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At the end of the Triassic period 200 million years ago, there was a mass-extinction event that caused the extinction of more than half of all living species. It was this extinction event that allowed dinosaurs to become the dominant species for the next 145 million years. We do not know exactly what happened that eliminated so many species in a relatively short period of time, but there are several possible explanations. One theory involves the decline of sea levels. Near the end of the Triassic period, sea levels were fluctuating. When sea levels fall, the habitats for ocean populations that live in the shallows and land species that live on the coast are destroyed. The destruction of coastal and shallow-ocean species would have had a profound effect on food chains worldwide, leading to mass extinctions. Another theory involves massive climate cooling. The end of the Triassic period was marked by widespread volcanic activity. The volcanoes released large amounts of sulfur dioxide (SO2). A rise in atmospheric SO2 is known to cause a lowering in global temperatures. Such climate change could have devastated many species and led to the extinctions. The third theory involves an asteroid strike. Asteroids (objects from outer space) occasionally collide with Earth. When an asteroid hits Earth' s surface, it often displaces large amounts of soil and crushed rock, leaving behind a depression, or crater. The displaced debris is thrown up into the atmosphere where it can block out sunlight for many months or even a few years. A sufficiently massive asteroid impact at the end of the Triassic period may have blocked sunlight long enough for most plants to die and many animal species to then starve.

Now listen to part of a lecture on the topic you just read about. While the theories given in the reading may sound plausible, none of them is a good explanation for the mass extinction at the end of the Triassic period. First, sea level change. While scientists agree that the sea level fluctuated at the end of the Triassic period, often going down, this isn' t a good explanation for the extinctions. Coastal and shallow-water ecosystems are usually capable of adapting to environmental changes that happen gradually. The fall in sea level at the end of the Triassic was quite gradual, taking place over several million years. The change would have to be much more sudden to have a widespread negative impact on the species in those ecosystems. Second, global cooling. It' s true that sulfur dioxide can lower global temperatures. But that can only happen during a relatively short period when the sulfur dioxide that' s been released by volcanoes is actually still present in the atmosphere. In a matter of a few years, the excess SO2 is usually cleared out of the atmosphere. Basically, the SO2 combines with water in the atmosphere and falls back on Earth as rain. It doesn' t seem likely, therefore, that even if there was a lot of volcanic SO2 released at the end of the Triassic, it stayed in the atmosphere long enough to cause mass extinctions. Third, very few scientists believe the asteroid theory because we haven' t found any asteroid crater—the site where the asteroid hit—that can be dated to the time when the mass extinction occurred. We did find a crater, but it dates to about twelve million years before the extinction. That' s just too long before the extinction to have anything to do with it.

Summarize the points made in the lecture, being sure to explain how they challenge the specific theories presented in the reading passage.

Do you agree or disagree with the following statement? In the past it was easier to identify what type of career or job would lead to a secure, successful future. Use specific reasons and examples to support your answer.