

Fossil Records and Geological Dating	Topic	Science 7	Grade
90 minutes – double block	Allotted Time		Date

Rationale: *Why is this lesson relevant at this time with these students?*

This lesson enables students to explore some of the knowledge we have today of our prehistoric history. It's important for students to be able to draw connections between today's ecological world and the ecological world that we have developed from.

Provincial Learning Standards

BIG IDEA: Fossil records provide evidence of geologic and environmental change.

- Explain how scientists use the placement and position of an object (including the environment the fossils are found within) to infer the time of events and the environmental context and state

Assessment

Lesson Outcome What will students learn?	Sources of Evidence What product or action will show what students have learned?	Criteria What will you look for in this evidence?
SWBAT explain how the Earth has changed over time so that we now find fossils.	Active engagement in fossil hunting.	Students will actively take part in group discussion regarding fossil hunting. Students will hand in a short reflection on the day.

Resources, Material and Preparation:

- Permission slips (and potentially waiver release forms for the gravel pit in which we will excavate) from all students and legal guardians. Emergency contact numbers for all students and a list of any allergies. Transportation arranged and another responsible adult supervisor (can be parent chaperone or classroom aide).
- First Aid kit including EpiPen.
- A few cold chisels and many hammers. Workgloves (students should have brought their own as well).
- Warm clothing backup in first aid kit for students (ie. Toque, fuzzy non-cotton clothing, warm gloves, etc.)

Pacing	Lesson Development
This will occur during the travel time.	Introduction: 1. Students will be taken on a field trip! On the way there they will be asked to think about how they envision what the fossil hunting area looked like millions of years ago, and also, how lucky we are to not have to watch over our backs for a tyrannosaurus attack...or sabre tooth tiger attack.
5 minutes	Teaching/Learning Sequence: 2. We will discuss group safety needed for the field trip. (Stay with a buddy and within eye distance or the boundaries set out by the teacher, don't run with tools, etc.)
15 minutes	3. We will travel to the fossil site. On the way, we will discuss the opening questions (as mentioned above), and the types of rock that fossils are

	most likely to be found in, referring to fossil examples.
30 minutes	4. Upon arrival, we will gather as a group, ensure that everyone has a buddy and then we will begin the search for fossils.
15 minutes	5. Gather up and travel back to the school classroom.
20 minutes	<p>Closure:</p> <p>6. When back at the school, we will discuss what we found. Hopefully we will have some fossils to show for our hard efforts. What type of rock did we find fossils in? What was the students' favourite parts of the day? They will write down a short reflection of their choice, their favourite part of the day, or an interesting find; students will then hand in their paper as a ticket out the door.</p>

Resources Used

- Science Grade 7 Integrated Resource Package, 2005. British Columbia Ministry of Education.