Geophysical Research Abstracts
Vol. 12, EGU2010-12317, 2010
EGU General Assembly 2010

Satellites data and field activity: Volcanology

Laurence Durand
Lycee Camille Saint Saens, none, Rouen, France (laurence.durand@free.fr)

Volcanic conduit is always represented as a regular structure that crosses the lithosphere as if it has been drilled.
The question for the pupils is: How is the volcanic conduit built during the eruption and how is it formed?

In Massif Central, there is a volcano called Lemptegy. This volcano is one of the 70 in the chaîne des puys.
After the Second World War, scoria of the volcano was dug up and used as building material. This area is now an outdoor museum which can be visited (http://www.auvergne-volcan.com/accueil/accueil.asp).
As most of the scoria has been drained, you can see where the lava has come through. These structures called dykes can normally be seen when erosion removes the volcanic cone.

By looking at the satellite image of the volcano, you can see the organisation of the dykes and the scoria around them.
When pupils are going inside the volcano, they can compare the satellite data with the rocks they find.
They can collect rocks at different places and take pictures of specific formations.

When pupils collect samples or take pictures, they use GPS to locate their exact position and a compass to determine the direction in which the picture was taken.

During the field trip, pupils have to hypothesize about how the volcano was built and the shape of the conduit.

Then, back at school, pupil geolocate the samples and the pictures on the satellite image. This data is then combined in order to model the shape of the conduit and drawn accordingly.