Rocks and Minerals Science Kit- Fourth Grade (2011)

***Teachers please use this as a guide, when preparing the science kit lessons. Please be sure you are using focus questions with each lesson and are having the children use some type of science notebook. The purpose of the notebook is to help students develop, practice, and refine their science understanding, while enhancing reading, writing, mathematics and communications. Below you will find a link to additional teacher materials. In addition, we have provided you with a description of lessons and special things to consider. If you are in need of further assistance please contact your CTC. ***

Website to obtain teacher materials and video lessons

http://www.carolinacurriculum.com/premium_content/Premium+Gateway+Login+Failed.asp

Username northcarolina.nsrci3@carolina.com **Password** nsrci3

Teacher Materials include (but are not limited to)

- **Rocks-Teacher's Guide**
- **Rocks-Power Vocabulary**
- **Inquiry Masters**
  - **Lessons 1,3, 4, 5, 6, 7,8, 9, 11, 12, 14, 15, and 16**
- **Concept Storyline**
- **Goals**
- **Safety Contract**
  - **English/Spanish**
- **Assessments**
  - **English/Spanish**
- **Glossary**
  - **English/Spanish**

Videos

- **Lesson 1**
  - **Sharing What We Know about Rocks**
    - Chart paper "What we know about rocks." (brainstorming activity)
    - Chart Paper "What we would like to know about rocks?" (brainstorming activity)
    - Students will use recording sheet 1A to record observations.
    - Observing of three types of rocks in this lesson.
  - **The Distribution Station**
    - *(See video for materials kids will need for activity)*

- **Lesson 2**
  - **Observing Rocks**
    - Students will be building upon their learning by observing nine more types of rocks.
    - In the lesson students will be using all their senses except taste.
    - Information about each rock is included in the rock identification cards found in the teacher's guide blackline master.

- **Lesson 3**
  - **Learning More about Rocks**
    - Important concept for this lesson is that rocks are formed in many different ways and rocks continue to undergo change over time.
    - Student will be able to identify properties that are associated with each rock.

- **Lesson 4**
  - **Discovering Minerals**
    - Properties of Minerals – Looking at similarities and differences
    - Observing three types of minerals
    - Recording sheet 4A will be used for the drawing and written explanation of each mineral

    Safety Note: Students will need to wear gloves when handle the mineral Galena

- **Lesson 5**
  - **Sharing What We Know about Minerals**
    - Students will have nine new minerals. Minerals will be observed, sorted, compared, and described in this lesson.
    - Egg Cartons will be used for labeling mineral and holding each mineral.
    - Reading Selection Feldspar will be used for this lesson.

- **Lesson 6**
  - **Observing Minerals**
    - Looking at how minerals are alike and different.
    - Each student will need twelve copies of the blackline master for this lesson.
    - Assessment Skill activity is used for this lesson. Refer to page 59 in the teacher's guide for this information.
- **Lesson 7**
  - **Describing the Color of the Minerals**
    - The first of five field test will be completed in this lesson. They will be using the Streak Test. Before teaching this lesson try the Streak Test using the model set of minerals.
    - Special sheets need to be made before starting this lesson. See teacher's guide or video for more information.

- **Lesson 8**
  - **Shining a light on the Minerals**
    - Investigating new properties of minerals ability to transmit light.
    - Materials for this lesson need to be cut ahead of time. See teacher's manual for details.
- **Lesson 9**
  - **Exploring the Luster of Minerals**
    - Discovering that not only can light pass through minerals but it can also show how much shine and luster mineral samples has.
    - Blackline Master- Sorting Minerals by Luster will be used with this lesson.
- **Lesson 10**
  - **Hardness of Minerals**
    - Material included a copper penny and a nail
    - A list of minerals that are soft, medium, or hard and a minerals profile sheet is needed for each pair of students. See video for instruction on this sheet.
- **Lesson 11**
  - **Testing the Minerals with a Magnet**
    - Students will be using scientific testing with a magnet.
    - Key note for testing: A negative result is still a result for this lesson.
- **Lesson 12**
  - **Describing the Shape of Minerals**
    - Four new minerals are used. Students will look at how samples are alike and different. They may use a penlight.
- **Lesson 13**
  - **Comparing Samples of the Same Minerals**
    - Students will compare and contrast minerals.
- **Lesson 14**
  - **Identifying the Minerals**
    - Students will need field guide cards. Blackline master is located in the Teacher's Manuel. These need to be prepared before the lesson.
    - Materials need to be ready for the field test. See video for details.
    - A Field Guide Notebook will be made in this lesson. See video for details.
    - Teachers need to start pulling books from the biography section in the Teacher's Manual. These books will be used for the oral report that the students have to complete in lesson 16.

- **Lesson 15**

  - **Exploring New Minerals**
    - Students will be observing, describing, problem solving, summarizing in this lesson.
    - Teacher question examples are on pages 117-118 in the teacher's manual.

- **Lesson 16**

  - **How are Rocks and Minerals Used**
    - Students will present their oral report in this lesson.
    - Background information for teachers is found on page 126 in the teacher's manual.
    - Rock information cards are found in the teacher's manual.
    - This lesson can be split between two days. One day for having students write their reports and the other day to present reports.