

Survival of the Fittest



Ages	Subject	Topics	Resources
7-11 years	Science Art & Design	Fossils Time	Mini white boards & pens, Jurassic Creature Cards & worksheets from the activity pack

The history of the Earth is characterised by several mass extinction events which have been triggered by major catastrophes. The most famous mass extinction event occurred at the end of the Cretaceous period about 65 million years ago when a massive comet or asteroid hit the Earth. The force of the impact caused a huge amount of debris to be expelled into the Earth's atmosphere blotting out the sun, causing temperatures to fall dramatically and reducing the ability of plants and plankton to photosynthesise. This forced winter was also exacerbated by volcanic activity which contributed poisonous and noxious gasses into the Earth's atmosphere. It is estimated that 75% of life on Earth became extinct including large dinosaurs on land and the giant marine reptiles in the seas. In this activity, children are assigned an animal from a modern-day environment and using modern day scenarios test whether their animal can survive or adapt. This leads onto looking at Jurassic creatures and evaluating how and if they have adapted and survived to the present day. If they have become extinct, children are asked to explore why that is.



Teachers' Materials

Children will need access to computers to research websites or encyclopaedias where they can find out about their nominated creatures. They will also need to use these creatures in the second half of the activity to compare to their Jurassic age creature.

Practicalities

The activity can take place safely in a classroom environment.

Discussions

When the asteroid hit the Earth 65 million years ago, it left behind a layer of Iridium in the rock record. This can be traced as a marker for the K-T (Cretaceous-Tertiary) mass extinction boundary since the element Iridium is so rare on Earth but common in asteroids. The devastation caused by the asteroid also provided evolutionary opportunities. What immediate impact would the lack of sunlight have on life? What types of animals would succeed and survive? The fossil record shows us that omnivores, insectivores and carrion-eaters survived the extinction event, perhaps because of the increased availability of their food sources. No purely herbivorous or carnivorous mammals seem to have survived. Rather, the surviving mammals and birds fed on insects, worms, and snails, which in turn fed on dead plant and animal matter.

Extensions and Adaptations

This activity could be extended and adapted into a PE lesson where children could act out their animal behaviours and act out their roles during a pretend mass extinction event. Another extension could be a greater study of the Cretaceous mass extinction event. Mammals that used burrows or lived in aquatic environments would have been shielded from the intense heat that briefly followed the impact. Once the heat was off, mammals could come back out and make the most of the remaining food resources. Children could storyboard this event or perhaps write a short story of life after the asteroid hit the Earth.

Links to Other Resources

Survival of the Fittest links well to the following resources:

- [Jurassic Coast Timeline](#)
- [Jurassic Food Webs](#)
- [Dinosaur Top Trumps](#)