

Learning game

"Trip around the Pacific Ring of Fire"

You start a journey around the Pacific Ocean to get to know the famous volcanoes. You need to complete various tasks that you perform using the geographical atlas and self-knowledge.

1. Start a journey from Asia. You are at a point on the Kamchatka Peninsula of the geographical coordinates: $56^{\circ} 04'N$, $160^{\circ} 38'E$. It is a volcano.....
2. You flow south until you reach the Land of the Rising Sun, which is,
This volcano is the highest peak of the state as well as it is a place of many pilgrimages. It occupies a special place in sintoizmie (the official religion of the country), as well as in Buddhism. It is
3. You reach the island of Luzon, where is located the capital of the Philippines. In 1991 the Volcano eruption took place, which caused a reduction in the average air temperature on Earth in 1992 approx. $0.5^{\circ}C$. Interestingly, the volcano was considered to be extinct.
4. You are going to get to the Indonesian islands, where 73 000 years ago was one of the largest known volcanic disasters. Currently, the site of super eruption is known as the largest lake in the Malay Archipelago. Give the name of the island and the volcano, which takes its name from the Lake.
 - a)
 - b)
5. The volume of products eruption of the Indonesian volcano amounted to about 3 000 km^3 . Using the Volcanic Explosivity Index volcanologists have identified the index $VEI = 8$ (the highest degree awarded eruptions that released more than 1 000 km^3 of lava and ashes). Give the possible volume of the products of the Vesuvius' eruption in 79 AD, knowing that the index $VEI = 5$, and each point on the scale represents a

tenfold increase explosiveness explosion. Name the three Italian cities that were destroyed during the explosion.

a)

b).....

c)

6. You change the azimuth and moving to the west coast of the South American continent. There are many volcanoes in the Andes that are the result of subduction of two tectonic plates: and One of them is located in southern Peru

7. Continuing along the coast you get to the state which name is closely linked to its geographical location. It is This volcano is located in the central part of the country with a height of 5897 m above the sea level and it is called

8. You reach Colombia. There is a volcano, whose eruption in 1985 caused the death of 25000 people (it is the second largest in terms of number of victims, the volcanic catastrophe in the twentieth century).

9. Before visiting USA you travel to Mexico. Local people tell you about the volcano, which was directly in the field of one of the farmers, without any specific explosion announcements. Its eruption lasted nine years, until 1952. You are at a point of $19^{\circ} 29'35''$ N, $102^{\circ} 15'04''$ W . What is the name of the volcano?.....

10. You end up your journey in the Cascade Mountains. The eruption took place in 1980 The name of the volcano is Its strength has been estimated to explosion of 500 nuclear bombs (100 million tons of TNT).