

Please read the instruction manual carefully before use. Please retain this information for future reference.

10+
Years

VOLCANO

DIY EXPERIMENTAL DEVICE

© KMART AUSTRALIA LIMITED
KMART AUSTRALIA - 690 SPRINGVALE
RD, MULGRAVE, VIC 3170 AUSTRALIA.
KMART NEW ZEALAND - REGIONAL
OFFICE C/O KMART PAPATOETOE STORE
HUNTERS PLAZA, GREAT SOUTH RD,
PAPATOETOE, AUCKLAND, NEW ZEALAND.

KMART CUSTOMER SERVICE: 1800 124 125



WARNING: ONLY TO BE USED FOR CHILDREN OVER 10 YEARS. TO BE USED SOLELY UNDER THE STRICT SUPERVISION OF ADULTS THAT HAVE STUDIED THE PRECAUTIONS SUPPLIED WITH THE EXPERIMENTAL SET. WEAR THE GOGGLES AT ALL TIMES WHILE PLAYING WITH EXPERIMENTAL SETS.



CAUTION: CONTAINS SOME CHEMICALS WHICH ARE CLASSIFIED AS A SAFETY HAZARD. READ THE INSTRUCTIONS BEFORE USE, FOLLOW THEM AND KEEP 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. STORE THE CHEMISTRY SET OUT OF REACH OF SMALL CHILDREN. EYE PROTECTION FOR SUPERVISING ADULT IS NOT INCLUDED.



Instructions for Parents

- The area surrounding the experiment should be kept clear of any obstructions and away from the storage of food.
- It should be well lit and ventilated and close to a water supply. A solid table with a heat-resistant top should be provided.

IMPORTANT:

- Do read these instructions before use, follow them and keep them for reference.
- Do keep young children, animals and those not wearing eye protection away from the experimental area.
- Do always wear eye protection.
- Do store experimental sets out of reach of young children.
- Do clean all equipment after use.
- Do make sure that all containers are fully closed and properly stored after use.
- Do wash hands after carrying out experiments.
- Do not use equipment which has not been supplied with the set.
- Do not eat, drink or smoke in the experimental area.
- Do not allow chemicals to come into contact with the eyes or mouth.
- Do not replace foodstuffs in original container.
- Dispose of immediately.

ADULT SUPERVISION REQUIRED:

1. Read and follow these instructions, the safety rules and first aid information and keep them for reference.
2. Incorrect use of chemicals can cause injury and damage to health. Only carry out those experiments which are listed in the instructions.
3. This chemistry set is for use only by children over 10 years.
4. 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, alkalis and flammable liquids.
6. The area surrounding the experiment should be kept clear of any obstructions and away from food. It should be well lit and ventilated and close to a water supply.
7. A solid table with a heat-resistant top should be provided.
8. Dispose of contents/ container to a household waste recycling center as hazardous waste except for empty containers which can be disposed of in the dustbin. You may contact with your local council for details.

First Aid Instructions:

1. In case of eye contact:Wash out eye with plenty of water,holding 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 advice.
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 5 minutes.
5. In case of doubt seek medical advice without delay.Take the chemical together with the container with you .
6. In case of injury always seek medical advice.

⚠ WARNING !



















Only for use by children over 10 years old. To be used solely under the strict supervision of adults that have studied the precautions given in the experimental set.
Use with care and only under supervision of an adult.

⚠ Product Introduction:

What causes the volcano eruption? Originally, the interior of the earth is fulfilled with hot magma and swollen bubble. Under extreme pressure, the magma will break through the earth from a very weak point and spout out. That causes the volcano eruption.

This is one DIY experimental device about Volcano Eruption. Children can witness the whole process of a volcano eruption and know its working principle through doing the experiment themselves with adult supervision.

⚠ Parts List:

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Sodium bicarbonate (NaHCO_3) 18g



Qty

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P8

Citric acid ($\text{C}_6\text{H}_8\text{O}_7$) 18g

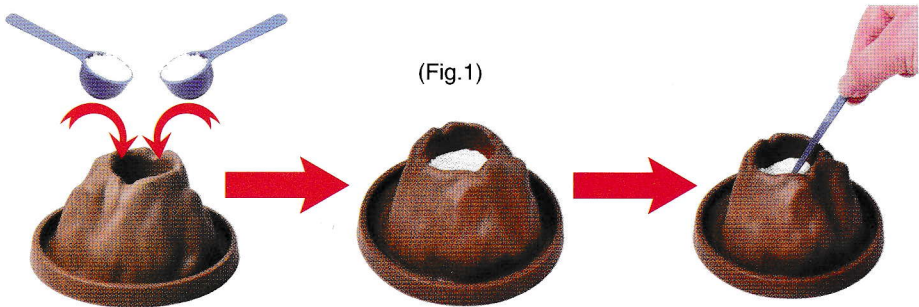


Qty

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Let's start the volcanic eruption!

1. Make sure you have put on your safety goggles. Make sure the volcano model is dry. Put same amount of sodium bicarbonate and citric acid powder inside the volcano crater and stir to mix (Fig.1). You can start by using 5g of each chemical. Use more for a more dramatic effect!



(Fig.1)

2. Pour some red food colouring (not included) into the plastic cup and use the plastic dropper to draw red food colouring (not included) into the dropper until it is full (Fig. 2).



(Fig. 2)

3. Use the plastic dropper to drop the red food colouring (not included) step by step to the volcano model (Fig.3), do not place your hand directly above the model.



(Fig. 3)

4、 Bubbles start to overflow out of the volcano crater just like a volcanic eruption(Fig.4)!



(Fig. 4)

5、 Throw contents away in right place after the volcanic reaction, clean the model with plenty of water.Dry and repeat.

NOTICE:

The above chemicals are classified as Hazardous Materials. Please observe the following statements(Risk and Safety advice).

Citric acid($C_6H_{10}O_8$ CAS Number 77-92-9, EINECS Number 2010691):

R36: Irritating to eyes. R37: Irritating to respiratory system. R38: Irritating to skin

Sodium bicarbonate ($NaHCO_3$ CAS Number 144-55-8, EINECS Number 2056338):

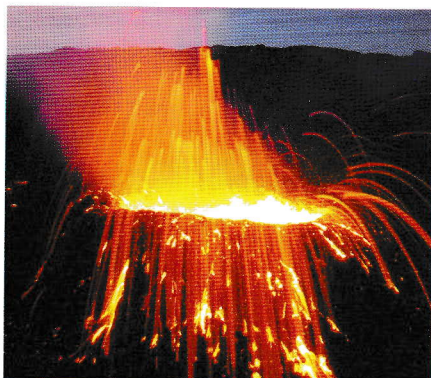
R34: Causes burns. S24: Avoid contact with skin. S25: Avoid contact with eyes.

Storage of chemicals:

Avoid direct sunlight. Keep away from wet or high humidity.Do not mix them in a closed container.

What is a volcano?

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, 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 do volcanoes erupt?

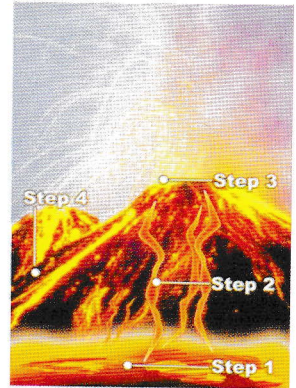
Step 1: Molten rocks, or magma, beneath the earth's surface rise due to high pressure.

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.



The hazard and benefit of a volcano

The fierce volcano eruption may swallow and even destroy the large tracts of land, burning a great number of lives and property into ash. In the meantime, the ash that the volcano has spouted is the best natural fertilizer. For example, the mulberry tree grows up very well in Fuji Mountain and it is good for sericulture; Grapes are rich and fruitful in the Vesuvius volcano area. Further more, the landscape in the volcano area is quite peculiar, which makes it become a tourist attraction.

