

Unit Design Template

Subject: Science-6

Unit: Rocks Unit

Part I: Clarity of Learning Targets

What are the grade level indicators that go with this unit? Place a star next to the grade level indicators that are Power Indicators. Are the indicators in student friendly language? Place the level of Bloom's Taxonomy next to each Power Indicator.

Describe the rock cycle and explain that there are sedimentary, igneous and metamorphic rocks that have distinct properties (ex. color, texture) and are formed in different ways.

Explain that rocks are made of one or more minerals.

Student-Friendly:

1. I can describe the rock cycle and explain how the three types of rock have distinctive properties and form in different ways. (Conceptual: Remember and Apply)
2. I can explain that rocks are made up of one or more minerals. (Conceptual: Apply)

What are the Big Ideas that go with this unit?

1. Rocks and minerals have distinctive properties.
2. The Earth's limited resources must be re-used.

What are the Essential Questions that go with this unit?

1. What properties determine different rocks (and minerals), and how can you use them to identify those rocks (and minerals)?
2. How does the Earth re-use its limited resources?

What strategies will we use in order to make learning targets clearer for all students, before, during and after instruction? How will you communicate the learning indicators to students?

- Power indicators (learning targets) are posted on the board or Smart board
- Discussion – Connect lesson or activity to learning targets, Essential Questions and/or Big Ideas (before, during, and after instruction)
- Wall of Knowledge: Learning target written at the top – Students show evidence that they understand the learning target. Bricks are posted on the wall. Students share their examples in small groups. (Once or more a week)

Strategies for making learning targets clearer for students

- ✓ At the beginning of a unit, share the Big Idea or Essential Question with the students. Once you have taught a lesson, refer to the Big Idea or Essential Question and have the students make connections between the lesson and the Big Idea or Essential Question.
- ✓ Pose the Essential Question throughout or at the end of the unit. Have the students answer the Essential Question in their own words. The goal in this case is for the students to be able to respond to the Essential Question with the Big Idea stated in their own words.
- ✓ Share the grade level indicator with the students before, during, and after the lesson. Make connections between the grade level indicator and the Big Idea/Essential Question.
- ✓ Have the students summarize what they have learned in an exit slip.
- ✓ Introduce the language of a rubric to students by asking them what they already know and then linking their thoughts to the main concepts in the rubric.
- ✓ Create rubrics that are in student friendly language.
- ✓ Teach students how to use the rubric to evaluate models of strong and weak work samples.

Part II: Feedback and Assessments (Formative and Summative)

How will we provide students with feedback throughout the unit?

What formative assessments will we use? (Non-graded assignments that check for understanding and provide feedback to the students) Incorporate the 7 Strategies of Assessment for Learning here.

- Wall of knowledge – Exit/entrance slips – use of strong student examples
- Analyze results of summative test (correcting mistakes ½ sheet)
- Clear learning targets student survey (handout)
- My reflections about the lesson (handout)

How will students be involved with keeping track of their own learning progress (note-this is different than tracking points for a grade)?

- Participation in class discussions
- Group work
- Note-taking
- Wall of knowledge – Exit/entrance slips

What summative assessments will we use? (Graded, evaluative assessments)

- Chapter test (revise) – Review and analyze the results of the test. The students pick 3 incorrect questions, explain why they missed the questions, and correct their answers. The teacher provides feedback on corrected test items.
Mistake I made...
The correction is...

Part III: Instruction and Student Activities

What instructional and student activities will we use for this unit? These activities should directly align with the indicators and assessments. (Some activities could be summative or formative assessments)

- Journey on the rock cycle stations
- Rock lab (revise) – Collect and analyze data
- Rock cycle lab (crayons) – Students are in groups of 6
- Extra activity – Rock cycle fudge
- Rock out activity
- Rock legend – Pg. 166 textbook

To Do:

Copies

Make rock cycle station materials

Create test

Revise rock lab