

Unit Design—8th Grade Science: Olmsted Falls City Schools

Subject: Science-8

Unit: Earth Science – Chapter 2 (maps), Chapters 3 & 4
(Minerals and Rocks)

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.

Chapter 2 (Maps and Globes)

Analyze the Earth's structure using various models of the Earth. Conceptual, analyze-extended response, short answer, performance (project, drawing)

Chapters 3 & 4 (Minerals and Rocks)

Explain the relationship between the rock cycle and the forces within the Earth. (Procedural, Understand) multiple choice, fill in, short answer, extended response

What are the Big Ideas that go with this unit?

The forces of the Earth have created the interior and exterior structures.

What are the Essential Questions that go with this unit?

-How are the Earth's interior and exterior structures created?

Possible Answers:

- Understanding the Earth's surface in terms of maps and globes
- Go beyond the understanding and diagram the Earth using topographic maps.

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?

- What I can do in Earth Science student handout
- Daily communication of the learning target (broken down and connected to the activity)

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.

Chapters 2, 3, and 4

- CPS System
- ***Quiz Star-Pre-Quiz**
- Reading Contour Maps Worksheet
- Contour Line Quiz (Non-graded)
- Minerals and Rocks Power Point Check Off
- Power Point Check Off
- Pre-quiz

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

Chapter 2

- Topographic Maps Worksheet
- Longitude and Latitude Quiz
- Contour Line Quiz
- Pixel Pictures
- Test and Island Flood
- Drawing Contour Maps of Specific Surface Features

Chapters 3 & 4

- Quiz on what's the difference between a rock and a mineral
- Video Quiz
- Classifying Rocks Worksheet

***End of Unit Test (Ch. 2-7)**

- Align indicators to the test questions
- The amount of time spent on the indicator should match the number of questions
- Rubric/checklist/criteria for grading

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.

Chapter 2

Ohio Treasure Check Activities

Power Point Presentation and Notes

Chapter 3 and 4

Rock Cycle Simulation on classzone.com

Rocks and Minerals Stations

Power Point presentation and Notes