Taung Child Skull Examination and Mystery Worksheet

1. This is the Taung Child skull. It was discovered by Raymond Dart in 1924. Dart had never seen a skull like this one before, so he spent a lot of time studying its features to try to learn about how it played into human evolution. The Taung Child skull is considered an important fossil showing the “missing link” between apes and modern humans. Today, we’re going to examine the skull and draw conclusions of our own.

2. One of the first features Dart examined was the location of the foramen magnum. The foramen magnum is the hole in the skull that the spine passes through to connect to the brain. By finding the foramen magnum, you can tell if an animal walked on two legs or four! Use Notes to label each skull’s foramen magnum and take a photo. If the foramen magnum is on the bottom of the skull, would you expect the animal to walk on two legs or four? What about if the foramen magnum is on the back of the skull? Explain your reasoning.

3. Even though the Taung Child skull is incomplete, can you determine where the foramen magnum would be? Use a Note to label the skull’s foramen magnum and take a photo. Do you think the Taung Child walked on two legs or four? Why?

4. Next, let’s examine the braincase of the Taung Child skull and compare it to a modern human’s braincase and a gorilla’s. Describe the similarities and differences among the braincases of a modern human, the Taung Child, and the gorilla. Which skull has the largest braincase? Can you draw any conclusions about brain size based on the size of the braincase?
5. Now let’s examine the Taung Child’s teeth to see if it was an herbivore, carnivore, or omnivore. Take a close look at the skull’s teeth. Does it only have molars? Only sharp teeth? A mix of both? Do you think the Taung Child was an herbivore, carnivore, or omnivore? Why? What kind of diet did the Taung Child have?

6. One of the major discoveries connected with Taung Child skull was figuring out what predator had killed the child. Dart believed the child was killed by another Taung person. Dart was researching this skull during the time after World War I, so he was very pessimistic about human nature and thought that violence may have been a trait of our species. Other scientists thought the Taung Child must have been killed by a large cat. What kind of predator do you think killed the Taung Child? Do you agree with Dart or other scientists? Do you have another idea on what may have killed our ancestor?

7. No one had any definitive proof as to what creature had killed the Taung Child. The mystery lasted until 1994 (20 years after the fossil’s discovery!), when a professor named Lee Berger happened to witness the clue that propelled him to solve the mystery of what killed the Taung Child.

8. Berger was relaxing at a dig site after a long day of excavating fossils when he saw some vervet monkeys come down a hill. One of the monkeys sounded an alarm call because a huge black eagle swooped down and attacked the monkeys. The eagle picked up one of the monkeys and carried it away. Berger knew where the eagles’ nest was, so he hiked there to see what he could discover. He found a pile of bones underneath the nest, including bones from vervet monkeys, small baboons, and small antelope. Many of the skulls and bones had markings from the eagle’s talons.

9. Berger became very interested in how eagles treat their prey and the kinds of markings that they leave on the bones. One day, he was reading an academic paper about eagles and learned that they often reach into their prey’s eye sockets to pluck out the eyes and get at the juicy brain. Doing this often leaves holes in the eye sockets of the prey.
10. Berger wondered if the Taung Child skull had these same beak markings and rushed to the lab to investigate the skull. Berger found the telltale marks of an eagle’s beak in the eye sockets of the Taung Child, proving that an eagle was the predator that killed the Taung Child. Examine the Taung Child skull and see if you can locate an eagle’s beak marks. Label them using a Note and take a photo.

11. Did you predict that an eagle would be the predator? What curious questions do you have about the Taung Child skull?