

Example of a Lesson plan

Title of thematic unit	Soil erosion
Length	1 hour and 30 minutes (2 school classes)
Learning outcomes	<p>After this lesson students will be able to:</p> <ul style="list-style-type: none"> • list types of soil and erosion • define and understand erosion as a process • explain the effects of erosion and the impact on the humans • describe how to prevent erosion • describe positive and negative consequences of erosion • explain why is necessary to prevent erosion for human and overall sustainable development • practice some individual actions for prevention of erosion
Teaching and learning resources and materials	<ul style="list-style-type: none"> • science journals or notebooks • picture of erosion • Skittles and M&M's • trays that can hold a small amount of water • eye droppers • water • video material on soil erosion
Learning methods and techniques	<ul style="list-style-type: none"> • discussion • demonstration • presentation • experiment • research
Instructions (course of the lesson)	<ul style="list-style-type: none"> • Show students a picture of a surface that has been eroded and ask them to do a 2W write – answering two



W questions (who, what, where, when or why). Share answers and discuss.

- Tell students they will be learning about erosion. Share background knowledge.
- For a collaborative element, divide students into groups and assign key vocabulary words before showing the video lesson. Ask them to be in charge of recording the definition to share later. Alternatively, allow all students to take vocabulary notes independently.
- Show the video lesson Soil & Erosion: Definition, Types, Causes & Prevention.
- Tell students to create an entry in their science journals titled 'Erosion'. Define terms, then create a chart to record the different types of erosion. Demonstrate, if necessary.
- Discuss:
 - Describe topsoil. What makes it susceptible to erosion?
 - How are the types of erosion the same and different?
 - What are some impacts of erosion? What makes them negative or positive?
 - What causes erosion?
- Have students create a section in their journals titled 'Erosion Prevention'. List and discuss differing methods of preventing erosion. Ask:
 - Why is it in our best interest to prevent erosion?

Activity

- Tell students they will participate in a demonstration of erosion using water, Skittles and M&M's.
- Tell students to create and label a section in their science journals to prepare for the demonstration. Pose and record the guiding question 'How does erosion impact different types of soil?'



	<ul style="list-style-type: none"> • Tell students they will be dropping water onto Skittles and M&M's, each representing a different type of soil. Have students make predictions about which will erode first, and how many drops each will take to erode, and so on. • Conduct the experiment, recording data. • Have students write conclusions and share information. Compare results to hypotheses and discuss. Ask: <ul style="list-style-type: none"> ○ What type of soil is most like the Skittle? M&M? Explain. <p>Extensions of the activity</p> <ul style="list-style-type: none"> • Visit a farm or invite a local farmer to discuss methods used to prevent erosion. • Conduct longer-term experiments with the types of soil listed in this lesson to investigate erosion. • Research different methods of erosion protection practices used around the world. Ask students to present information or make models of these methods.
<p>Evaluation (assessment)</p>	<ul style="list-style-type: none"> • Assessing student's portfolio • Essay on prevention of erosion • Tests of knowledge about soil erosion