

Natural Resources & The Economy

7th Grade WV Social Studies Lesson Plan



Developed by the Museum Education Office at the West Virginia State Museum

Lesson Essential Question	Notes:
How do natural resources impact the economy?	
Lesson Objectives (“I Can...” Statements)	
<input type="checkbox"/> I can illustrate a connection between natural resources and the economy. <input type="checkbox"/> I can compare and contrast different natural resource industries and their impact on the economy. <input type="checkbox"/> I can collaborate with my peers to research and present information using appropriate sources. <input type="checkbox"/> I can create a visual representation that demonstrates the connection between natural resources and the economy.	
Lesson Standards	
<p>SS.7.10: Research and investigate how natural resources impact the economy.</p> <p>ELA.7.26: Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.</p> <p>DSS.6-8.7: Improve executive function skills; work collaboratively in groups or independently, as appropriate.</p>	
Prior Knowledge/Prerequisite Skills	
<i>Students should be familiar with vocabulary and concepts related to natural resources, economy, and grade-level appropriate researching methods.</i>	
Key Vocabulary	
Natural Resource, Industry, Economy, Supply and Demand	
Materials	
<ul style="list-style-type: none"> ● Jigsaw Activity (attached) ● Project Checklist and Rubric (attached) ● Student access to research materials (i.e. devices with internet access, encyclopedias, etc.) <ul style="list-style-type: none"> ○ It may be helpful to provide students with a list of suggested resources. Some have been provided for you within this lesson plan that are specific to WV 	
Learning Procedures	
<p>1. Activating Strategy: Jigsaw Activity</p> <p>a. Use the Jigsaw Activity activity to get students engaged in the</p>	

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lesson. Students have to actively participate and communicate with their peers in order to complete the activity. Instructions for completing this activity are included on the attached resource.

- b. Transition into a discussion about the impact of natural resources on the economy by reviewing (or introducing) the concept of **supply and demand** using a familiar resource. You could choose to do this as a prompted question or have students roleplay a scenario.

2. Review

- a. Review the natural resources within West Virginia as a whole group by having each group present their natural resource and information from the Jigsaw activity.
- b. Supplement with materials previously learned or with additional resources as needed.

3. Project Introduction

- a. Students will research and investigate one natural resource industry and its impact on the economy.
NOTE: This project is worded so that you can choose to focus on natural resources and economies at the local, state, national, or global level.
- b. Present students with an example of a completed project (LINK: [7th Grade Project Example](#) or type: <https://bit.ly/7thGradeExample> ~ A PDF copy is also attached)
- c. After modeling the completed project example, provide students with the project checklist that contains the directions and rubric.
- d. Review the project instructions and rubric. Address any questions as needed and provide clarifications to fit the needs of your students.

4. Independent Student Work

- a. Allow students to work collaboratively, providing assistance and guidance as needed.
- b. This project and lesson was designed to be flexible and can accommodate your timeline. Students could complete a basic version of the assignment in one class period, or it could be a more complex project spread over several class periods.

Suggested Resources for State Information (click to obtain link):
[West Virginia's State Industries e-WV](#)
[WV | Natural Resources Revenue Data](#)
[West Virginia Economic Outlook 21-25](#)
[WV PYs 2020-2023 | WIOA State Plan](#)

Outcome & Assessment Strategies

Outcome:

Students will identify connections between natural resources and the economy and be able to draw conclusions based on data and historical events.

Assessment Strategies:

- Jigsaw: Students collaborate amongst themselves to match natural resource and economic factors together
- Student Projects: Students integrate creativity and comprehension to present information

Natural Resources & The Economy



JIGSAW ACTIVITY

Directions: For each natural resource industry included, there is a title card and 3 fact cards associated with that industry (a set of 4). There are 24 cards in total.

Print and cut along the dashed lines. Mix and distribute one card to each student. Students must move around and discuss with each other to try and find their corresponding facts and natural resource industries. You may choose to set a timer for your desired amount of time to assist with time management and student focus.

NOTE: For classes with <24, duplicate the desired amount of groups by printing duplicate cards. If classes are >24 students, provide some students with multiple cards from the same natural resource industry.

TIP: Print on cardstock and laminate for re-use.

Information taken from the following sources:

- **SALT**

- <https://www.wvencyclopedia.org/articles/168>

- **COAL**

- <https://www.wvencyclopedia.org/articles/1349>;
- <https://business.wvu.edu/research-outreach/bureau-of-business-and-economic-research/economic-outlook-conferences-and-reports/economic-outlook-reports/west-virginia-economic-outlook-2023-2027/chapter-iii-west-virginia-s-economy-industry-focus>

- **FORESTRY**

- <https://wvforestry.com/logging/>
- <https://www.wvencyclopedia.org/articles/2023>

- **NATURAL GAS & PETROLEUM**

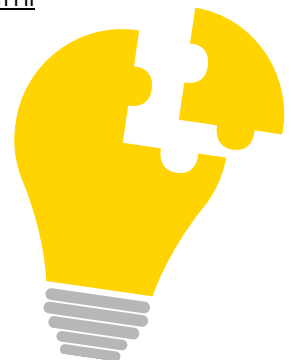
- <https://www.wvencyclopedia.org/articles/1600>
- <https://www.api.org/news-policy-and-issues/news/2023/05/16/api-pwc-wv-2023>

- **GLASS:**

- https://www.wvgazettemail.com/dailymailwv/daily_mail_features/changing-times-took-toll-on-glass-manufacturers/article_4235c736-81dc-5ceb-9a74-57429566bd0e.html
- <https://www.wvencyclopedia.org/articles/2116>

- **CLAY**

- <https://www.wvencyclopedia.org/articles/1291>
- <https://www.wvencyclopedia.org/articles/1907>



SALT

First major industry in WV

Production during the War of 1812 lead to legal arrangements designed to control excess production, prices, and products

Elisha Brooks; John Haymond and Benjamin Wilson; John George Jackson; David and Joseph Ruffner

COAL

Became used as a commercial fuel during the early 19th century

Total employment in 2021 for this industry was approximately 11,700 jobs

James Otis Watson; George W. Imboden; Clarence Wayland Watson; Aretas Brooks Fleming

FORESTRY & WOOD PRODUCTS

Has roots in all 55 counties

Generates \$3.2 billion annually for the state's economy; provides over 30,000 jobs

Buck Harless; William M. Ritter;
Charles Lloyd Ritter;

NATURAL GAS & PETROLEUM

Dr. R.W. Hazlett; John C. "Cass"
Rathbone; Johnson Newlon
Camden; Michael L. Benedum

Contributed 15.0% of the state's total gross domestic product

First found in the Kanawha and Little Kanawha river valleys during the 18th century

GLASS

Michael Owens; William John Blenko; Frank L. and John W. Fenton; Joseph Powell

Abundance of other natural resources such as natural gas, limestone, and silica boosted the state's ability to capitalize on this industry

In 1910, work within this industry's factories was the 4th largest employer in the state

CLAY

No longer mined in the state, but was once a major industry in the state due to its abundance and multiple purposes. Demand decreased after WWI due to increases in shipping costs and use of synthetic materials

Catapulted Hancock County into becoming the brick and tile capital of the United States

A.P. Donaghho; West Virginia Brick Company; Carr China Company

NATURAL RESOURCES AND THE ECONOMY

PROJECT CHECKLIST

DIRECTIONS: With your group members, research your natural resource and its impact on the economy. Be sure to cite your sources! Once you have gathered your information, create a presentation for the class.

GROUP MEMBERS:

NATURAL RESOURCE:

CHECKLIST:

- Background Info: Natural Resource
- Background Info: Economy
- Impact on economy (past, present, future)
- All sources cited in correct format
- Presentation created
- Presentation practiced
- Self-rubric completed by all group members

GUIDELINES FOR PRESENTATION:

All group members must *actively participate* in the presentation in some way. You can be as creative as you would like! Keep in mind, your presentation should include information about your natural resource, its impact on the economy, and citations for your sources.

Examples:

Slideshow, poster, artwork, skit, TV advertisement, etc.

GROUP NOTES:



Name: _____

Date: _____

Class: _____

Directions: Your project will be graded with the following rubric. You should use it to guide your work. At the end of the project, you will also complete a rubric for **yourself** to reflect on your work throughout the project.

CATEGORY	4	3	2	1	0
RESEARCH	Clear and focused with strong evidence and examples.	Focused with some evidence and examples.	Limited focus and weak evidence.	Lack of focus and poorly supported ideas.	Did not complete
ORGANIZATION	Exceptionally well-organized, smooth flow, logical structure.	Consistently organized with minor disruptions to flow	Lack of consistent structure, unclear transitions.	Disorganized, challenging to follow.	N/A
GRAMMAR AND SPELLING	No more than 1 minor error.	2-3 minor errors	1-2 major errors and/or more than 3 minor errors	Lack of proofreading is clearly evident. Multiple major and minor errors.	N/A
CONTENT	Deep understanding of natural resource and its impact on economy demonstrated through clear connections with cited sources.	Demonstrates knowledge of natural resource and the economy. Draws connections and cites some evidence.	Limited understanding of the impact of natural resources on the economy and cites weak sources.	Did not draw a connection between natural resources and the economy and did not cite any evidence.	N/A
EFFORT	Consistent effort with meaningful contributions	Some effort with meaningful contributions, but lack of focus	Lack of consistent effort, few meaningful contributions	Lack of consistent effort, little to no meaningful contributions	N/A

Total Score: ____/20	Comments:
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COAL

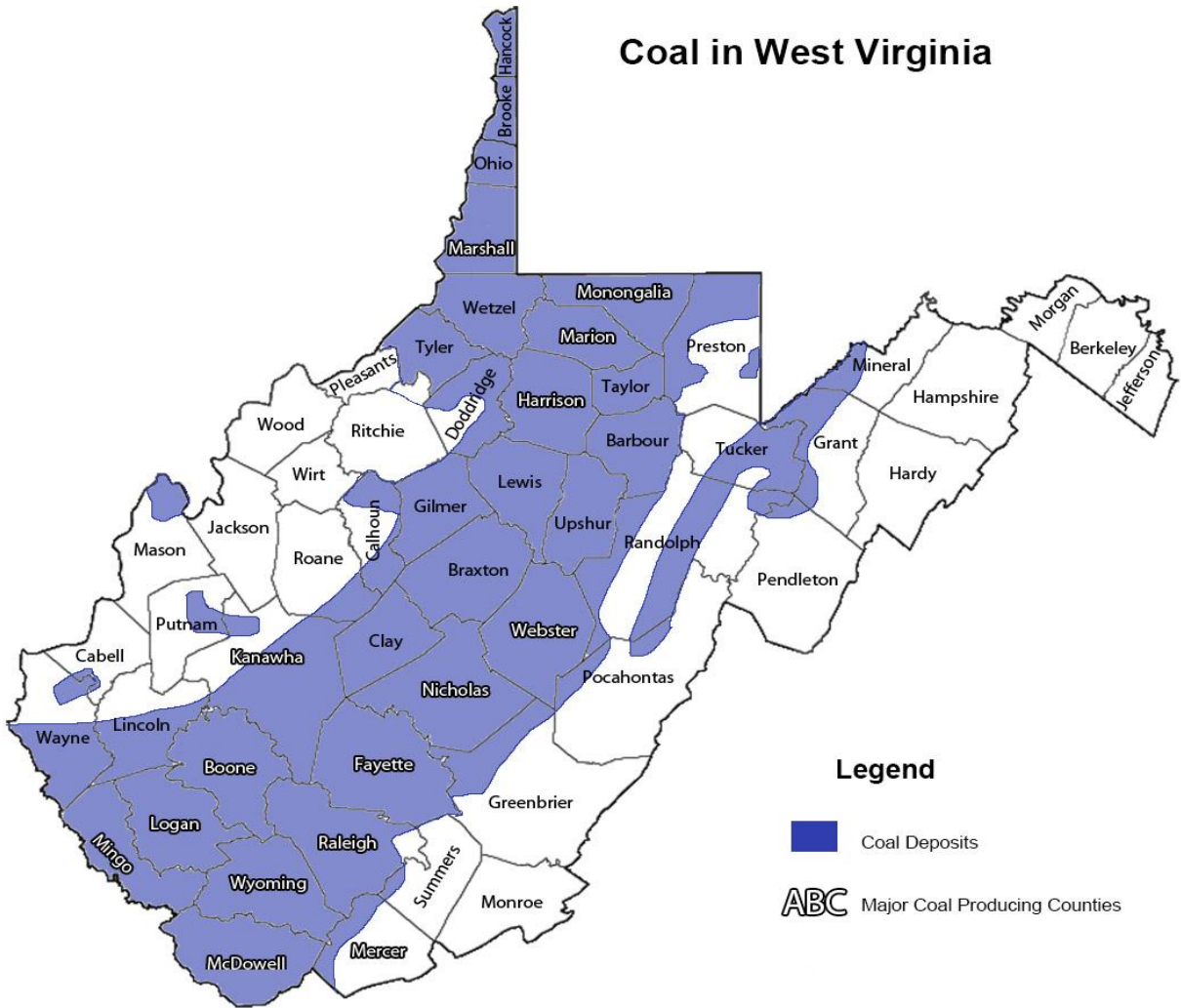
AND THE

ECONOMY IN WV

*Authors:
Mothman, Flatwoods Monster, Batboy*

(Lewis, 2023)

Coal in West Virginia



WV

1797

SALT FURNACES IN KANAWHA COUNTY STIMULATES DEMAND FOR COAL

>1,000 employed by 25 independent coal companies by

1860

2023

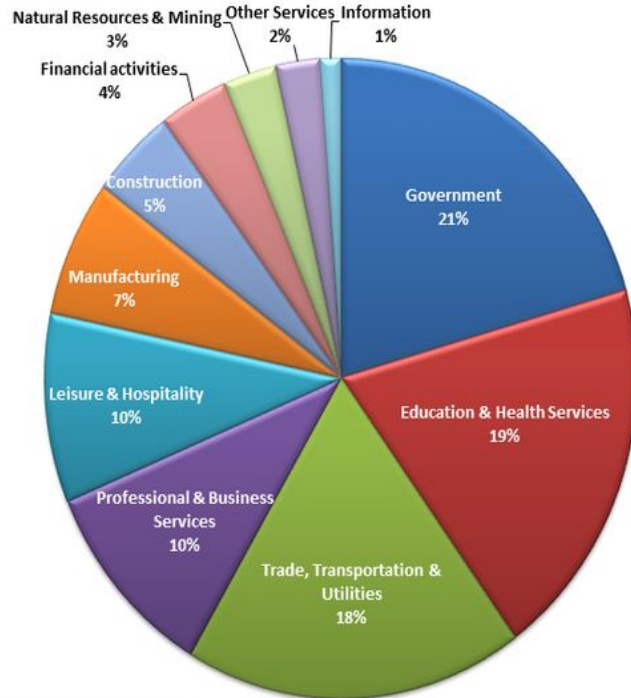
R WV YER

ground miners
surface miners
harry miners
strip plant workers
independent contractors
(directly related)

Source: Riddel, Frank S. *The Historical Atlas of West Virginia*. Morgantown: West Virginia University Press, 2008.

The Economy in WV

Figure 2.5: West Virginia Employment Distribution by Sector (2020)



Source: US Bureau of Labor Statistics

- Civilian labor force of 790,500 in 2023
 - Largest coal producer east of the Mississippi River
 - 14% of US Coal production
 - Recurring boom-bust business cycles
 - Gross state product ~\$97 billion in 2022
 - Location promotes easy market access
 - Economic diversification important to growth
- (Sonis & Hohmann, 2023)

THE IMPACT OF COAL

- Initial investments produced major positive economic changes (Booms)
- Industrial transitions and changing demands produce negative economic changes (Busts)

(Lewis, 2023)

THE IMPACT OF COAL

- A little over 11,000 jobs in coal in the end months of 2020
- Global demand for coal increased
 - 80 million short tons average product export in early 2021
- New energy sources
(Lego et al., 2021)

THE FUTURE OF COAL

- Continued boom-bust cycle?
 - Renewable and alternative energy sources lead to decline in demand
 - Fewer jobs; higher unemployment
 - OR: increased demand globally, more jobs; less unemployment
- Continue to be a major factor in state economy
 - Labor, Salary, GDP

REFERENCES

Lewis, Ronald L. "Coal Industry." e-WV: The West Virginia Encyclopedia. 24 October 2023. Web. 29 November 2023.

Sonis, Larry and George Hohmann "The Economy." e-WV: The West Virginia Encyclopedia. 22 November 2023. Web. 29 November 2023.

Lego, B., Deskins, J., Bowen, E., Christiadi, & Mullet, D. (2021). West Virginia Economic Outlook 2022-2026. John Chambers College of Business and Economics | West Virginia University.

<https://business.wvu.edu/research-outreach/bureau-of-business-and-economic-research/economic-outlook-conferences-and-reports/economic-outlook-reports/west-virginia-economic-outlook-2022-2026>