

Don't Wither Away!!

Weathering and Erosion of Famous German Castles



Overview

The students will be able to explore the process of weathering, erosion, and deposition through demonstrating the effects on sugar cubes, which resemble the landforms castles are built on and the bricks and stones that castles are made from.

Education Standards

TEKS 5.7 (a) Earth and Space

The student knows Earth's surface is constantly changing and consists of useful resources.

- (a) explore the processes that led to the formation of sedimentary rocks and fossil fuels
- (b) recognize how landforms such as deltas, canyons, and sand dunes are the result of changes to Earth's surface by wind, water, and ice

Materials Needed

sugar cubes

warm water

pebbles

black painting tray

small container to shake pebbles and sugar cubes in

Powerpoint of Castles

Vocabulary

weathering

erosion

deposition

landform

destructive force

constructive force

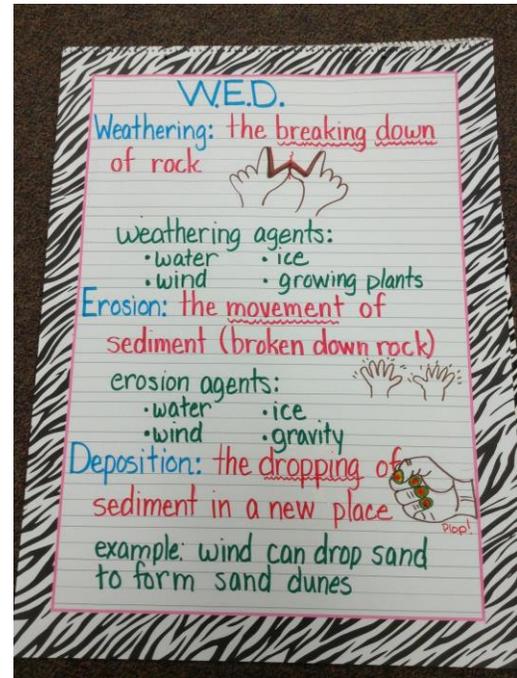
Student Objectives

Students will discover that over time, wind, water and ice have caused great changes to occur with the castles and with the land surrounding these architectural structures.

Activity

To prepare before the lesson: glue 12 sugar cubes together to form a cube (which will resemble the base of a castle or a large hill).

1. Review the vocabulary and have students make hand motions to show what “Weathering, Erosion, and Deposition” is.
2. TW will explain that **destructive forces** occur with *weathering and erosion* and **constructive forces** occur with *deposition*.
3. TW show the powerpoint on castles and ask students to observe what materials were used to build each castle and what landforms are surrounding each castle.
4. TW will place the sugar cube in a plastic container with pebbles and will begin to shake it. Ask students what process is happening. (*weathering*) TW pass around the container and let all the students shake the container.
5. Then TW take the “sediments” in the container and dump them in the upper part of the painting tray and will pour warm water over the mixture of broken sugar cubes and pebbles as the students observe it go down to the lower level of the tray. TW will ask students what process is happening. (*erosion and deposition*)
6. TW can explain that some landforms are created with deposition such hills, sand dunes and even islands. This process was caused with constructive force.
7. TW will make the connection of how over time wind, water and even ice can be a destructive force to these beautiful castles.
8. SW continue planning and working on their castle creations.



Teacher will play classical music by German composers during the lesson. Here is a great link found on Youtube to play (3 hours worth of great music)

<https://youtu.be/Eb4K00UOVR0>

Extension

The students can explore different kinds of mediums as “castle bases or hills” such as Cheez-Its, real rocks (limestone), Chalk, etc. Students can shake them in a container and see which ones break down faster and this can lead to a discussion of what kinds of materials should a castle be made out of so that it lasts longer.

