

# *Selected Volcano Resources*

## **Volcanism and Volcanos**

### **Volcano World**

<http://volcano.oregonstate.edu/>

Volcano World shares real time volcano information in an understandable way. Includes a glossary, lessons, movies of eruptions, updates on volcanic eruptions, and volcano legends and lore.

### **Types of Volcanos (Treiman, LPI)**

<http://www.lpi.usra.edu/science/treiman/greatdesert/workshop/volcanos1/index.html>

There are three types of volcanos, right? Learn why this well known "fact" is incorrect!

### **Heat from Within: Educator Field Trip to Oregon to Explore Earth's Volcanism ... and Beyond!**

<http://www.lpi.usra.edu/education/fieldtrips/2006/>

Resources, presentations, maps, and activities related to plate tectonics and volcanism (this resource list will look familiar!) used in association with a field experience for K-12 educators.

## **United States Geologic Survey Sites**

### **Volcano Observatories (USGS)**

Get real-time news about the volcanos with which we live, access photos, maps, eruptive histories, latest hazards assessments, FAQ's, activities, teacher packets, and links, living with volcanos, and how to plan a visit to a volcano. Great pictures. Especially good stuff about Mt. St Helens on the Cascades site

<http://www.avo.alaska.edu/index.php/index.htm> - Alaska Volcano Observatory

<http://hvo.wr.usgs.gov/cnmi/> - Anatahan Volcano - Northern Mariana Islands

<http://lvo.wr.usgs.gov/> - Long Valley Observatory

<http://volcanoes.usgs.gov/yvo/> - Yellowstone Volcano Observatory

<http://hvo.wr.usgs.gov> - Hawaii Volcano Observatory

<http://vulcan.wr.usgs.gov/> - Cascades Volcano Observatory

<http://vulcan.wr.usgs.gov/Outreach/framework.html> - Cascades Volcano Observatory education and outreach resources

<http://volcanoes.usgs.gov/> - Volcano Hazards Program

<http://volcanoes.usgs.gov/Products/Pglossary/> - Photo glossary of volcanic terms

<http://pubs.usgs.gov/gip/monitor/> - Monitoring Active Volcanoes – online book

<http://pubs.usgs.gov/gip/volcus/> - Volcanoes of the United States – online book

<http://pubs.usgs.gov/gip/hawaii/> - Eruptions of Hawaiian Volcanoes – online book

<http://pubs.usgs.gov/publications/msh/> - Eruptions of Mt. St. Helens: Past, Present, and Future – online book

### **Volcanoes (Bob Tilling, USGS)**

<http://pubs.usgs.gov/gip/volc/>

This online book presents a summary of the nature, workings, products, and hazards of the common types of volcanos around the world and a brief introduction to volcano monitoring and research.

### **3D Geology of the National Parks**

<http://3dparks.wr.usgs.gov>

Several volcanos found in National Parks are presented in 3D.

### **Volcano Information and Glossary**

<http://volcano-pictures.info/index.html>

Great photo dictionary of volcanic terms, including rocks, structures, and more.

### **Smithsonian Global Volcanism Program**

<http://www.volcano.si.edu/index.cfm>

This program maintains a database of all known global volcanic activity over the last 10,000 years, and is building a petrologic database for volcanic materials. Accessed by geographic region through interactive maps.

### **Satellite Images of Volcanos**

<http://www.jpl.nasa.gov/radar/sircxsar/volcanoes.html>

NASA satellite images and discussion of images

### **Earth Wall / Earth Bulletin (American Museum of Natural History)**

<http://earthbulletin.amnh.org/>

Track current Earth events, including volcanic activity on the Earth Wall.

### **Virtually Hawaii - A Virtual Field Trip**

<http://satftp.soest.hawaii.edu/space/hawaii/virtual.field.trips.html>

Virtual interactive field trips are offered to the Big Island, as well as to Oahu, Maui, Molokai, and Kauai. Fun; a neat twist.

### **Volcanoes – Can we predict volcanic eruptions? (Annenberg Corporation)**

<http://www.learner.org/exhibits/volcanoes/>

Good pictures, simple text, nicely presented, many topics. These are not in depth. Great kids overview with connections to "more Info" Good interactives on raising and lowering the temperature for melting rocks. Good for middle school students.

### **How Volcanoes Work**

[http://www.geology.sdsu.edu/how\\_volcanoes\\_work/](http://www.geology.sdsu.edu/how_volcanoes_work/)

This site describes the science behind volcanos and volcanic processes ... and the *three* types of volcanos (with a few other subordinate types).

### **Exploring the Environment (ETE) (NASA The Classroom of the Future)**

<http://www.cotf.edu/ete/modules/volcanoes/volcano.html>

This Web-based learning module is password protected - but it is easy to get a password - anticipate ~ 1 week. Nicely done background and activities about Mt Hood, Pompeii, hazards, Yellowstone, etc. Teacher background, activities for middle to high school students.

### **Volcanic crisis in the Classroom**

<http://classes.colgate.edu/kharpp/volc%5Fcrisis/>

Geologists at Colgate University have designed a multi-week, cooperative learning activity for introductory, undergraduate volcanology classes that culminates in the simulation of a volcanic monitoring crisis.

### **Cake Batter Lava**

[http://www.spacegrant.hawaii.edu/class\\_acts/CakeLavaTe.html](http://www.spacegrant.hawaii.edu/class_acts/CakeLavaTe.html)

Students use cake batter to understand how different lavas flow and the structures that are created.

### **Gelatin Volcanos**

[http://www.spacegrant.hawaii.edu/class\\_acts/GelVolTe.html](http://www.spacegrant.hawaii.edu/class_acts/GelVolTe.html)

Jell-O is used to explore how lava flows in a volcano.

## **Making and Mapping a Volcano**

<http://ares.jsc.nasa.gov/ares/education/program/DestMars/destmarsLes3.pdf>

After having vinegar/baking soda eruptions, students use Play-Doh to mark where the lava flowed. In teams they examine the stratigraphy and map the flows.

**Ice Volcanos of Lake Superior** - <http://www.geo.mtu.edu/volcanoes/ice/>

**Mud Volcanos of Trinidad** - <http://www.gstt.org/teaching/mud%20volcanoes.htm>

**How to Cook with Lava** - <http://www.dolphinbayhilo.com/cook.html>. Do not try this in your backyard.

## **Volcanos in our Solar System**

**Volcanic Worlds: Exploring the Solar System Volcanoes**, Edited by Rosaly M.C. Lopes and Tracy Gregg, 2004, Springer-Praxis Publisher. Written by active volcanologists (all female!), this book provides an overview of volcanism across our solar system – and how scientists conduct volcanic research on Earth and other planets - for the science-enthusiastic public.

### **Year of the Solar System May 2011: Volcanism**

<http://solarsystem.nasa.gov/yss/display.cfm?Year=2011&Month=5>

## **Igneous Rocks**

<http://csmres.jmu.edu/geollab/Fichter/IgnRx/Ighome.html>

Igneous rocks! The site presents complex information in an interesting and understandable manner – at a variety of levels.

**Rocks!** Samples from Earth – and examples of what exists on Mars and the Moon (not the real thing – examples!) - can be ordered from science supply companies. The following are from Ward's Natural Science Company:

Basalt [http://www.wardsci.com/product.asp\\_Q\\_pn\\_E\\_IG0004711\\_A\\_Basalt](http://www.wardsci.com/product.asp_Q_pn_E_IG0004711_A_Basalt)

Vesicular Basalt (gas pocket "holes")

[http://www.wardsci.com/product.asp\\_Q\\_pn\\_E\\_IG0004713\\_A\\_Basalt+%28Vesicular%29](http://www.wardsci.com/product.asp_Q_pn_E_IG0004713_A_Basalt+%28Vesicular%29)

Flood Basalt [http://www.wardsci.com/product.asp\\_Q\\_pn\\_E\\_IG0004710\\_A\\_Basalt+%28Flood%29](http://www.wardsci.com/product.asp_Q_pn_E_IG0004710_A_Basalt+%28Flood%29)

Volcanic Breccia

[http://www.wardsci.com/product.asp\\_Q\\_pn\\_E\\_IG0004671\\_A\\_Breccia+%28Volcanic%29](http://www.wardsci.com/product.asp_Q_pn_E_IG0004671_A_Breccia+%28Volcanic%29)

Search also for granite, rhyolite, diorite, andesite, granodiorite, dacite, and gabbro.

**Lunar and Mars Soil Simulant** can be ordered from Planet LLC at <http://www.planet-llc.com/pages/store/simulant.htm>