Blåfjell
Information Sheet



Location: BLÅFJELL
Conservation designations: Cultural heritage
Grid reference: EU89, UTM-zone 33
Address: Blåfjellveien, 4380 Hauge i Dalane
Parking available: Yes, cars and busses can park at Linepollen. Cars can also drive all the way up the mines
Personnel to be contacted prior to visit: Magma Geopark, Elvegaten 23, 4370 Eigersund, E-mail: post@magmageopark.com, Phone +4791782594

Useful equipment:
- Camera
- Warm clothes
- Good shoes
- Wind and water proof garment
- Hand lens
- Meter stick
- Paper
- Pen
- Color pencils
- Compass

Relevance national curriculum:
8th grade middle school (natural and social science)

High school (Geoscience and geography)

Rock types and geological processes observed: Anorthosite, norite, ilmenite, magmatic crystallizartions, dykes
Geological structures: magmatic rock boundaries
Earth processes: eg. Glacial processes (moraines, erratics, striations etc.)
Geological periods present: Precambrian, quarternary

Site specific hazards and risks:
- Height from outside mine
- No exit into the mines itself
- If very wet or cold the mountains might be slippery

Mitigation measures:
- Park in a designated area
- Show respect for the cultural heritage
- Respect grassing animals
- Keep your dog on a leash
- Close gates when you have passed them

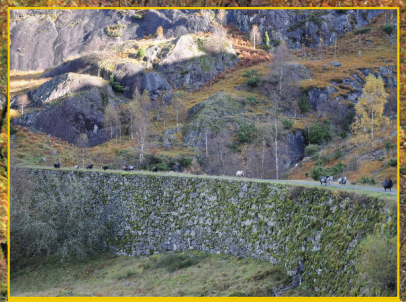
Did you know:

Topics to cover before visit: Areal conflicts, resources, basic geology (difference of rocks and minerals, how to distinguish rocks and minerals etc.), large landforms and how they are formed

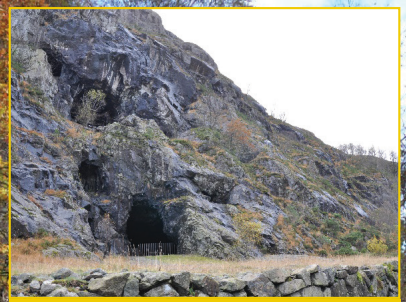
Keywords: Mountain chain, magma chamber, ilmenite, ore, mining, minerals, ice age

Format developed by the Western Education and Library Board's Magilligan Field Centre

Stop 1: Ruggesteinen / The rocking rock



Stop 2: Remnants from the old railway



Stop 3: The Blåfjell mines

Stop 4: Weathered norite dyke cutting through anorthosite

Stop 5: The black ilmenite contrasts the sourrounding rocks

Stop 6: Inside the top mine. Pillars of ilmenite is left to stabilize it

Stop 7: Norite dyke cutting through the anorthosite

Stop 8: Outcrop showing anorthosite with megacrystals of plagioclase. Outcrop also shows a sharp boundary to ilmenite

Stop 9: View towards the windmill park and mine at Tellenes

Stop 10: Glacial erratics

Geological history*:

About 1 billion years ago, a large mountain chain the size of Andes existed in this area because of the collision between a continental and an oceanic plate. Below this mountain chain there was a magma chamber where hot magma through several episodes intruded and crystallized (solidified). The first rock to crystallize was the anorthosite about 930 million years ago. Later, about 920 million years ago, ilmenite norite and pegmatite intruded into the already existing anorthosite and crystallized. Through millions of years, the mountain chain eroded away, continents drifted apart and the rocks are today visible at the surface of the earth. In quaternary time, glaciers shaped the landscape we see today, and there are traces left scattered around in the terrain. The ilmenite in the ilmenite, norite and pegmatite has become an important resource for the area.

Stop 11: Sedimentary profile in a moraine