



# Classroom Assessment Techniques

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2012 GSA/NAGT Short Course



## Stage 2. Assessment of Learning

The second stage in the design process is to define what forms of assessment will demonstrate that instruction achieved the desired objectives.

- **Performance Task**— The performance task is at the heart of the learning. A performance task is meant to be a real-world challenge in the thoughtful and effective use of knowledge and skill— an authentic test of understanding, in context.
- **Criteria Referenced Assessment** (quizzes, test, prompts). These provide instructor and student with feedback on how well the facts and concepts are being understood.
- **Unprompted Assessment and Self-Assessment** (observations, dialogues, etc.).

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## Classroom Assessment Techniques Resources

- Geoscience Concept Inventory:  
<http://geoscienceconceptinventory.wikispaces.com/>
- Student Assessment of their Learning Gains:  
<http://www.salgsite.org/>
- Field-Tested Learning Assessment Guide:  
<http://www.flaguide.org/>
- SERC Starting Point-Teaching Entry Level Geoscience, Assessment:  
<http://serc.carleton.edu/introgeo/assessment/index.html>
- SERC Cutting Edge, Student Learning Observing and Assessing:  
<http://serc.carleton.edu/NAGTWorkshops/assess/index.html>

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## Assessment Techniques Performance (Authentic) Assessments

*Performance assessments* measuring the process and products involved with student achievement when engaged in authentic scientific practice.

Performance assessments involve observing student performances and evaluating the products they have created during the tasks.

As such, performance assessments reflect authentic geoscience practice. Development of performance assessments is often best done by a disciplinary expert trained to develop assessment.

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**Performance Assessments**

**What do you observe? Explanation?**



Tablelands, Gros Morne National Park, Newfoundland

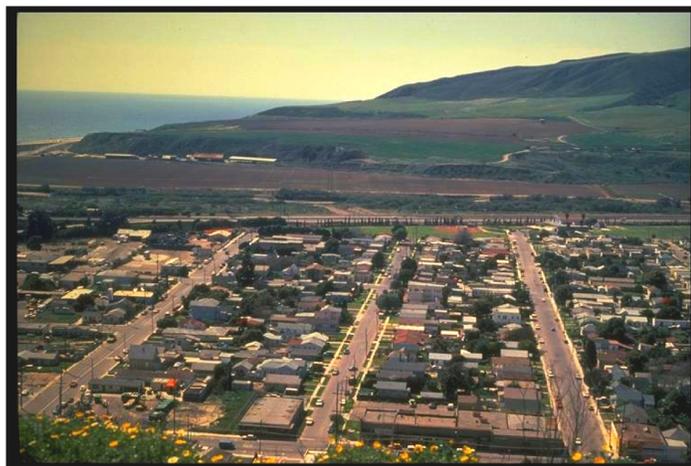
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**Performance Assessments**

**What do you observe? Explanation?**



Beach Terraces, Northern California

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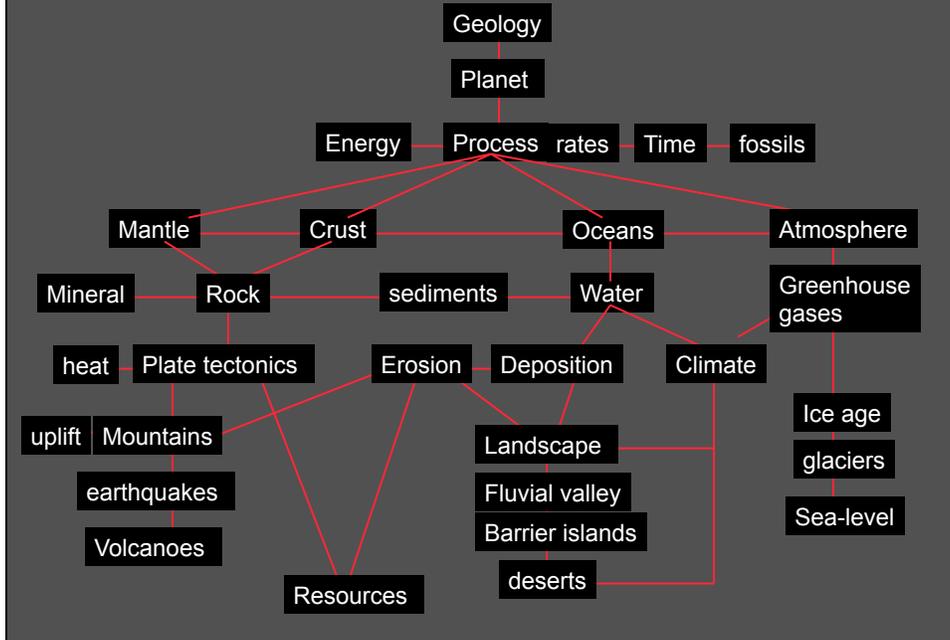
Performance Assessments

What do you observe? Explanation?

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My Knowledge Framework





## Rubric Resources

A rubric is one of the best instruments to use to evaluate the student artifacts developed during performance tasks. This type of assessment can also benefit from portfolio assessments.

- AACU Valid Assessment of Learning in Undergraduate Education (VALUE): [http://www.aacu.org/VALUE/rubrics/index\\_p.cfm](http://www.aacu.org/VALUE/rubrics/index_p.cfm)
- SERC Assessment Using Rubrics: <http://serc.carleton.edu/NAGTWorkshops/assess/rubrics.html>



## Last Activity: Developing Explicit Learning Goals and Assessment Techniques

In this activity, we will use existing instructional materials from two courses (physical geology or sedimentary geology) to develop learning goals for the instructional activity and an associated performance assessment.