

# The Niagara Escarpment

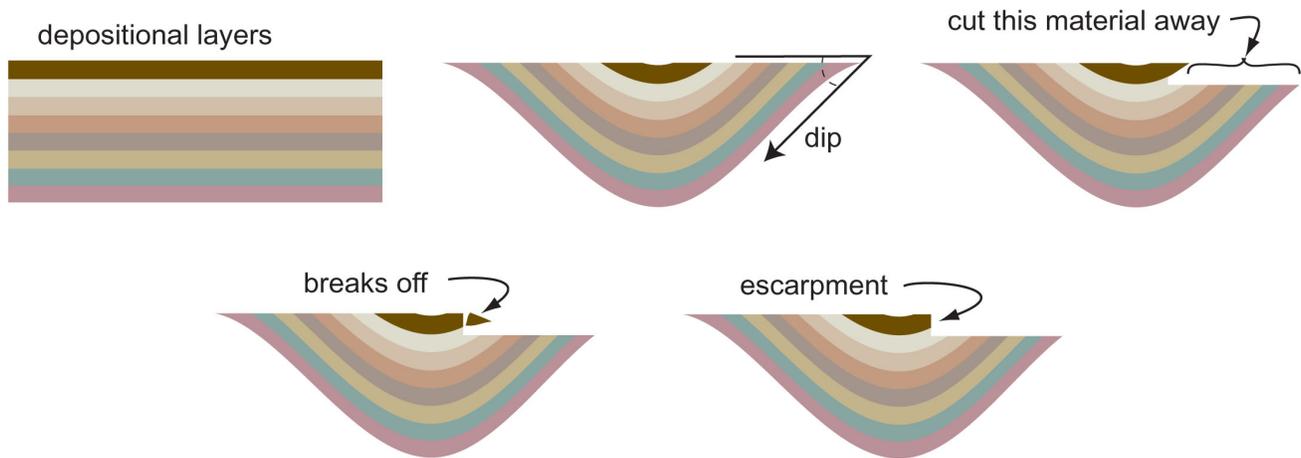


## Sapping Demonstration - Instructions and Guidelines

### Materials Needed:

- Large bowl
- Different colours of plasticine (3 or 4 colours)
- Rolling pin (to flatten out the plasticine)
- Knife (to cut the model down the middle and remove the layers to show the effects of erosion)

1. Collect the materials.
2. Take the different coloured plasticine and roll each colour with the rolling pin until it is a flat sheet about 2 cm thick.
3. Place each plasticine sheet (rock layer), one on top of the other to illustrate that the rock layers were once a horizontal deposit.
4. Place the layers in the bowl, pushing gently to ensure that the plasticine takes the shape of the bowl.
5. Cut out half of the model and remove it from the bowl (it should retain its curved shape).
6. Show the students how the layers dip toward the centre of the basin. Explain that this slope is called the dip and can be measured as an angle from the horizontal plane.
7. On the top layer (the dolostone layer), make a clean cut to create a 'cliff' effect. Cut away the underlying layers, to create a hollowed out section beneath the top layer (see figure below). Explain to the students that this is the effect of erosion. The soft shales and sandstones are eroded away while the harder dolostone remains as a cap. This is what happens along the Niagara Escarpment. If too much of the underlying sedimentary rock is eroded away, the dolostone is left unsupported and eventually will break off due to its weight and the effects of gravity. This process is known as sapping.
8. Project the **Overhead Sapping Process** to illustrate the stages of sapping and erosion.



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## Sapping Process

