



# HIIKOI PUIA GEOLOGICAL WALK

PRE - VISIT  
INFORMATION

## General:

Date of eruption: Through carbon testing it was estimated that the maunga last erupted 20,000 years ago. However, new argon testing has shown that it actually erupted 70,000 years ago.

The mountain currently sits at 106m above sea level however, every day this number increases.

Te Pane O Mataoho is one of the largest scoria cones out of the 53 volcanic cones in Auckland's volcanic field.

Geologist claim Maangere Mountain Erupted in the following sequence:

1. A bubble of magma started forcing its way through the crust

2. This magma met ground water

3. Violent explosions took place and a large explosion crater formed with a low tuff ring;

4. Fire fountaining followed with lava bombs blasting up into the air and forming steep mounds

Crumb Bomb, Bread crust Bomb, Lense Bomba and Almond Bomb using Landmarker on the mountain.

5. Large amounts of lava came to the surface and flowed outwards through a breach in the crater; heated up and semi-fluid lava pushed upwards forming a tholoid in the middle of the main crater;

6. New vents blasted out more scoria within the crater; and

7. One vent in the crater rim erupted very violently to produce a second, very steep crater • Lava fields from Te Pane o Mataoho spread in all directions except the south-east. They cover about 5 square kilometres. Lava caves and tunnels are found in and around the mountain as well as volcanic ash which spread in all directions except the south for about 8 kilometres. The soil became very fertile and was used for extensive gardening

## Vocabulary:

**Lava flow** - Hot, melted rock that flows from a volcano or other opening in the surface of Earth

**Carbon dating** - A technique used by Scientists to answer many questions about the past and pinpoint when it happened to understand how and why it happened

**Scoria** - Volcanic rock formed by lava reaching the surface. Gases are released which form its small holes.

**Volcanic** - Anything of, related to or produce by a volcano magma Hot, melted rock material within the Earth

**Crust** - Earth's surface layer of solid rock explosion crater

**Tuff ring** - Any ring-like low-profile small volume volcanic edifices with wide craters where their crater floor is above the syn-eruptive surface.

**Fire fountaining** - An continuous explosion of magma

**Lava bombs** - Different volcanic rocks formed during fire fountaining stage

**Breach** - Created when lava escaped from the crater

**Tholoid** - A build up of magma above the surface

**Vent** - Where gases were released

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