LAUNCH APP AND PLAY!



 Scan the QR code to dowload Devar app.



Earth's surface and even out of it! Check yoursell in the volcano quiz.

3. Press play button to start the Al Volcano Experiment.



 Open Devar App and scan the same QR code or type Volcano Experiment to activate the AR volcano app.



4. Scan AR card with volcano to activate the AR game.

AR VOLCANIC ERUPTION EXPERIMENTAL KIT

WARNING – This set contains chemicals and apparatus that may be harmful if misused. Read cautions on individual containers carefully. Not to be used by children except under adult supervision.

WARNING – Not suitable for children under 8 years. For use under adult supervision. Contains some chemicals which present a hazard to health. Read the instructions before use, follow them and keep them for reference. Do not allow chemicals to come into contact with any part of the body, particularly the mouth and eyes. Keep small children and animals away from experiments. Keep the experimental set out of reach of children under 8 years old. Eye protection for supervising adults is not included.

ADVICE FOR SUPERVISING ADULTS:

- Read and follow these instructions, the safety rules and the first aid information and keep them for reference.
- 2. The incorrect use of chemical can cause injury and damage to health. Only carry out these experiments which are listed
- in instructions.

 3. This experimental set is for use only by children over 8 years.

 4. Because children's abilities vary so much, even within age
- groups, supervising adults should exercise discretion as to which experiments are suitable and safe for them. The instructions should enable supervisors to assess any
- experiment to establish its suitability for a particular child.

 5. The supervising adult should discuss the warnings and safety information with the child or children before commencing
- the experiments. Particular attention should be paid to the safe handling of acid, alkalies and flammable liquids. 6. The area surrounding the experiment should be kept clear of
- any obstruction and away from the storage of food. It should be well lit and wentilated and close to a water supply. A solid table with a heat-resistant top should be provided.
- Substances in non-reclosable packaging should be used up (completely) during the course of one experiment, i.e. after opening the package.

FIRST AID INFORMATION

Tel- (852) 2333, 6688

- Most important: In case of injury, get medical assistance immediately. 1. In case of eye contact: Wash out eye with plenty of water,
- holding the eye open if necessary. Seek immediate medical advice. 2.If swallowed: Wash out mouth with water; drink some fresh water, Do not induce vomiting. Seek immediate medical
- 3.In case of inhalation: Remove person to fresh air.
 4.In case of skin contact and burns: Wash affected area with
- plenty of water for at least 10 minutes.

 5. In case of doubt, seek medical advice without delay. Take the chemical and its container with you.
- 6.In case of injury always seek medical advice. Write the telephone number of your nearest Poison Control Center that can be reached in an emergency:

SAFETY RULES

- Read these instructions before use, follow them and keep them for reference.
- Keep young children, animals away from the experiment area.
- ars. Store this experimental set out of reach of children under 8
 - years of age.

 Clean all equipment after use.

 Make sure that all containers are fully closed and properly
- stored after use.

 Fusure that all empty containers and/or non-reclosable.
- Ensure that all empty containers and/or non-reclosal packaging are disposed of properly.
- packaging are disposed of properly.

 Wash hands after carrying out experiments.

 Do not use any equipment which has not been supplied with
- the set or recommended in the instructions for use.

 Do not eat or drink in the experiment area.
- Do not eat or drink in the experiment area.
 Do not allow chemicals to come into contact with the eyes or
- Do not allow chemicals to come into contact with the eyes mouth.

SODIUM BICARBONATE POWDER INGREDIENTS:

Name	ID	% by weight
Sodium bicarbonate NaHCO,	CAS Number 144-55-8	
	EC Number 205-633-8	99
Sunset Yellow food colouring	E110	< 0.5
Ponceau 4R food colouring	E124	< 0.5

DISPOSAL OF CHEMICALS:

The used chemicals can safely be flushed down the drain with plenty of water.







1. Assemble the 2-piece volcano model as shown (Fig. 1). You will need a flat surface to prepare your workstation. We don't recommend performing the experiment on your dining room table or other nice, polished surface without covering the surface with plastic sheeting.

2. Make sure the volcano cone model is dry before you begin, then open the bottle of sodium bicarbonate powder. Use the provided rod to push enough of the sodium bicarbonate powder into the crater (also called 'caldera') to fill it to about halfway.





3. Pour approximately 40ml vinegar into the plastic cup, and squeeze the dropper several times to draw vinegar into it until it is full.

4. Use the dropper to add about half the vinegar into the caldera/crater. Do not locate your hands or eyes directly above the model, but use the length of the dropper to help you work from the side. Bubbles will start to flow out over the edges of the caldera just like a volcanic eruption. Repeat the process, dropping more vinegar into the volcano to continue the eruption.

5. You can clean your model then make the volcano erupt again whenever you like. If you finish the sodium bicarbonate powder in the kit, you can repeat the experiment using baking soda from the kitchen instead (ask an adult first!). And you can drop in lemon juice or coke instead of vinegar [SCIENCE TIP: The reason why lemon juice, coke and vinegar all produce the same reaction is that they are all highly ACIDICI.

VOLCANO FACTS

Now you have seen a simulated eruption, but what really is a volcano?

A volcano is a vent in the surface of the Earth through which magma and associated gases and ash erupt; also, the form or structure, usually conical, that is produced by the ejected material.

Why do volcanoes erupt?

Volcanoes erupt when the pressure within the magma under the surface becomes stronger than the rocks that make up the volcano. That pressure comes both from the buoyancy of the magma and from gas bubbles inside the magma that want to expand. If the pressure can be released easily then you will have a peaceful eruption such as in Hawaii. If the pressure is released explosively then you have a dangerous eruption such as Pinatubo, El Chichon.

or Mt. St. Helens. How does a volcano erupt?

Step 1. Molten rocks, or magma, beneath the earth's surface rise due to high pressure.

Step 2. Magma pushes itself upwards through the cracks in the earth.

Step 3. Lava erupts from a volcano.

Step 4. Lava cools down and builds up outside the volcano. Step 5. A mountain forms.

How many volcanoes are there?

There are more than 1500 active volcanoes 80 or more volcanoes are found under the oceans

Where did the word volcano come from?

The word volcano came from name of a volcanic island called Vulcano in the Aeolian Islands of Italy, whose name in turn originates from the Roman god Vulcan, the god of fire.

Notable volcanic eruptions

Here are some volcanic eruptions in history you need to know:

Mt Vesuvius - Italy In 79AD, Mt Vesuvius erupted and destroyed the city Pompeii. The whole city was buried under the ash and

pumice from the volcano. It was one of the most famous eruptions. The remains of Pompeii is now one of the most popular tourist destinations in Italy.

Krakatau - Indonesia One of the most violent volcanic eruptions in recorded history happened in Krakatau of Indonesia in 1883.

The sound of the massive explosions was so loud that it can be heard in Australia. The volcano was obliterated

Huge amount of ashes and dust were emitted into the atmosphere and reduced global temperature for 5 years. More than 36,000 people were killed in the tsunamis during this eruption.

Bárdarbunga - Iceland

Bardarbunga, is a volcano located under Vatnaiökull, Iceland's most extensive glacier, Since September, 2014, it has been erupting continuously for more than 2 months. It is counts as the largest eruption in Iceland in over 100 years. It continues to eject huge amount of lava up to 17km long, and over 1 cubic kilometer in volume.

Mount Pelee - Martinique

Mount Pelee was a dormant volcano situated in the Caribbean island of Martinique. Its eruption in 1902 and the destruction that resulted, dubbed the worst volcanic disaster of the 20th century. Pyroclastic flows completely destroyed St. Pierre, a town of 30,000 people, within minutes of the eruption.



