They died where they stood. Violently, with almost no warning. Wealthy women in their jewels. Armed soldiers. Babies. Almost 2,000 years ago a seaside town in southern Italy had the misfortune to be in the shadow of Mount Vesuvius – one of Europe's active volcanoes – at the wrong time. The 16,000 inhabitants of the Roman towns of Herculaneum and neighbouring Pompeii who were buried beneath 30 metres of dust on an August night in ad 79 bear silent witness to the destructive force of volcanoes.  
  
Objects of terror and fascination since the beginning of human time, volcanoes take their name from Vulcan, the Roman god of fire. Today there are some 1,350 active volcanoes in the world: At any given moment, somewhere between one dozen and two dozen are throwing out ash and molten rock from the earth's core.  
  
Approximately one billion people live in their dangerous shadows. Experts expect the number to rise. The rapid growth of population, greater competition for land and an increase in urban migration are driving more and more people to settle around volcanoes, significantly increasing the potential loss of life and property in the event of eruptions.  
  
Despite major advances in technology, the ability to predict when a volcano might erupt remains imprecise. But meeting the challenge is vital because volcanoes are 'people magnets'. A recent study identified 457 volcanoes where there are one million or more people living within 100 kilometres. Many of these volcanoes – several in Indonesia and Japan, for instance – have surrounding populations greatly exceeding one million. Today, 3.75 million people live within 30 kilometres of the summit of Mount Vesuvius in the southern Italian city of Naples. 'What do they do if it starts erupting? No one can imagine evacuating a city the size of Naples,' said Dan Miller, chief of the US Geological Survey's Volcano Disaster Assistance Program.  
  
Persuading people to move permanently out of hazard zones is not usually an option. Many of the land-use patterns are long established, and people just won't do it', Miller went on. 'The only thing you can do is have systematic volcano monitoring to detect the earliest departure from normal activity.'  
  
Nowadays it is easier to predict volcanic activity, but evaluating the threat of eruption is frequently still difficult. Mexico City knows the problem well. The city, which has a population of more than twenty million, lies within 60 kilometres of the summit of Popocatepetl, a volcano which has erupted at least fifteen times in the last 400 years. The flanks and valleys surrounding 'Popo' have been evacuated several times since 1994 in response to earthquakes and eruptions of volcanic ash and plumes of steam. Each time the mountain has settled down without a major eruption, although some activity has continued. Yet when, or if, a major eruption will occur next remains unknown.  
  
'There could be weeks, months, or years between the time a volcano shows some activity and the time of its eruption,' said Miller. 'It may never erupt. Most people are willing to be evacuated once. But if nothing happens, the loss of credibility could cause people to ignore future warnings.'  
  
Volcanic eruptions, when they do come, are sometimes relatively slow and quiet. There was no loss of life when the world's largest active volcano erupted in 1984. The people who lived in the proximity of Hawaii's Mauna Loa volcano had plenty of time to get out of the way when it erupted in 1984. Its lava crept down the slope at about the speed of honey. At other times the eruption is sudden and violent, and evacuation unfortunately comes too late.

**Read questions 1-6 below. Then, read the article again and choose the correct answers.**  
  
1. What happened when Mount Vesuvius erupted in AD 79?

1. The rich managed to escape.
2. It covered many towns with dust.
3. A few people were killed.
4. People were unprepared.

2. What do experts think will happen in the future?

1. More volcanoes will become active.
2. People will farm in volcanic areas.
3. More people will set up home near volcanoes.
4. Around one billion people will die in volcanic eruptions.

3. According to the article, what is the present situation regarding volcanic eruptions?

1. Eruptions are most likely to happen in Indonesia and Japan.
2. Technological breakthroughs have led to accurate predictions.
3. Most large cities have no appropriate evacuation plans in place.
4. People will be less affected than before.

4. What does the article say about Popocatepetl?

1. There was a major eruption in 1994.
2. There have been no eruptions in the last 20 years.
3. Nobody can say whether there will be a major eruption in the future.
4. People who live nearby are fed up with being evacuated.

5. Why was the eruption of Mauna Loa less dangerous?

1. People had been evacuated from the area beforehand.
2. People were able to keep ahead of the lava.
3. Scientists had warned people well in advance.
4. It was not a major eruption.

6. What would be the most appropriate title for this article?

1. Volcanoes: Sleeping threat for millions.
2. Volcanic eruptions and other natural disasters.
3. Volcanoes: advances in their prediction.
4. Volcanic eruption: A study of volcanic behaviour.

**Word building**  
  
1. Underline all the nouns in the text related to these root verbs. How are they similar?  
  
*Compete, erupt, evacuate, fascinate, migrate, populate*  
  
2. Underline all the adjectives in the text related to these root verbs and nouns.  
  
*act, danger, destroy, system, volcano*  
  
  
3. Complete these sentences with an appropriate form of a word from the list.

act, devastate, fascinate, migrate, science, system

a. A great deal of \_\_\_\_\_\_\_\_\_\_research is being carried out on volcanoes  
b. The early nineteenth century was a period of mass \_\_\_\_\_\_\_\_\_\_from Ireland.

c. Not long after the tsunami struck, a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ search for survivors began.

d. I have never really understood the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ some people have for tornadoes.

e. The recent hurricanes caused widespread \_\_\_\_\_\_\_\_\_\_\_\_\_ in the areas affected.

f. Nocturnal animals, like foxes, are \_\_\_\_\_\_\_\_\_\_\_ at night.