things such as toxic gases. They can find and mine for ore, and could help to rescue trapped miners in the event of an emergency. Robots can also change large equipment tires. Changing large mining equipment tires is dangerous because tires can fall and crush workers and, if a blowout occurs while a person is working on a tire, the forces generated can be very dangerous. A robotic forklift can drive up to a piece of equipment, use lasers to locate lug nuts, robotically remove the lug nuts, change the tire, and reattach the new tire – all without a person being in the vicinity of the work.

TASK: Conduct research with your group to discover other ways that this technology is being developed to improve mining practices. Think about how this technology could be used to help reduce specific costs in the mining industry and design or refine a product (existing or new) that can achieve your goal!

Student Capture Sheet 3: Product Research

How is/can your technology be used in the mining industry?	What types of costs (energy, resources, safety) could your technology help to reduce in mining?	What kinds of materials will you need or use to build your prototype model of the technology?
Sketch your ideal prototype:		

Extension Activities:

- Types of Conflict Extension Activity- Students that have mastered the standard work examine short stories that we have covered for types of conflict. -Gallery Walk/Sorting onto Posters -Discussions in small groups - Characteristics that define
- Figurative Language - Fig lang "hunt" using various types of text/sources
- Jeopardy Games - Both Teacher AND student created [Fig Lang Jeopardy](#)
- Color Coding for Fig Lang within texts outside of our unit of study.
- Written Response (Citing text evidence) Extension - Students "grade" other student's responses checking for mastery of the RACE/Written Response format/Rubric
- "Bullseye Activity" - Will begin semester 2
 - "Bullseye" (Smekens) Creating Multiple Choice Questions - Students are given a question from the teacher. They then work to locate 5 pieces of text evidence from the story to use as possible answer choices (1 perfect/bullseye, 1 near bullseye, 2 outer ring pieces)
- Socratic Seminar/Shared Inquiry Discussion -Great Books Roundtable
- THEME - Ted Talks - Students search for a Ted Talk related to a particular THEME. Complete a Ted Talk Response Sheet
- Sell This Haunted House - Creative Writing Activity (see packet)
- Red Scarf Girl - Using Visual Images...students make INFERENCES - Small Group Discussion -Making connections between the Memoir and the Historical Documents. (What information do I need from the historical documents to better understand the memoir?)

6th Grade ELA Priority Standards-Learning Menu Activities

6 R.L. 2.1 Cite Evidence & 6 R.N. 2.1 Cite Evidence

Cite textual evidence to support analysis of what a text says explicitly, as well as, inferences drawn from the text.

6 R.N. 2.2 Central Idea

Determine how a central idea of a text is conveyed through particular details; provide an objective summary of the text.

Option #1: NewsELA (Independent, Table Group Discussion, Whole Group Presentation)

Students will choose high interest passages within their Lexile Range and answer comprehension questions that vary in complexity based on reading levels. Students will also answer an open-ended question using various strategies (ie: written response format, objective summary). Students will summarize one article of choice to their group and/or class.

I CAN:

- *determine the central idea of a text
- *cite text evidence for to support the analysis of a text
- *summarize information objectively
- *effectively engage in collaborative discussions (e.g.,one-on-one, in groups, and teacher-led)
- *elaborate and reflect on ideas by referring to specific evidence

STANDARDS:

RN/RL.2.1

RN/RL.2.2

SL.2.1

SL.2.2

Additional Student Resources: Written response anchor chart/organizer, objective summary anchor chart, EdPuzzle, student inquiry, schema

6 R.L. 2.2 Theme

Determine how a theme or central idea of a work of literature is conveyed through particular details; provide a detailed, objective summary of the text.

Option #2: Theme in Literature Through Art (Independent, Table Group Discussion)

Students will examine famous pieces of artwork and infer the theme or life lesson the artist was attempting to convey. Then, students will read background information about the piece of art and the artist. Students will reevaluate their original theme and modify it if necessary. Students will also share and compare their ideas within their group.

I CAN..

- *determine how a theme is conveyed through particular details
- *use clues and my background knowledge to make an inference

*effectively engage in collaborative discussions (e.g.,one-on-one, in groups, and teacher-led)

*elaborate and reflect on ideas by referring to specific evidence

STANDARDS:

RL.2.2

RL.2.1

SL.2.1

SL.2.2

Additional Student Resources: EdPuzzle, theme in Pixar, student inquiry, schema

6.R.L.2.3 Plot/Characterization

Explain how a plot unfolds in a series of episodes as well as how the characters respond or change as the narrative advances and moves toward a resolution.

Option #3- Subtext Submarine (Collaborative, Whole Group Presentation)

Students will assess comprehension of a protagonist character's development across a text by developing criteria, drawing inferences from the text and supporting analysis with text evidence. Students will also work collaboratively in an effective way and appropriately present findings to the class.

I CAN...

*explain how a plot unfolds

*explain how characters change and/or respond throughout a story

*support my analysis with text evidence

*use inference to analyze a character

*effectively engage in collaborative discussions (e.g.,one-on-one, in groups, and teacher-led)

*elaborate and reflect on ideas by referring to specific evidence

STANDARDS:

6.RL.2.3

6.RL.2.1

6.RL.2.2

6.SL. 2.1

6.SL.2.2

Additional Resources: "The Outsiders" novel, EdPuzzles, peer collaboration, student inquiry, schema

6 R.N. 2.3 Analyze in Detail

Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., *through examples or anecdotes*).

Option #4-Individuals, Events and Ideas (Independent, Table Group Discussion)

Students will use a variety of on-line and primary sources to analyze how individuals, events and/or ideas are introduced, illustrated and elaborated in text. Students will also analyze how structures of a

text and author's purpose contribute to the development of these ideas. Students will also share and compare their analysis of a specific person, event or idea within their group.

I CAN...

- *use a variety of sources to analyze people, events and ideas
- *explain how people, events and ideas are presented throughout a text
- *explain how text structure contributes to a story's development
- *explain how an author's purpose contributes to a story's development
- *effectively engage in collaborative discussions (e.g.,one-on-one, in groups, and teacher-led)

STANDARDS:

- 6.RN.2.3
- 6.RN.3.2
- 6.RN.3.3
- 6.SL.2.1

Additional Resources: EdPuzzle, various media and primary sources, student inquiry, schema

6 R.N. 3.3 Author's Purpose/Perspective

Determine an author's perspective or purpose in a text, and explain how it is conveyed in the text.

Option #5: The Rise of Instagram Influencers (Collaborative)

Students will work in a small group to analyze the author's purpose and point of view, including conflicting viewpoints, with a high-interest article. Students will also annotate for text evidence and answer questions regarding the author's claim (Google Forms format). These questions will require inferential and explicit support using their annotated text evidence. Finally, students will integrate information from an alternate source/media.

I CAN:

- *use close read strategies to annotate text
- *determine the author's purpose of a text
- *cite explicit textual evidence
- *cite textual evidence to support inferences drawn from the text
- *effectively engage in collaborative discussions (e.g.,one-on-one, in groups, and teacher-led)
- *elaborate and reflect on ideas by referring to specific evidence
- *use evidence to evaluate the accuracy of information presented in media

STANDARDS:

- 6.RN.3.3
- 6.RN.2.1
- 6.SL.2.1
- 6.SL.2.2
- 6.ML.2.1

Additional Resources: EdPuzzle, various media sources, peer collaboration, student inquiry, schema

6 R.N. 4.1 Evaluate Arguments/Claims (Evidence)

Trace and evaluate the argument and specific claims in a text, distinguishing claims that the author supports with reasons and evidence from claims that are not supported.

Option #6 -Tracing and Evaluating Arguments (Independent, Table Group Discussion, Whole Group Presentation)

After reading high interest passages, students will answer a set of standards-aligned questions designed to provide opportunities to identify the main claim, examine reasons and evidence used to support minor claims, and evaluate the effectiveness of each argument. Students will then work with their group to compare their reasonings, produce an effective counterclaim and present their arguments to the class.

I CAN:

- *evaluate an argument based on claim and evidence
- *support a claim with evidence
- *determine when claims are not supported with evidence
- *produce an effective counterclaim
- *effectively engage in collaborative discussions (e.g.,one-on-one, in groups, and teacher-led)
- *elaborate and reflect on ideas by referring to specific evidence
- *demonstrate a clear understanding of a topic or issue.

STANDARDS:

- 6.RN.4.1
- 6.RN.4.2
- 7.W.3.1
- 6.SL.2.1
- 6.SI.2.2

Additional resources: student inquiry, schema, peer collaboration

6 R.V. 2.1 Context to Determine Meaning

Use context to determine or clarify the meaning of words and phrases.

(Acquire and use accurate grade-level appropriate general academic and content-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression)

Option #7- Vocabulary Entries (Independent, Group Presentation)

Students will create and build upon Google Slides that represent vocabulary words of their choice. These words can be taken from readings, discussions, movies, the news, etc. Students will be responsible to add one slide per week, in addition to the other options they are working on. Each slide must contain: the definition, a sentence that includes context, synonyms, antonyms, associations with people, places, objects and/or actions, and a picture that represents the word (either literal or symbolic). Once 5 slides have been created, students will present one slide of their choice to their group and/or class.

I CAN:

- *use context to clarify words
- *apply vocabulary knowledge (definitions, synonyms/antonyms, context, associations) when determining the meaning of words.

*create engaging presentations that include multimedia components (e.g. graphics, images, music, sound) and visual displays in presentations to clarify information

STANDARDS:

6.RV.2.1

6.RV.1

6.SL.4.2

Additional Resources: outside reading, movies, tv, Google Slides, schema, student inquiry

6.W.1 Learning Outcome

Write routinely over a variety of time frames for a range of tasks, purposes, and audiences; apply reading standards to support analysis, reflection, and research by drawing evidence from literature and nonfiction texts.

Option #8: An Argument Game (Collaborative, Independent, Group Discussion and Whole Group Presentation)

As a table group, students will agree on a high interest question from a provided list. Students will then work independently to create a Google Slide that argumentatively answers the question. Each student will then present their presentations to the class, and the class will have to decide whose argument is the most effective.

I CAN:

*introduce a claim

*support a claim with clear evidence

*establish a style that is appropriate to the purpose and audience create engaging presentations that include multimedia components (e.g. graphics, images, music, sound) and visual displays in presentations to clarify information

*effectively engage in collaborative discussions (e.g.,one-on-one, in groups, and teacher-led)

*elaborate and reflect on ideas by referring to specific evidence

STANDARDS:

6.W.1

6.W.3.1

6.SL.2.1

6.SL.2.2

6.SL.4.2

Additional Resources: student inquiry, Google Slides

Option # 9- Ted Talks (by brilliant kids and teens) Listening Guide and Response (Independent, table Group Discussion)

Students will choose from pre-selected videos that are of interest to them (the purpose of these videos is to encourage students to think critically about new or difficult information and provide advice about how to lead with confidence). Students will note-take on key points, make text connections, and reflect in writing. Students will also summarize the article in writing, and share them with their group.

I CAN:

- *write in response to a given task
- *actively listen for a given purpose
- *summarize what I heard using key evidence
- *reflect on ideas under discussion
- *effectively engage in collaborative discussions (e.g., one-on-one, in groups, and teacher-led)
- *elaborate and reflect on ideas by referring to specific evidence

STANDARDS:

- 6.W.1
 - SL.2.1
 - SL.2.2
-

Specific Writing Standards:

6 W 3.1 Write Arguments

“Write **arguments** in a variety of forms that –

- Introduce claim(s), using strategies such as textual analysis, comparison/contrast and cause/effect.
- Use an organizational structure to group related ideas that support the argument.
- Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.
- Establish and maintain a consistent style and tone appropriate to purpose and audience.
- Use appropriate transitions that enhance the progression of the text and clarify the relationships among claim(s) and reasons.
- Provide a concluding statement or section that follows from the argument presented.”

6. W. 3.2 Write Informative

“Write **informative** compositions in a variety of forms that –

- Introduce a topic; organize ideas, concepts, and information, using strategies such as definition and classification.
- Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples from various sources and texts.
- Use appropriate transitions to clarify the relationships among ideas and concepts.
- Include formatting (e.g., *headings*), graphics (e.g., *charts, tables*), and multimedia when useful to aid comprehension.
- Choose language and content specific vocabulary that express ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.
- Establish and maintain a style appropriate to purpose and audience.
- Provide a concluding statement or section that follows from the information or explanation presented.”

6 W 3.3 Write Narrative

“Write **narrative** compositions in a variety of forms that –

- Engage and orient the reader by developing an exposition (e.g., *describe the setting, establish the situation, introduce the narrator and/or characters*).

- Organize an event sequence (e.g., *conflict, climax, resolution*) that unfolds naturally and logically, using a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.
- Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.
- Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.
- Provide an ending that follows from the narrated experiences or events.”