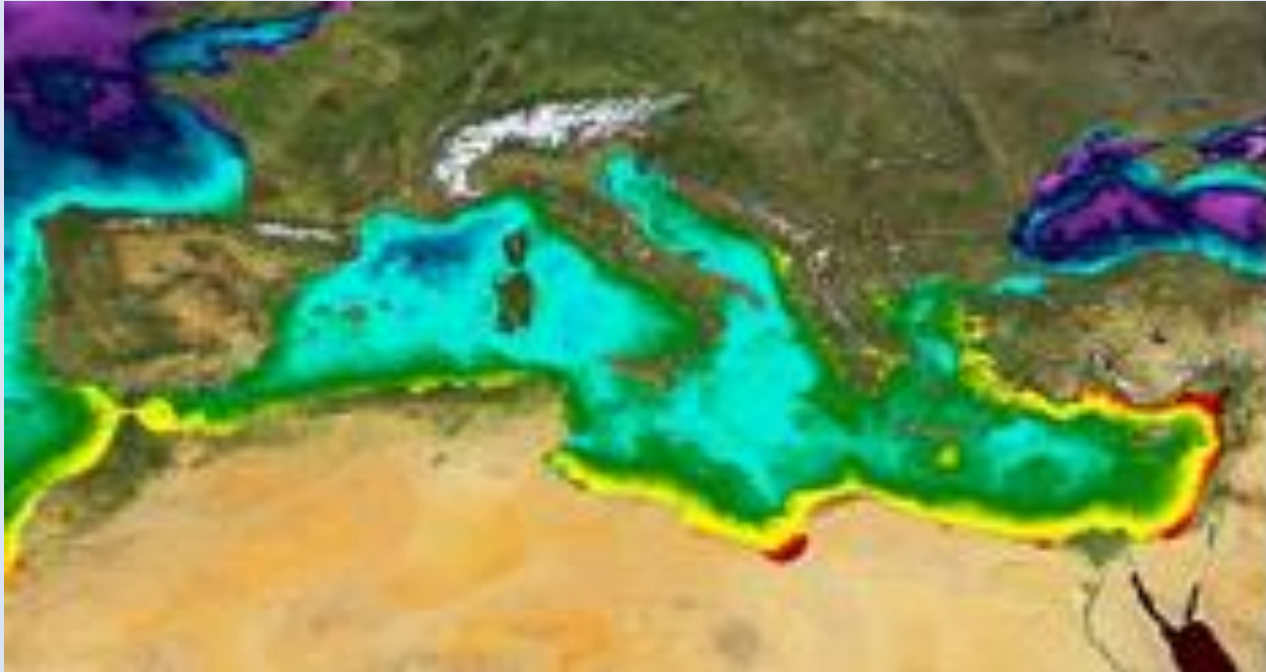




# The Mediterranean Sea – through Earthlearningideas

Chris King





# The Mediterranean Sea – through Earthlearningideas Earthlearningideas

## Ice breaker

- Plate movement by hand – modelling plate movement with your hands

## Series of activities

- Earthquake prediction – When will the earthquake strike?
- Tsunami – What controls the speed of a tsunami wave?
- See how they run – investigate why some lavas flow more quickly than others
- Best classroom eruption? – which type best shows how volcanoes erupt?
- The Himalayas ALPS in 30 seconds – a fold mountain range in an empty box
- Rock, rattle and roll – resistance of rocks to erosion by shaking in a container
- Changing coastlines – investigating wave erosion, transportation and deposition
- Mighty river in a small gutter – sediments on the move

## Plenary

- Volcano in the lab – modelling igneous processes in wax and sand



# The Mediterranean Sea – through Earthlearningideas

- All are activities from the Earthlearningidea website
- Currently:
  - 260 in English
  - 800 translations into ten languages (including German, Norwegian, Polish, Portuguese, Slovak, Spanish)
  - downloads at more than 40,000 per month
  - accessed in 200 countries and 10,000+ towns/cities worldwide



www.earthlearningidea.com

## Earth Learning Idea

Innovative, Earth-related teaching ideas



[ELI pages](#)
[ELI teaching strategies](#)
[ELI translations](#)
[ELI around the world](#)

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PHYSICAL GEOGRAPHY


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[Modelling river pothole-formation by calculation – thinking through the assumptions](#)






related activities in category:  
[Earth energy/processes](#)






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## Earth Learning Idea

Innovative, Earth-related teaching ideas

The search engine

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Search Earthlearningidea again

choose PDF document or video (MP4) PDF ▾

**Keywords:**

Earthquake

**Search**

**Search Results**

Your search for *Earthquake* found the following documents (of 848 documents searched):  
Displaying documents 1-10 of 49, with best matches first:

1. [Surviving an earthquake](#)  
Earthlearningidea - <http://www.earthlearningidea.com/> 1 Surviving an **earthquake** Learn the **earthquake** drill and increase your chances of survival Ask the class to tell you about any **earthquake** experiences they have had. For some this will be all too real...  
**URL:** [http://www.earthlearningidea.com/PDF/Surviving\\_an\\_earthquake\\_1.pdf](http://www.earthlearningidea.com/PDF/Surviving_an_earthquake_1.pdf) - 244KB - 18 Nov 2014
2. [Earthquake through the window - what would you see, what would you feel?](#)  
Earthlearningidea - <http://www.earthlearningidea.com/> 1 **Earthquake** through the window - what would you see, what would you feel? Asking pupils to picture for themselves what an **earthquake** through the window might look like What would it look like through...  
**URL:** [http://www.earthlearningidea.com/PDF/Earthquake\\_thro\\_window.pdf](http://www.earthlearningidea.com/PDF/Earthquake_thro_window.pdf) - 349KB - 17 Nov 2014
3. [Earthquake prediction - when will the earthquake strike?](#)  
Earthlearningidea - <http://www.earthlearningidea.com/> 1 **Earthquake** prediction - when will the **earthquake** strike? Modelling the build-up of stress and sudden release in the Earth that creates earthquakes Ask pupils why they think many people can be killed...  
**URL:** [http://www.earthlearningidea.com/PDF/49\\_Earthquake\\_prediction.pdf](http://www.earthlearningidea.com/PDF/49_Earthquake_prediction.pdf) - 682KB - 24 Nov 2014
4. [Quake shake will my home collapse?](#)  
Quake shake will my home collapse? When an **earthquake** strikes investigate why some buildings survive and others do not Set up the demonstration out of sight of the class. Place a flat piece of wood in one end of a tray and then fill the whole tray...  
**URL:** [http://www.earthlearningidea.com/PDF/Quake\\_Shake.pdf](http://www.earthlearningidea.com/PDF/Quake_Shake.pdf) - 413KB - 18 Nov 2014
5. [Innovative teaching ideas for the OCR A-Level Specification Earthlearningidea](#)  
Innovative teaching ideas for the OCR A-Level Specification Earthlearningidea The Earth Science Education Unit (ESEU) was recently asked to present a day of Professional Development to the two members of the geology department in a nearby sixth form...  
**URL:** [http://www.earthlearningidea.com/PDF/ELI\\_OCR\\_A\\_level.pdf](http://www.earthlearningidea.com/PDF/ELI_OCR_A_level.pdf) - 98KB - 14 Dec 2014
6. [Quake shake - will my home collapse?](#)  
From Thomas McGuire, Arizona, USA Student groups could have a contest to design tremor resistant structures followed by a 'quake-off' to discover 'the last man (structure) standing'. From a colleague in Japan Watch this video for an easy way to understand...  
**URL:** [http://www.earthlearningidea.com/PDF/Extension\\_Quake\\_Shake.pdf](http://www.earthlearningidea.com/PDF/Extension_Quake_Shake.pdf) - 44KB - 17 Nov 2014
7. [tsunami brochure.pdf](#)  
The Boxing Day tsunami was the worst natural disaster in recent history, and Sri Lanka was one of the worst hit countries. The idea of supporting tsunami victims motivated me to write this booklet. It has been written for a non-scientific audience, so...



## The Mediterranean Sea – through Earthlearningideas

Many of the Earthlearningideas use models:

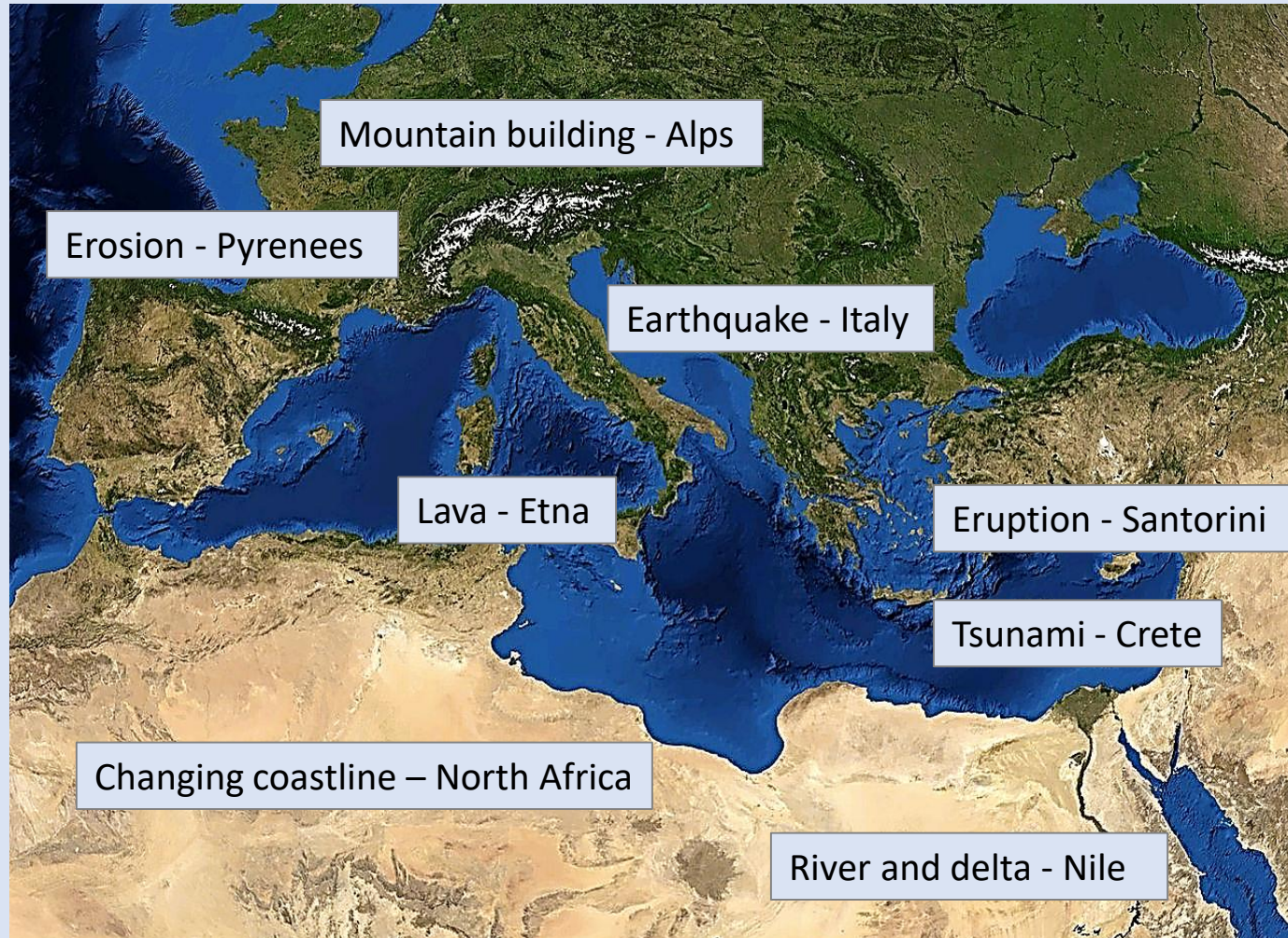
- Coll et al. state that ‘Models and modelling are key tools for scientists, science teachers and science learners’ (2005 : 183).
- Windschitl et al. argue ‘The general aim of modeling is to test an idea – represented as a system of related processes, events, or structures – against observations in the real world and to assess the adequacy of the representation (i.e., model) against standards of evidence’ (2008 : 944).
- Sibley states that ‘Scientific models (...) are representations shared by experts to make predictions or retrodictions about concepts, objects, systems, data, processes or events. (...) This definition agrees with variations presented by science (...) with the addition of the term retrodiction, an important aspect of geological reasoning’ (2009 : 255).



# The Mediterranean Sea – through Earthlearningideas

Were are they?

- Earthquake
- Tsunami
- Lava
- Eruption
- Mountain-building
- Erosion
- Changing coastline
- River and delta

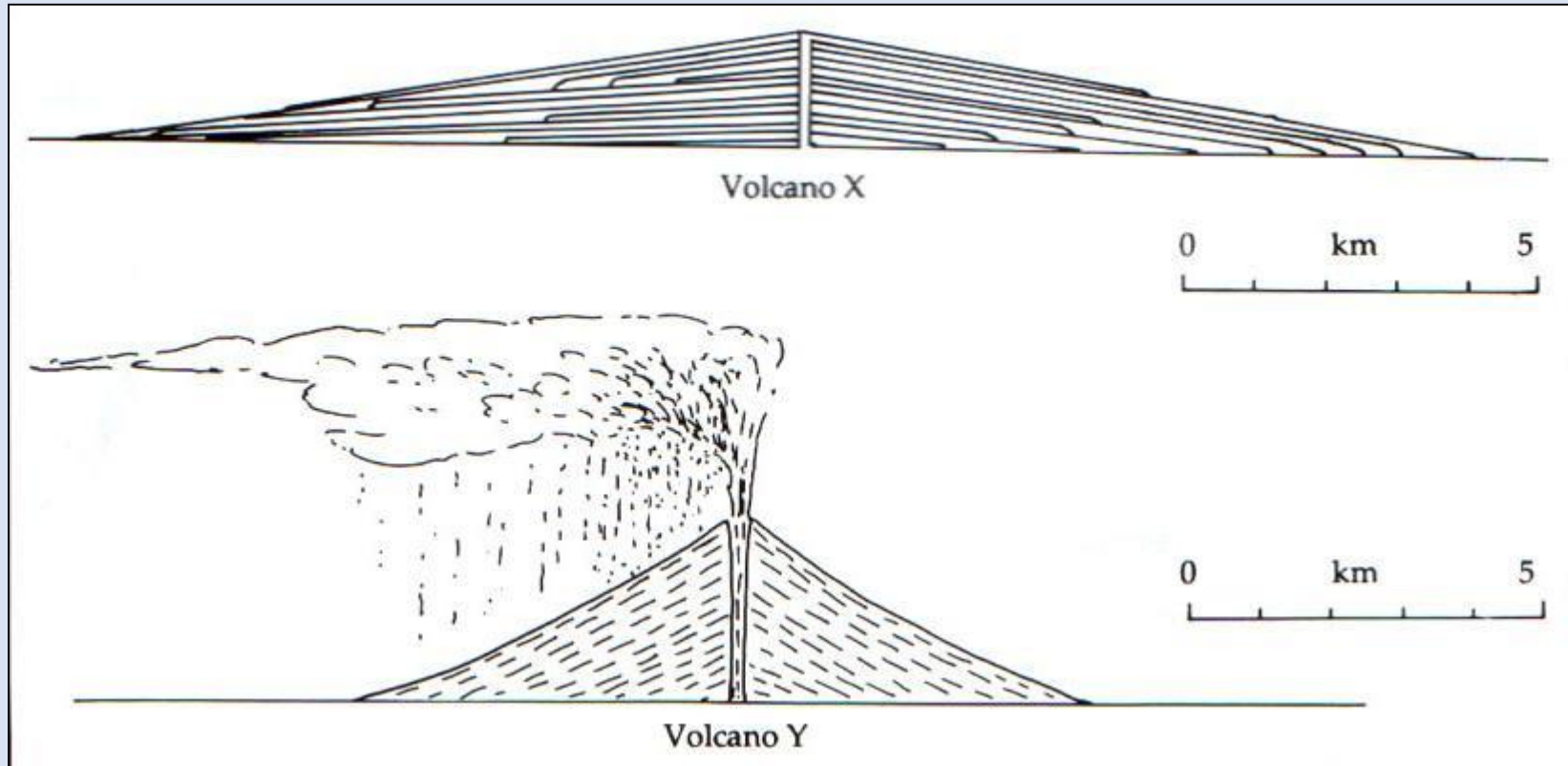


This image is in the [public domain](#) because it is a screenshot from [NASA](#)



## Testing the activities

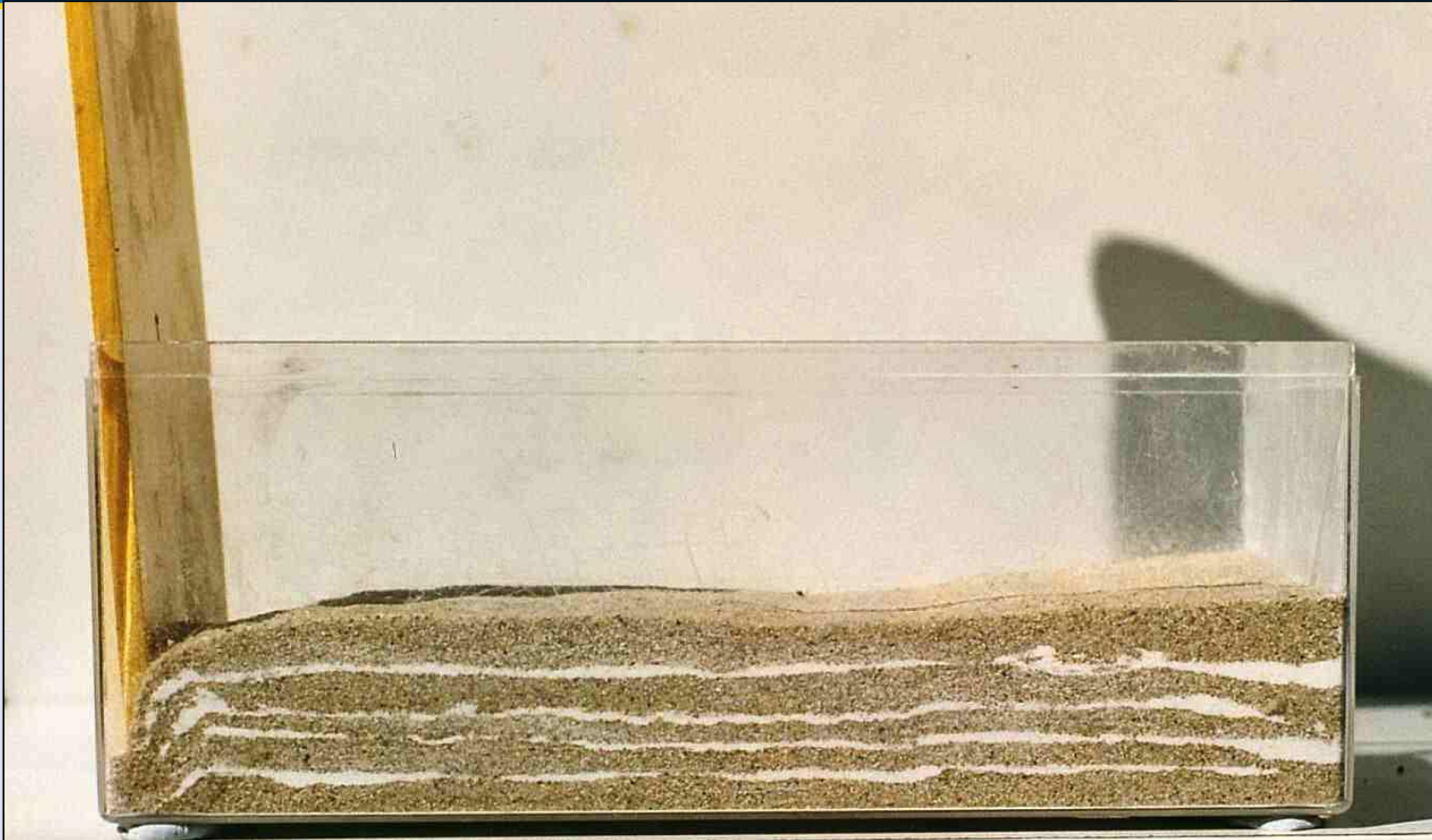
- **Go to the activity** you have been given – read through the information sheet
- **Try out the activity** in the short time we have given you
- When we visit you later, please:
  - Name the topic you tried out
  - **Explain what you did – giving the best demonstration you can**
  - How does this relate to the real world?
  - Would you use it in class? If so, how is it best used with the class; group practical work; teacher demonstration; part of a circus etc?
  - Any safety implications?



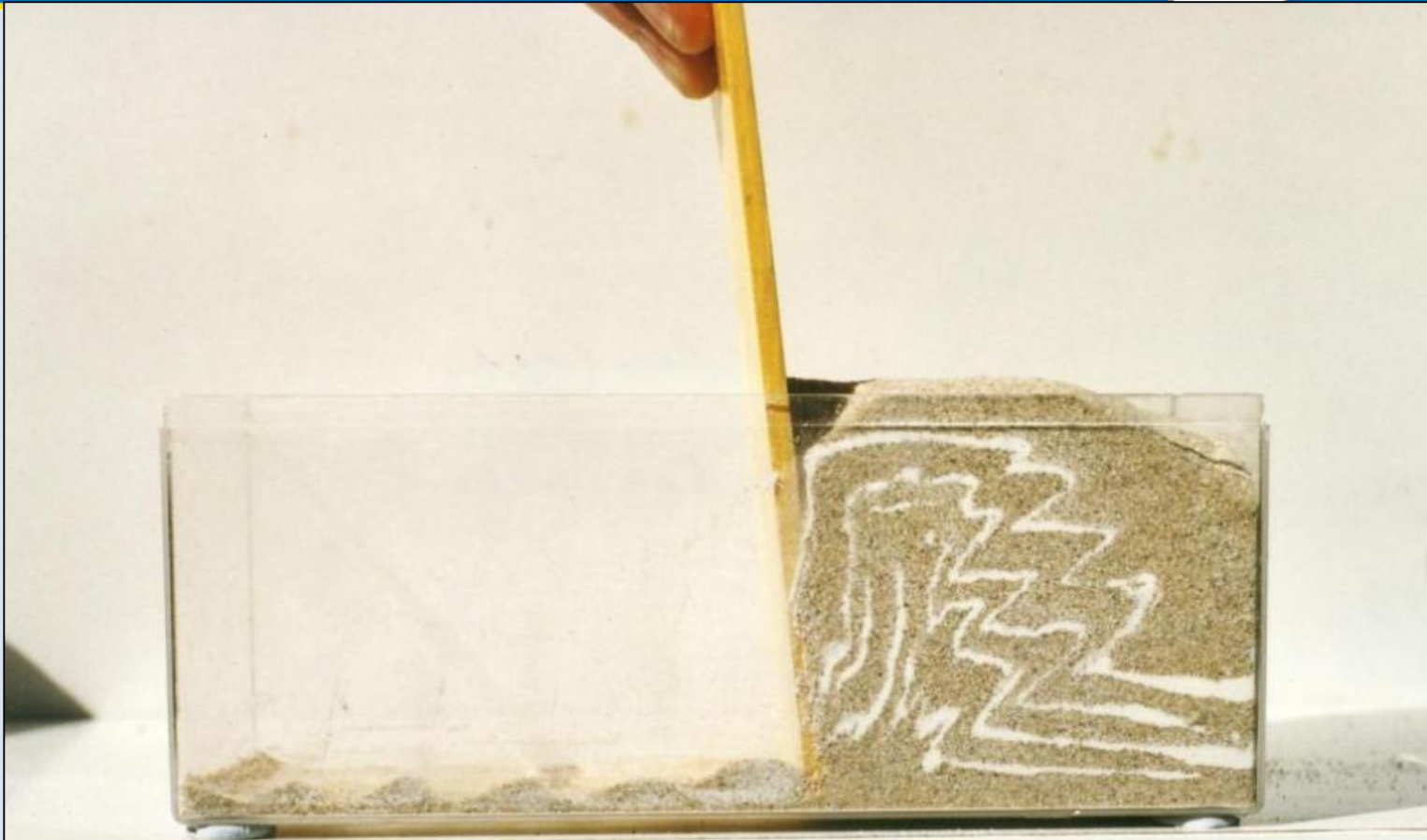
- Which volcano was formed by runny lava?
- Which volcano was formed by slow-flowing lava?
- Which sort of eruption would you like to watch?

From: ESTA, *Science of the Earth* 11 - 14, *Magma - introducing igneous processes*. Sheffield: Geo Supplies





**The Alps in 10s...**



**The Alps in 10s!**

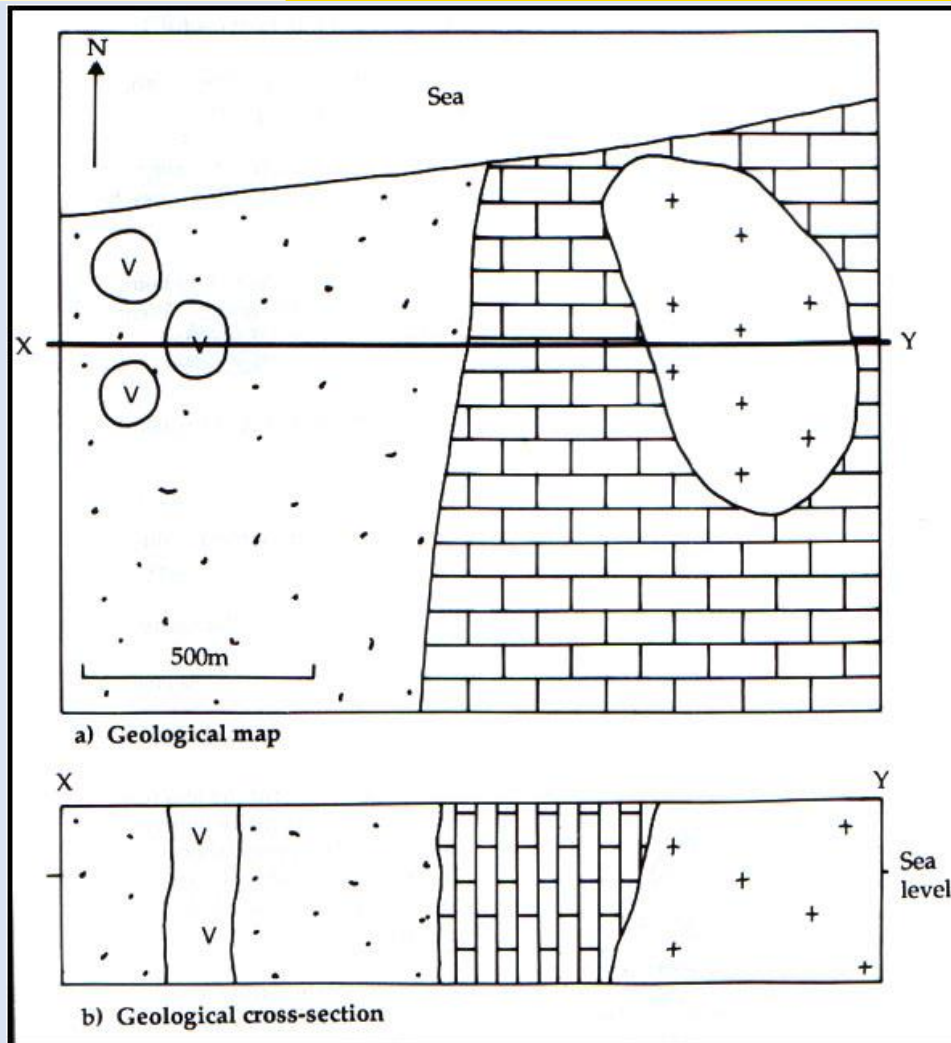


**The Alps in 10s!**

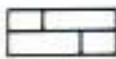
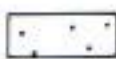
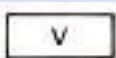
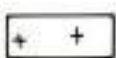


## Erosion and transport – investigating the resistance of rock samples to “erosion”

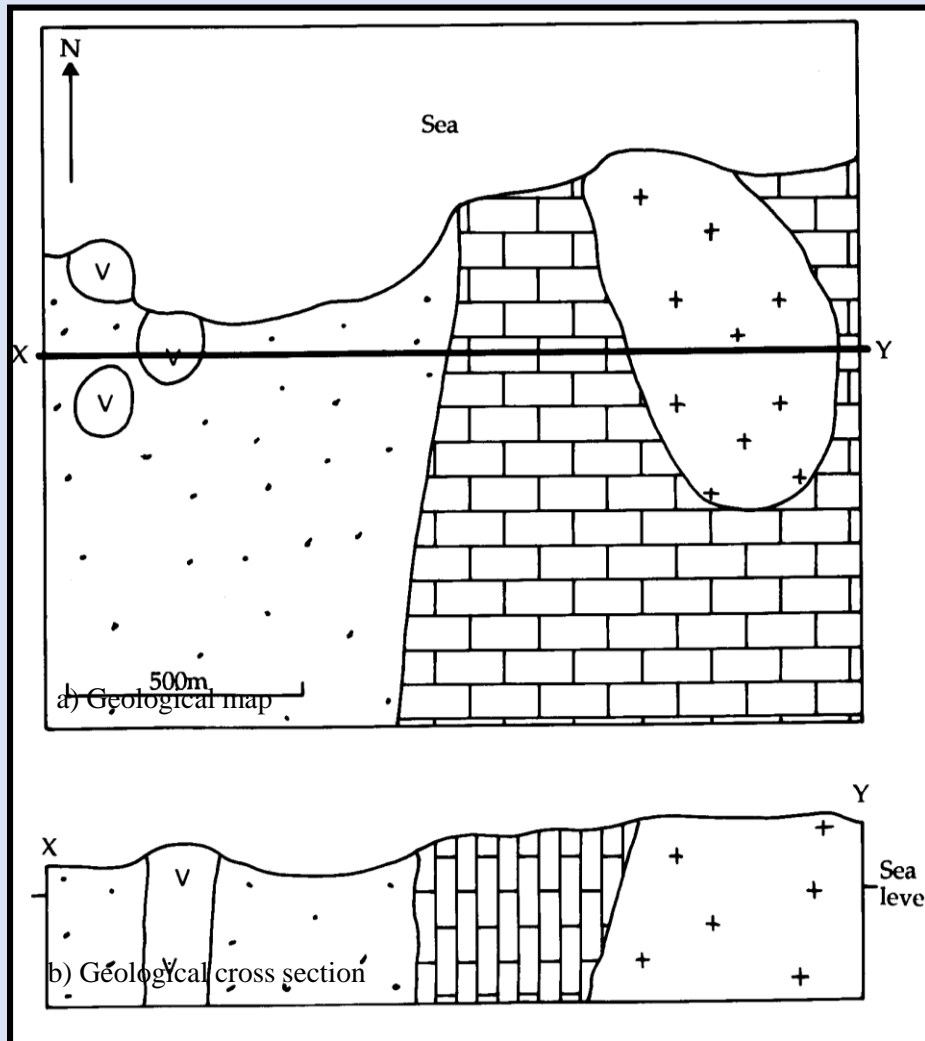
What will it look like in  
10,000 years ?



### Key

	crystalline limestone
	crumbly sandstone
	fine-grained igneous rock
	coarse-grained igneous rock

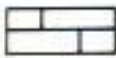
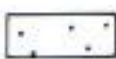
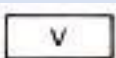
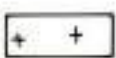
From: ESTA, *Science of the Earth*  
11 - 14, *Sediment on the move.*  
Sheffield: Geo Supplies



## Erosion and transport – investigating the resistance of rock samples to “erosion”

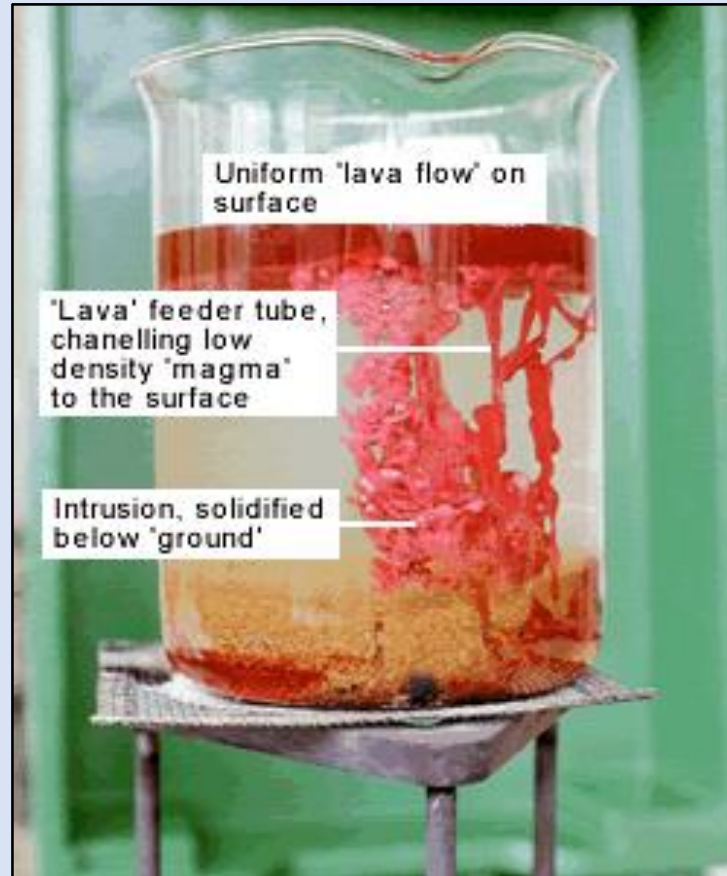
- Which rocks form headlands, hills? Which form bays, valleys?
- What does it mean when you walk uphill?

### Key

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GIFT – Geosciences Information For Teachers



(Click to set the volcano off)



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