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Course Title: Indiana Social Studies
Grade Level: 4th
Unit: History of Limestone in Indiana

Abstract: In this unit, students explore the history of Indiana’s state stone, limestone. They study specific events that both positively and negatively impacted the production of limestone in Indiana. Students locate and identify locations of limestone and quarries on Indiana maps. They evaluate how Indiana’s limestone industry has changed throughout time. At the end of this unit, students utilize their content knowledge to articulate the historical influence limestone has had on Indiana.

Focus Questions:

How did historical events impact the limestone industry in Indiana?
 How has the limestone industry changed from the late 1800’s to present day?

Instructional Resources:

<http://www.ilias.com/pages/History>
<http://www.visitbloomington.com/about-us/community/history/>
<https://igs.indiana.edu/MineralResources/>

Benchmark	Assessment Tasks	Key Concepts
<p>4.1.13 Identify and describe important events and movements that changed life in Indiana from the mid twentieth century to the present.</p> <p>4.1.15 Create and interpret timelines that show relationships among people, events, and movements in the history of Indiana.</p> <p>4.1.6 Explain how key individuals and events influenced the early growth and development of Indiana.</p> <p>4.3.4 Map and describe the physical regions of Indiana and limestone and quarries are located.</p>	<p>Create a timeline identifying the different events that impacted Indiana’s limestone production from the 1800’s to present day (4.1.15 and 4.1.6)</p> <p>Create a map identifying where limestone and quarries are located in the state of Indiana. (4.3.4)</p> <p>Compare how the limestone industry has changed since the late 1800’s to present day (4.1.13)</p>	<p>Limestone Indiana Century Quarries</p>

Catalogue of Lessons

Lesson 1: Timeline of Events

The students research the history of limestone in Indiana from the 17th century to present day. They identify and describe the major events that both positively and negatively impacted the limestone industry in Indiana. Then, students construct a timeline consisting of 6 historical events relating to the limestone industry.

Lesson 2: Creating a Limestone Map

The students research where limestone and quarries are located in Indiana. They create a map of Indiana identifying limestone’s quarries. The students label the quarries on the map and write a small description about each one.

Lesson 3: Organizing Information About Limestone

The students research how limestone industry functioned in the late 1800's and examine the limestone industry operates today in Indiana. They compare how the industry has changed and cite how certain aspects remain the same. Each student creates their own Venn Diagram citing at least three pieces of information in each section totaling to nine pieces of information on the entire diagram.

Lesson 4: Analyzing Major Historical Events and Impacts on the Limestone Industry

The students pair off in small groups. Each group selects a historical event that impacted the limestone industry (Great Depression, Chicago fires, creation of public buildings) or how acid rain is impacting the limestone industry and limestone buildings. Each group researches their event and creates a 5-minute skit. Then, each group presents their skit to the class.

Lesson 5: Using Primary Sources

The students analyze primary sources (photographs of limestone production in the 1900's). The students identify tools used in the photographs and guess how they were used. Students conclude their research of the limestone industry by identifying how equipment has changed overtime.

Assessment Task #1

Abstract: In this assessment, students research historical events that impacted the limestone industry from the 1800's to present day. For each event, students record descriptions and how it impacted the limestone industry. The students then place the events in chronological order on a timeline. This assessment reinforces the idea of how external events can positively and negatively impact the limestone industry. Creating a timeline enables the students to see the order of which things happened and builds on the life skill of timeline interpretation.

Prompt: The controversial issue in this topic is the use of limestone for the Union Statue in a cemetery in Bedford, Indiana. The students look at both viewpoints of who would like the statue made of limestone and who would not. Ask students if we still see this today and at the end of the assessment, inform students that they have determine which viewpoint they agree with.

Students view a PowerPoint, which outlines the beginning of the limestone industry in Indiana, and are asked to think about what types of historical events may have impacted the industry.

Directions: “We have been learning about how historical events impacted history lately. Today, we are going to research and find historical events that impacted the limestone industry from the late 1800's to present day. After you have gathered your information, you will create your own timeline. When we have completed our timelines, we will present them to City Hall to explain to the visitors about Indiana's limestone history”

Your timeline must include:

- Title, time period, and correct dates of events
- 6 different events: 2 from the 1800's, 2 from the 1900's, and 2 from the 2000's
- Description of each event (how it impacted the limestone industry)

Procedures: Present a PowerPoint outlining the beginning of the limestone industry in Indiana. Ask the class to think about what types of historical events may have positively or negatively impacted the industry. Have the students research historical events that impacted the limestone industry. Inform the class that they will be creating their own timeline of the events they have researched. Each timeline must have 6 different events and 2 from each century starting at the 1800's. Show a model of a timeline to give to students an idea of how to create one. Answer any questions about assessment task.

Rubric:

Benchmark	Score			
	1	2	3	4
4.1.15 Create and interpret timelines that show relationships among people, events, and movements in the history of Indiana.	Timeline is missing three of these components: title, date, descriptions	Timeline is missing two of these components: title, date, descriptions of each event,	Timeline is missing one of these components: title, date, descriptions of each event,	Timeline has a title, correct dates, descriptions of each event, and

4.1.6 Explain how key individuals and events influenced the early growth and development of Indiana.	of each event, and 6 events with 2 in each century	and 6 events with 2 in each century	and 6 events with 2 in each century	6 events with 2 in each century
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Assessment Task #2

Abstract: In this assessment, the students research the locations of limestone quarries in Indiana. Each student uses blank Indiana map to plot the location of each quarry in the state. For each location they find, they record the placement of it on Indiana’s map and a description of it. This assessment reinforces student’s map interpretation skills. By creating their own map, they learn not only the locations of limestone quarries in Indiana but specific features on Indiana’s map.

Prompt: The controversial issue in this topic is the limestone industry collapsing during the Great Depression. Though an education was not required for work in the limestone industry, conditions were dangerous and physically taxing. Students investigate and determine which situation is more ideal: creating a substantial living for yourself working at the quarry or creating a decent living for yourself with an education. At the end of the assessment, students make a choice as to which viewpoint they agree with. At their presentation at the Indiana Limestone Company, they explain what factors led them to this belief.

Students view a PowerPoint concerning quarries in Indiana and think about where they think they are located on Indiana’s map.

Directions: “Today, we are going to locate all of the quarries in the state of Indiana. After we have located all of the quarries, each of you will be given a blank map of Indiana and you will have to place the locations on your map. When we have completed this project, we will send in our maps to be displayed at the Independent Limestone Company”

Your map must include:

- Title and major Indiana identifications (capital)
- 4 limestone quarry locations
- Description of each location

Procedures: Present a PowerPoint of quarries in Indiana. Ask the class where they think these quarries are located on the map of Indiana. Have the students research the location of the quarries in Indiana. Tell the students to find a description of each quarry found. Instruct students to create their own map of Indiana with the locations of the quarries. Each map must have at least 4 limestone quarry locations and descriptions of each one. Show a model of a map of Indiana to give the students an idea of how to create one. Answer any questions about the assessment task.

Rubric:

Benchmark	Score			
	1	2	3	4
4.3.4 Map and describe the physical regions of Indiana and	Map is missing three of these components: title and identification, 4 limestone	Map is missing two of these components: title and identification, 4 limestone	Map is missing one of these components: title and identification, 4 limestone	Map has title and identification, 4 limestone quarry locations, and

identify where the natural resource, limestone, and its' quarries are located	quarry locations, and a description of each location	quarry locations, and a description of each location	quarry locations, and a description of each location	a description of each location
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Assessment Task #3

Abstract: This assessment requires students to research how the limestone industry functioned in the late 1800's-1920's and compare this to how the contemporary limestone industry is ran today in Indiana. Each student uses a Venn Diagram to assess how the industry has changed over time along with aspects that have stayed the same. This assessment reinforces how things change over the course of history. By creating a Venn Diagram, the students are able to create a visual to further understand historical continuity and change over time.

Prompt: The controversial issue in this topic is health care in the limestone industry. The air in the quarries is filled with rock dust and is harmful to the workers lungs. Students evaluate both viewpoints of doing more to protect quarry cutters from breathing in rock dust versus believing that there is enough help already being done. The students write a letter to send to the newspaper on their position of limestone dust.

Students examine photographs (primary sources) of people working in limestone quarries during the 1900's. Ask students: how you think the industry has changed from this time period to now?

Directions: "We have been learning a lot about limestone and quarries. Today, we are going to compare how the industry has changed from the 1800's to present day. We are also going to research how the industry may have stayed the same in certain aspects. After we have gathered the information, each student will create a Venn diagram. When we have completed this project, we will compile the diagrams and send them to our local newspaper to be displayed"

Your Venn diagram must include

- 3 pieces of information from the late 1800s-1920's
- 3 pieces of information from present day
- 3 pieces of information in middle section

Procedures: Students receive photographs of people working on limestone quarries in the 1920's. Ask students to look at the photo and identify ways the industry has changed from this time period to now. Provide students with time to research how the limestone industry operated during the late 1800's-1920' compared to present day. Then, students list 3 items in each section of their Venn Diagrams, creating a total of 9 pieces of information. Provide students with a model Venn Diagram to guide them. Answer any questions about the assessment task.

Rubric:

Benchmark	Score			
	1	2	3	4

<p>4.1.13 Identify and describe important events and movements that changed life in Indiana from the mid twentieth century to the present.</p>	<p>Venn Diagram is missing three of these components: 3 items in the past section, 3 items in the middle section, and 3 items in the present section</p>	<p>Venn Diagram is missing two of these components: 3 items in the past section, 3 items in the middle section, and 3 items in the present section</p>	<p>Venn Diagram is missing one of these components: 3 items in the past section, 3 items in the middle section, and 3 items in the present section</p>	<p>Venn Diagram has 3 items in the past section, 3 items in the middle section, and 3 items in the present section</p>
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