

# *Mining for Knowledge*

---

Author: Tammy Acord

Big Ideas: Change Over Time

Essential Questions: What happened in the past? How am I connected to those in the past? How have West Virginia communities changed and how might it change in the future?

## **Social Studies Standards**

---

SS.2.5 investigate various occupations and career opportunities and how they have changed within the state and nation.

SS.2.19 locate county seat, the state capital city, and bordering states on a map.

SS.2.H.C1.1 create timelines using documents and oral accounts to investigate ways communities and generations of families changes.

SS.2.17 – identify state symbols, celebrations, holidays, famous West Virginians and the governor of the West Virginia state government.

SS.2.9 – utilize a legend, compass rose, and cardinal directions to identify (Charleston, WV, NY, CD, etc.) and geographic features.

## **Learning Plan: Day 1**

---

Begin by telling students we are going to learn about Coal Mining in WV in the past by exploring a read aloud book called *Canary in the Coal Mine*. On a large piece of chart paper, draw the KWL chart [attached](#). **K** is for what the students already Know about the history of mining, **W** is what they want to learn through the book and **L** is to be completed after the book is finished with information they learned throughout the book. Allow students to brainstorm to fill in the **K** column with what they already know about mining. Record their suggestions on the chart paper. Next, allow students to offer suggestions of what they would like to learn through our coal mining study and record this under the **W** section. Leave the chart displayed throughout the entire novel. Once the novel is completed, filling in the **L** column will serve as a form of post-assessment and review. Next, read the first chapter of the book and ask students to summarize what is happening in this chapter. Students are most likely unfamiliar with the concept of canaries being used to test for safety of the air, so use this opportunity to discuss this practice. See [Scrip](#).

[Bandannas, and a canary lesson plan](#). In addition, student knowledge of mining and digging for coal may be limited, so prepare a box with moist sand or soil whereby you have hidden objects within that students can use spoons to “dig” for the items. Record what is found on the [recording sheet attached](#) to this lesson. Take it a step further by adding a paper towel role tucked into the dirt. Introduce a Lego Man and explain that in an actual mine, the miner is expected to travel underground, sometimes in a very narrow area to mine for coal. Have the student imagine s/he was the Lego Man and imagine s/he was to work in an area that may be very compact. Equipment must be taken underground, as well, so the fit can be very tight at times.

Check out the [Beckley coal mine experience website](#).

### **Learning Plan: Day 2 and 3**

---

Allow students to summarize orally what was read to them yesterday from chapter 1. Proceed to reading chapters 2-6. Use chapters five and six as the springboard to discuss Charleston as our state capital by visiting the links highlighted below. Distribute [maps of WV](#) and guide students in labeling both where they live, and Charleston to make a connection between what they are learning and where they live. After that, broaden this concept by giving them a [map of the United States](#) and have them locate WV and color it red. Walk them through labeling the bordering states by coloring Ohio blue, Pennsylvania yellow, Virginia purple, Maryland green and Kentucky orange (acronym for bordering states: My Very Old Pal Kim). Guide them in creating a legend in the top right corner of their map demonstrating the colors as they relate to the bordering states. Have students compile all their work throughout this unit into a WV folder. Next, reread the part from chapter five where Sammy is addressing the legislators for chocolate and it touches on the rebuilding of the capitol due to the [capitol fire](#). This concept is mentioned several other times throughout the book as well, so build on this portion of the novel by discussing this fire and show photographs of the state capitol as it changed [over the years](#). Guide students in constructing a timeline of the capitols with index cards and yarn. Place these in their WV folders. (Follow-up with STEM Activity listed at the end of plan.)

### **Learning Plan: Day 4 and 5**

---

Allow students to discuss with partner for 2 minutes what has happened in the novel so far. Read chapters 7-11 today. Spend today building on the entries from chapter seven referencing the company store. Highlight the company store and scrip by showing [Discovery Room 10](#). Allow student to design and draw their own scrip. Use these drawings to allow students to actually make scrip using sculpting clay. Be sure students include distinguishing characteristics that would make their scrip distinguishable from everyone else’s. Tell them coal companies used specially designed scrip that could only be used at their company stores to buy supplies and

that this money was not able to be used anywhere other than the company store. Before closing the lesson today, have students take their WV map back out of their folder and guide them in marking where Gilmer, New River and Kanawha is on the map (as discussed in chapter 8).

### **Learning Plan: Day 6 and 7**

---

Begin by distributing a West Virginia flag. Discuss with the students what *Montani Semper Liberi* means as was mentioned in chapter 8 yesterday. Explore the importance of each element of the flag (the white field is bordered in dark blue; West Virginia's flag displays a rock containing the date June 20, 1863, the day West Virginia became a state; the two men represent farming and mining; below them are two rifles with a "Liberty Cap" on top of the rifles; a banner ribbon includes the state motto "Mountaineers Are Always Free"; around the picture are a wreath of rhododendron and the name of the state on a red ribbon). Allow students to color the flag to match the WV State Flag. Include this in their WV folders. Next, read chapters 12 – 16. Discuss the part in chapter 13 where it is mentioned that the cardinal is West Virginia's state bird. Have students color a picture of a cardinal and include it in their folder. Next, the book references the Charleston Gazette several times and, in these chapters, Bitty uses newspaper clippings to create his plea for canary rights by cutting out the words he wants to say and gluing them on paper. Distribute local newspaper and have students recreate the plea by finding their own words in the newspaper they have, cutting them out and gluing them on paper. Include in WV folder.

### **Learning Plan: Day 8 and 9**

---

Read the remaining chapters of the novel today (17 -22) Get the West Virginia map back out and have students color in McDowell and Fayette Counties as both are referenced in these chapters. Discuss how the book ended with a mine tragedy where 11 miners were trapped...6 survived by 5 did not. Visit the [Upper Big Branch Memorial Page](#) and discuss that this is a memorial that was placed to help remember some miners who lost their lives in a similar incident. Take the remaining time to recap the state capital, flag and bird. Discuss also the state fish, animal, plant and insect. Also, discuss our current governor. As a culmination activity, revisit the KWL chart from Day 1 and have students brainstorm what they have learned and record it on the chart. Then, allow students to use all the information they have gathered and learned to create a Canary in the Coalmine PowerPoint or KeyNote presentation. Presentation would include six slides including the title slide. Slide 1 will be the title slide and will include the title "Welcome to West Virginia". Slides 2-4 would include a WV location in relation to bordering states, state symbols, state capital and capitol. Slide 5 must highlight what the student has learned about coal mining as an industry. Slide 6 must include both the importance of canaries in early mining and the purpose of scrip. The final slide must site any sources used in the creation of the presentation.

## **Learning Plan: Day 10**

---

Allow students to present their presentations to the class. See the [Multi-media presentation rubric](#) for assistance.

### **Notes to the Instructor**

---

This novel is used as a means to meet both ELA and Social Studies standards during this unit. These lesson plans, however, are meant to focus primarily on meeting the Social Studies standards, so these are highlighted in this plan.

This particular unit is divided into days 1 – 5. This is not meant to be ironclad, however, and it is anticipated that the schedule and timeframe would be adjusted to meet individual class needs.

Know your students before you begin this novel. The beginning chapters set the backdrop of the dangers for the canary in the mine. If your students have lost a parent, you will want to be mindful of that as you are reading the book so you can possibly rephrase certain parts that discuss the loss of parents and/or other family members.

### **Assessment**

---

KWL Chart completion

Articles and pieces accumulated in WV folder

PowerPoint or Keynote creation/rubric

### **Art-Inclusion Activities**

---

Make scrip using clay making sure to design a distinctive “coin” that differentiates theirs from all the other students.

### **Music/Wellness-Inclusion Activities**

---

Square dances – Teach students the movements for WV Reel by showing video and modeling. Once students have mastered this dance, invite parents to come watch students perform.

### **STEM Activities**

---

Use mini marshmallows, toothpicks and spaghetti to reconstruct the capitol building or design and build their own capitol building. Once the capitol is built, students will draw their creation then write about the construction process including specific information such as how many toothpicks, noodles and marshmallows were used in the building of the capitol. Students should also include whether it is sturdy enough to stand on its own.

### **Materials and Other Resources**

---

Canary in the Coal Mine by Madelyn Rosenberg

KWL Chart

Box with moist sand or soil with small objects hidden

Spoons

Recording sheet

WV Map

US Map

Newspapers

Glue

Index cards

Coloring sheets for cardinal

Yarn

State flag

State flower

State fish

State insect

Marshmallows

Toothpicks

Spaghetti noodles

West Virginia Enchanted Learning [website](#)