MR. NUSSBAUM
LEARNING + FUN

The Pacific Rim of Fire Reading Comprehension
Name _____

The Pacific Rim of Fire is a horseshoe shaped region along the shores of the Pacific Ocean named for its numerous active volcanoes. It is the most volcanically active location in the world, and is home to 75% of the world's active and dormant volcanoes. It is also where 80% of the earth's earthquakes occur. California, Mexico, Alaska, Canada, Russia, Japan, Ecuador, Peru, Bolivia, Argentina, and Chile are among places within the Pacific Rim of Fire. Of the 25 largest volcanic eruptions to have occurred in the last 11,700 years, 88% of them occurred within the Pacific Rim of Fire. The1980 eruption of Mt. St. Helens, in 1980, within the Pacific Rim of Fire, was the most powerful and deadliest volcanic eruption in American history. The South American nation of Bolivia is home to the world's greatest number of active volcanoes. In 1991, the eruption of Mt. Pinatubo in the Philippines was so powerful that its effects were felt around the world. It was the second most powerful eruption in modern history.

The volcanoes at the Pacific Rim of Fire are formed where giant oceanic plates meet and collide with continental plates. The movements and collisions of these massive plates is called plate tectonics. When these plates collide, one of them goes underneath the others. Since the Pacific Plate is older, colder, and denser than the surrounding plates, it subducts (goes underneath) the other plates during this process. When this happens, the Pacific Plate brings a lot of water down into the earth with it, making the crust and upper part of the mantle easier to melt. This molten rock (magma) then rises through the earth's crust and creates volcanoes! This process also creates a lot of earthquakes as the Pacific Plate scrapes against the plates it subducts.

1. **Which question is NOT answered?**
    a. What is the shape of the Pacific Rim of Fire?
    b. Why do earthquakes occur in the Pacific Rim of Fire?
    c. What was the most recent eruption that occurred in the Pacific Rim of Fire?
    d. Do major volcanic eruptions actually occur in the Pacific Rim of Fire?

2. **Which of the following statements best summarizes the first paragraph?**
    a. Currently and historically, the majority of the world's volcanic eruptions and major volcanic eruptions occur within the Pacific Rim of Fire
    b. Currently and historically, a portion of the world's volcanic eruptions occur within the Pacific Rim of Fire
    c. Although most of the world's volcanic eruptions historically occurred within the Pacific Rim of Fire, currently only a small portion of such eruptions occur there
    d. Currently, most of the world's major volcanic eruptions occur within the Pacific Rim of Fire, but there is no evidence that most of the world's past eruptions occurred there

3. **How are plate tectonics related to volcanic eruptions?**
    a. Plate tectonics result from volcanic eruptions
    b. Volcanoes are a cause of plate tectonics
    c. Volcanoes are formed through plate tectonics
    d. Eruptions are measured through plate tectonics

4. **What was the effect of the eruption of Mt. Pinatubo in 1991?**
    a. It changed the Philippines forever
    b. It was the second largest eruption in modern history
    c. It effected the region's plate tectonics
    d. The passage doesn't specify, but there were "effects" felt worldwide.

5. **Which of the following could be considered a "side-effect" of the creation of volcanoes?**
    a. earthquakes
    b. hurricanes
    c. subduction
    d. plate tectonics

6. **Which of the following sentences describes a contrast?**
    a. The Pacific Rim of Fire is a horseshoe shaped region along the shores of the Pacific Ocean named for its numerous active volcanoes.
    b. California, Mexico, Alaska, Canada, Russia, Japan, Ecuador, Peru, Bolivia, Argentina, and Chile are among places within the Pacific Rim of Fire.
    c. In 1991, the eruption of Mt. Pinatubo in the Philippines was so powerful that its effects were felt around the world. It was the second most powerful eruption in modern history.
    d. Since the Pacific Plate is older, colder, and denser than the surrounding plates, it subducts (goes underneath) the other plates during this process.

7. **Which of the following best explains the formation of volcanoes in the Pacific Rim of Fire?**
    a. Volcanoes in this region are formed when a continental plate slips beneath an oceanic plate, causing magma to rise through the surface
    b. Volcanoes in this region are formed when an ocean plate slides underneath a continental plate causing magma to rise through the surface
    c. Volcanoes in this region are formed when a continental plate rises above an oceanic plate, causing magma to rise through the surface
    d. Volcanoes in this region are formed when an oceanic plate rises above a continental plate, causing magma to rise through the surface