

Two Lessons in Detail (Day 3 & 4)

Day 3: Activity: *How do clastic and chemical sedimentary rocks differ?*
Read *Limestone Caves* and use INSERT

Sedimentary Rock Activity and Reading

Big Idea/Learning Objective: All three classifications of rocks contain various types and uses.

Idaho Science Standards Addressed:

Standard 1: Nature of Science

Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations

5.S.1.2.1 Use observations and data as evidence on which to base scientific explanations and predictions.

7.S.1.2.1 Describe how observations and data are evidence on which to base scientific explanations and predictions.

Goal 1.6: Understand Scientific Inquiry and Develop Critical Thinking Skills

5.S.1.6.4 Use evidence to analyze descriptions, explanations, predictions, and models.

7.S.1.6.3 Evaluate data in order to form conclusions.

5.S.1.6.6 Compare alternative explanations and predictions.

7.S.1.6.5 Evaluate alternative explanations or predictions.

5.S.1.6.7 Communicate scientific procedures and explanations.

7.S.1.6.6 Communicate and defend scientific procedures and explanations.

Use bottom half of page D71 in Text

Vocabulary:

Taught on Day 2

Mineral: A natural, solid substance that has a definite chemical composition and physical structure

1. Teacher will lead reading of pages D50&51

Volunteers will read

Teacher will review old (see above) and new vocabulary:

Sedimentation: The process of building up layers of sediment over millions of years

Chemical Rock: One of a group sedimentary rocks that is made from minerals that were dissolved in water, came out of solution, and were then deposited

Clastic Rock: One of a group of sedimentary rocks that is made of sediments that were weathered, transported, and deposited in layers

2. Teacher will gather students round a big table for Activity and Students will read, speak and listen.

Teacher will graph results on chalkboard

Students will take turns reading and drawing conclusions

Individual Students will use individual rock samples and droppers

3. Students will individually silently read *Limestone Caves* using INSERT method

After reading, teacher will lead discussion of book excerpt from Caves

LIMSST Project Literacy Lesson Reflection Form

Date of Lesson: 4-8-08

Lesson Title/Topic Areas:

Sedimentary Rock Activity and Reading

Literacy Strategies Used:

(Please discuss what literacy strategies you embedded in this lesson. What were your goals in using these strategies?)

INSERT - My goal was to assist the students in greater focus on their reading.

Student Response to the Lesson:

(Was the strategy effective? Were students able to read/write as needed in this lesson? What attitudes were displayed? How did specific students and/or the class do? How did the literacy strategy aid in developing student understanding of the topic? Cite specific evidence from the samples of student work)

Yes, the strategy worked well as evidenced by their marked-up papers and the lively discussion. Students questioned the text, they confirmed some things they already knew, and they gained new understandings. They reported that while reading they concentrated better than usual.

Lesson Reflection:

(What worked well with this lesson? What challenges did you encounter in this lesson? Would you change certain aspects of the lesson or the questions that you asked? How does this influence future lesson planning?)

The strategy was easy to teach and the students put it into use immediately gaining greater focus. One challenge was 1 page that had been copied poorly. We quickly recopied that page, I just want to use it again and again.

Relationship to Previous Instruction:

(Have you taught this lesson/topic prior to the LIMSST project? If so, how did your teaching of this lesson differ from what you taught before? How did students' reactions to this lesson differ?)

No, not exactly. I had taught my students to underline and highlight and circle text. But the INSERT method keys in on other markings that reflect deeper thought.

Day 4: Vocabulary and Reading: *Sedimentary Rocks*

(Some reading whole group, some individual and some partners)

Continue filling out Graphic Organizer

Vocabulary with “Frayer Model” and/or VVWA

Students observe sedimentary samples

Sedimentary Rocks

Big Ideas/Learning Objectives:

1) All three classifications of rocks contain various types and uses.

2) Sedimentary rock forms from the transportation and accumulation of layers of sediment.

Idaho Science Standard Addressed

Standard 4: Earth and Space Systems

5.S.4.2.1 Explain the rock cycle and identify the three classifications of rocks.

No Standard 4 Objectives at 7th Grade Level

Vocabulary:

Weathering: The process of breaking rock into smaller pieces

Erosion: The movement or transportation of sediment to new locations

Deposition: The dropping of sediment from wind or water that slows down, or from ice that melts

Sedimentation: The process of building up layers of sediment over millions of years

Cementation: The gluing together of particles of sediment

Chemical Rock: One of a group sedimentary rocks that is made from minerals that were dissolved in water, came out of solution, and were then deposited

Clastic Rock: One of a group of sedimentary rocks that is made of sediments that were weathered, transported, and deposited in layers

1. Teacher will lead review of Day 3’s Activity and Reading

Oral Discussion

2. Students will read “Formation of Sedimentary Rocks” as a whole group, enlisting volunteers, in order to understand Big Idea.

Remember to review clastic and chemical rocks from Day 3’s Activity

3. Students will read “Uses of Sedimentary Rocks” and “Summary” as individuals or partners (give students choice), in order to understand Big Idea.

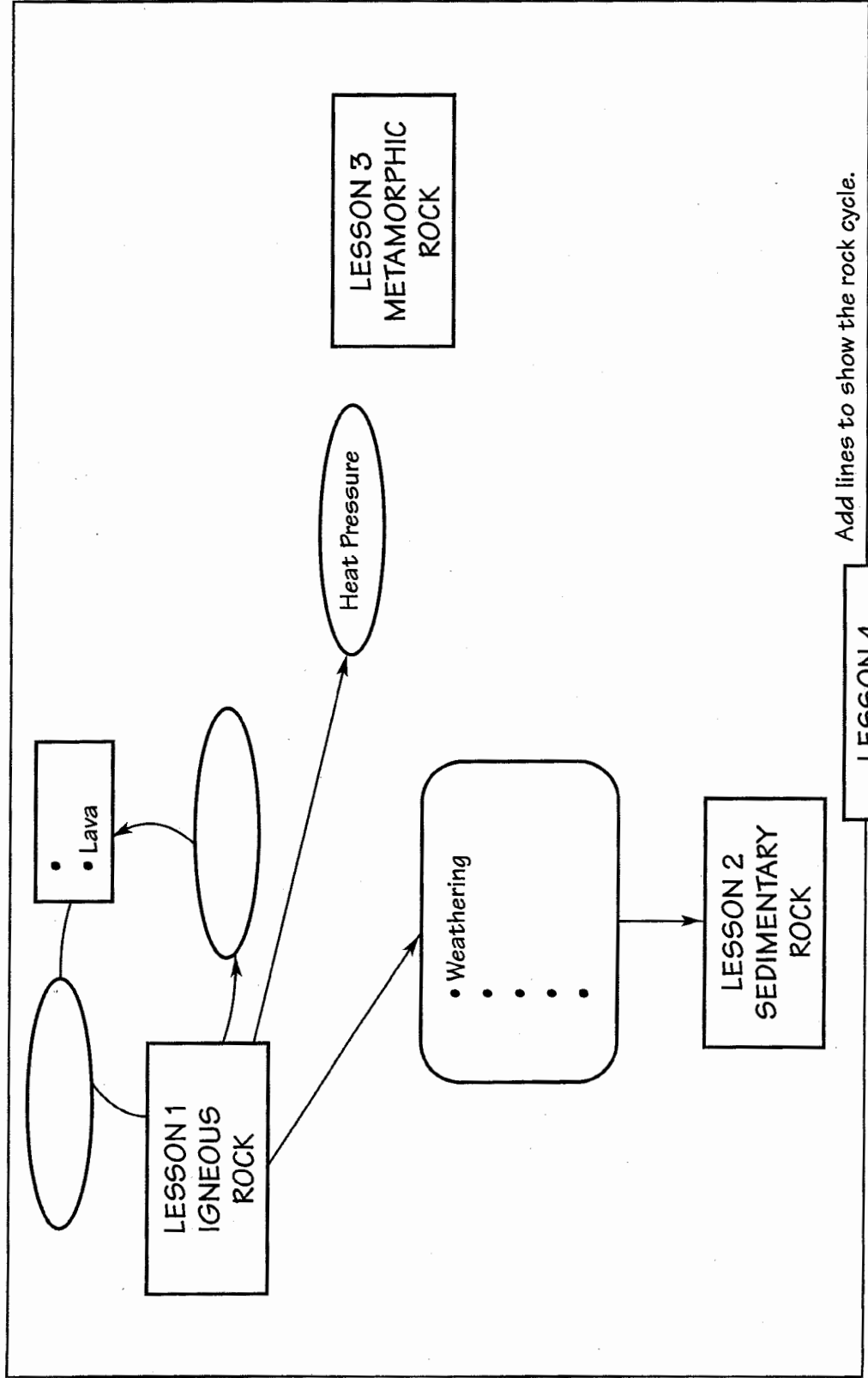
4. Depending on time factor, students will answer all the review questions individually or teacher will assign questions to different students. Then teacher will lead discussion of answers with the whole group

5. Teacher will lead additions to Note-Taking Graphic Organizer

6. Teacher will assign 2 vocabulary from this lesson to be completed in class using VVWA or Frayer.

Chapter 2 • Graphic Organizer for Chapter Concepts

Rocks and the Rock Cycle



Add lines to show the rock cycle.

Name _____

Date _____

Definition (in own words)	Characteristics
Examples (from own life)	Nonexamples (from own life)

Definition (in own words)	Characteristics
Examples (from own life)	Nonexamples (from own life)

Frayer Model

Name _____

Date _____

VVWA (Verbal and Visual Word Association)

Vocabulary Term	Visual Representation
Definition	Personal Association & Characteristic

Vocabulary Term	Visual Representation
Definition	Personal Association & Characteristic

LIMSST Project Literacy Lesson Reflection Form

Date of Lesson: 4-9-08

Lesson Title/Topic Areas:

Sedimentary Rocks

Literacy Strategies Used:

(Please discuss what literacy strategies you embedded in this lesson. What were your goals in using these strategies?)

Graphic Organizer - Goal - Assist students in sorting out and remembering information
VWVA and Frayer - Goal - Assist students in comprehension and application of vocabulary

Student Response to the Lesson:

(Was the strategy effective? Were students able to read/write as needed in this lesson? What attitudes were displayed? How did specific students and/or the class do? How did the literacy strategy aid in developing student understanding of the topic? Cite specific evidence from the samples of student work)

Yes, the Graphic Organizer helps reveal understanding or lack thereof. Students can all have the opportunity to fill in "gaps."
The choice of vocabulary activities works well for different types of learners and different types of words.

Lesson Reflection:

(What worked well with this lesson? What challenges did you encounter in this lesson? Would you change certain aspects of the lesson or the questions that you asked? How does this influence future lesson planning?)

Many students enjoyed drawing visual representations of words like cementation + lava. They used color for the first time. I will continue to remind them of my expectations for gaining the most benefit from these activities.

Relationship to Previous Instruction:

(Have you taught this lesson/topic prior to the LIMSST project? If so, how did your teaching of this lesson differ from what you taught before? How did students' reactions to this lesson differ?)

I have used the graphic organizer as more of an independent assignment. Now I work on the overhead projector and they fill in the blanks through discussion and on paper. The vocab. activities are so much richer than what I used in the past.