The following instructional plan is part of a GaDOE collection of Unit Frameworks, Performance Tasks, examples of Student Work, and Teacher Commentary. Many more GaDOE approved instructional plans are available by using the Search Standards feature located on GeorgiaStandards.Org.

Georgia Performance Standards Framework for Earth Science – Grade 6

Unit: Rocks and Minerals
Differentiated Task
Classifying Rocks

Standards (Content and Characteristics):

S6E5. Students will investigate the scientific view of how the earth’s surface is formed.
   a. Classify rocks by their process of formation.

S6CS1. Students will explore the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.
   a. Understand the importance of—and keep—honest, clear, and accurate records in science.
   b. Understand that hypotheses are valuable if they lead to fruitful investigations, even if the hypotheses turn out not to be completely accurate descriptions.

S6CS2. Students will use standard safety practices for all classroom laboratory and field investigations.
   a. Follow correct procedures for use of scientific apparatus.
   b. Demonstrate appropriate techniques in all laboratory situations.
   c. Follow correct protocol for identifying and reporting safety problems and violations.

S6CS6. Students will communicate scientific ideas and activities clearly.
   a. Write clear, step-by-step instructions for conducting scientific investigations, operating a piece of equipment, or following a procedure.
   c. Organize scientific information using appropriate tables, charts, and graphs, and identify relationships they reveal.
S6CS9. **Students will investigate the features of the process of scientific inquiry.**

Students will apply the following to inquiry learning practices:

a. Scientific investigations are conducted for different reasons. They usually involve collecting evidence, reasoning, devising hypotheses, and formulating explanations.

b. Accurate record keeping, data sharing, and replication of results are essential for maintaining an investigator’s credibility with other scientists and society.

S6CS10. **Students will enhance reading in all curriculum areas by:**

a. **Reading in All Curriculum Areas**
   - Read a minimum of 25 grade-level appropriate books per year from a variety of subject disciplines and participate in discussions related to curricular learning in all areas
   - Read both informational and fictional texts in a variety of genres and modes of discourse
   - Read technical texts related to various subject areas

c. **Building vocabulary knowledge**
   - Demonstrate an understanding of contextual vocabulary in various subjects.
   - Use content vocabulary in writing and speaking.
   - Explore understanding of new words found in subject area texts.

d. **Establishing context**
   - Explore life experiences related to subject area content.
   - Discuss in both writing and speaking how certain words are subject area related.
   - Determine strategies for finding content and contextual meaning for unknown words.

Enduring Understanding:

- Rocks are classified based on how they formed and their mineral composition.

Essential Question(s):

- How are rocks formed?
- How are rocks classified?
**Georgia Performance Standards Framework for Earth Science – Grade 6**

Pre-Assessment: Students will complete the Rock Web graphic organizer as a “chalk talk” or whole class activity to determine their previous experience of rocks.

<table>
<thead>
<tr>
<th>Outcome/ Performance Level Indicator</th>
<th>BASIC</th>
<th>INTERMEDIATE</th>
<th>ADVANCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will investigate an example of the three rock types, and classify them by their process of formation.</td>
<td>Students will investigate examples of rocks and classify them by their process of formation and physical appearance.</td>
<td>Students will investigate examples of rocks and classify them by their process of formation. Students will identify US geographical feature that contains each rock type.</td>
<td></td>
</tr>
</tbody>
</table>

**Teacher Note:**
Teacher will show students several different types of igneous, metamorphic and sedimentary rocks prior to assigning this task.
No special laboratory safety apparel will be required.
Students should be cautioned about appropriate handling of rocks.
Students should wash hands at the conclusion of the activity.

**Performance Task: (Detailed Description)**

<table>
<thead>
<tr>
<th>Teacher role?</th>
<th>Student role?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher will provide an example of an igneous, metamorphic, and sedimentary rock.</td>
<td>Students will produce and present a visual project to the class illustrating how the rock was formed, the minerals which the rocks are composed of, and how the rock is used.</td>
</tr>
<tr>
<td></td>
<td>Students will use a classroom rock collection to produce and present a visual project to the class which depicts an example of an igneous, metamorphic, and sedimentary rock. The visual will include the name of the rock, how it was formed, its mineral composition, and ways in which it is used.</td>
</tr>
<tr>
<td></td>
<td>Students will select examples of igneous, metamorphic, and sedimentary rocks. A visual poster or multimedia project will be constructed and presented which identifies the rock, how it is formed, its mineral composition, and its current uses. Projects will include a picture of a US geographical feature</td>
</tr>
</tbody>
</table>
# Georgia Performance Standards Framework for Earth Science – Grade 6

<table>
<thead>
<tr>
<th>Resources</th>
<th>Student Text Classroom Library Internet Websites: <a href="http://edtech.kennesaw.edu/web/rocks.html">http://edtech.kennesaw.edu/web/rocks.html</a> <a href="http://www.fi.edu/tfi/units/rocks/rocks.html">http://www.fi.edu/tfi/units/rocks/rocks.html</a></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Homework/Extension</td>
<td>On their own, students will complete a copy of the rock web graphic organizer summarizing rock types, examples, and their uses.</td>
<td>Students will locate and classify 3 new rocks, providing illustrations of the rocks, their formation and their common uses.</td>
<td>Students will collect pictures of additional geographical features found anywhere in the world to illustrate each rock type and its formation and their uses.</td>
</tr>
</tbody>
</table>

### Instructional Tasks

#### Accommodations for ELL Students

- View a video on rock types. Go to [www.gpb.org](http://gpb.org)


  [http://gpb.unitedstreaming.com/search/assetDetail.cfm?guidAssetID=50B4796F-56FA-4A4C-894C-03073F1F49F6&tabStart=videoSegments](http://gpb.unitedstreaming.com/search/assetDetail.cfm?guidAssetID=50B4796F-56FA-4A4C-894C-03073F1F49F6&tabStart=videoSegments)

- Use shorter sentences
- Paraphrase often
- Provide a word wall for difficult vocabulary
- Avoid “asides” when giving direct instruction about examples of the three types of rocks

#### Accommodations for Students with Specific Disabilities

- Provide hands-on samples of rock specimens
- Provide guided practice as students classify the three types of rocks by appearance and formation process
- Have students collaborate with general education peers
## Georgia Performance Standards Framework for Earth Science – Grade 6

### Instructional Tasks

- Use think-pair-share activities during direct instruction
- Reduce sources of distractibility such as multiple visual aids (ADHD)

### Accommodations for Gifted Students

- Use curriculum compacting as needed
- Students may construct their own graphic organizer based upon their depth of mastery
- Students will develop their own learning contract for the unit of study on formation and classification of rocks based on the standard; be sure to provide content information and a variety of resources for students to use negotiated product and assessment requirements
### ROCK WEB PREASSESSMENT

#### 3 types:

1. **Examples:**
   - 
   - 
   - 
   - 
2. **Examples:**
   - 
   - 
   - 
   - 
3. **Examples:**
   - 
   - 
   - 
   - 

#### Uses

1. 
2. 
3. 
4. 

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Georgia Department of Education  
Kathy Cox, State Superintendent of Schools  
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