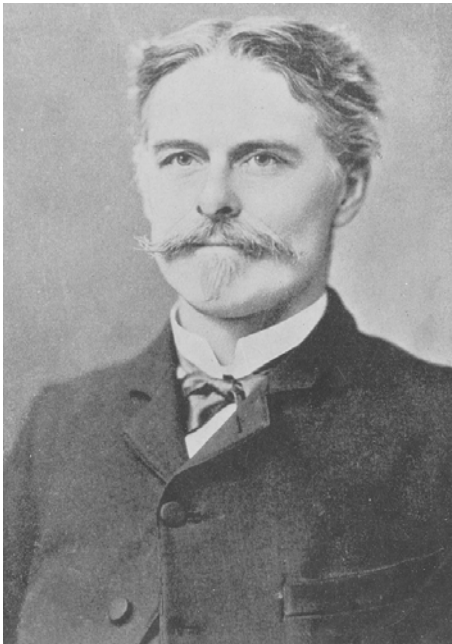


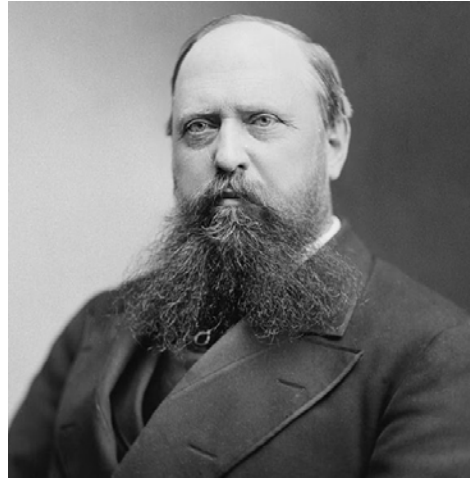
Name:

Edward Drinker Cope was born on July 28, 1840 in Philadelphia. His family was wealthy and planned for him to become a farmer. However, Cope was interested in science. As a child and teenager, he was never formally trained in science but instead taught himself. As a young adult, he studied under Joseph Leidy who was responsible for discovering the first dinosaur bones in America. He became a zoologist and paleontologist. Cope has been described as passionate and eccentric. It is claimed that he had a bad temper and often got into fights. Cope died at the age of 56.



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THE RIVALRY



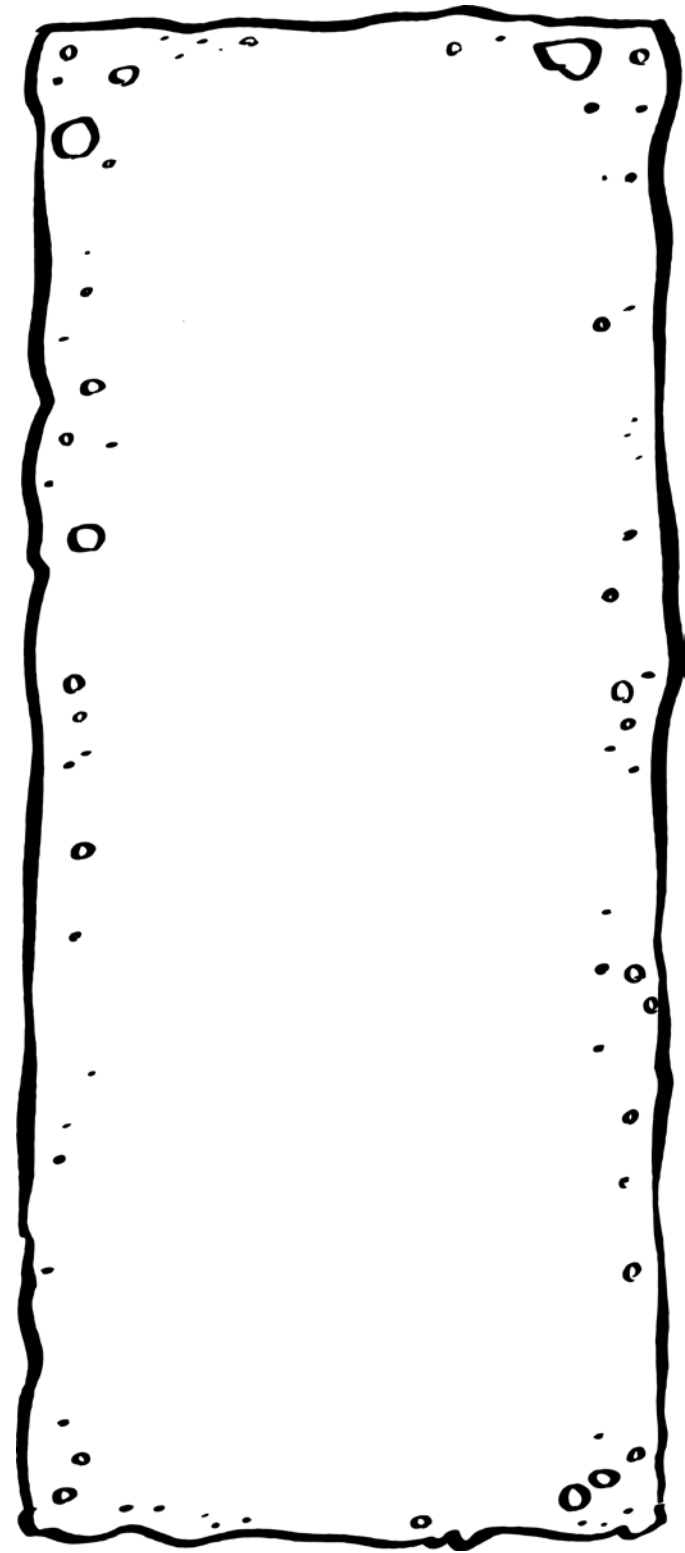
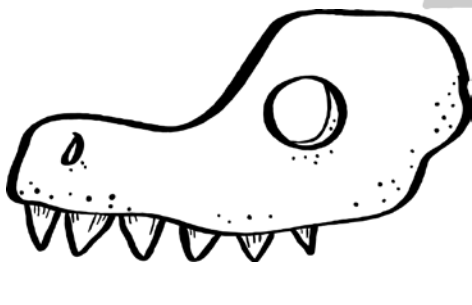
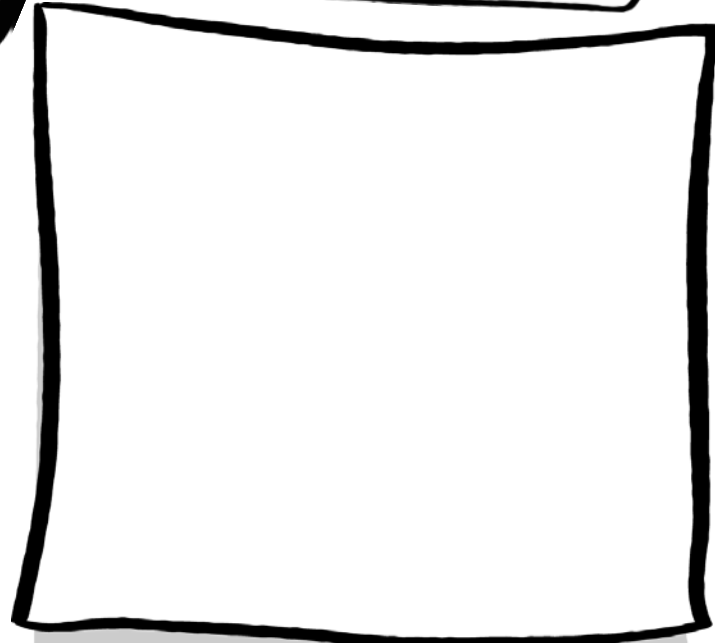
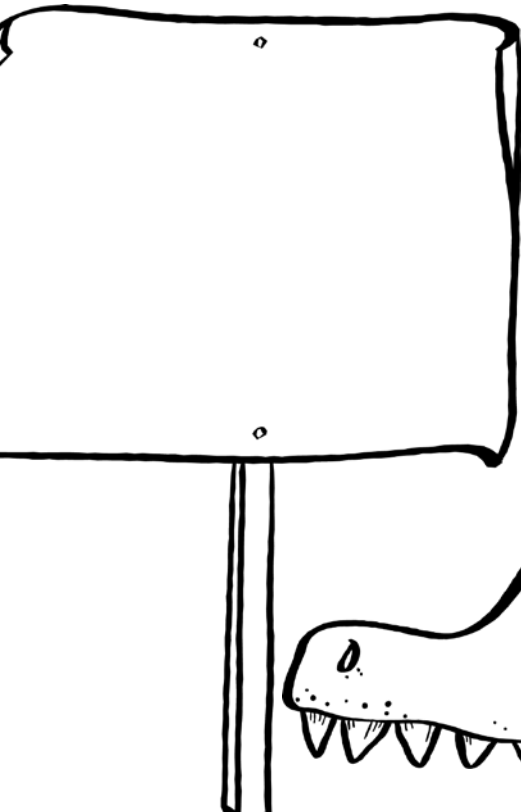
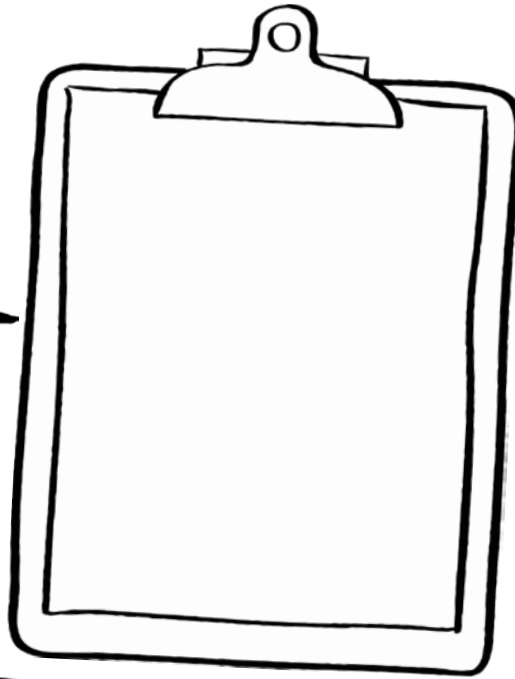
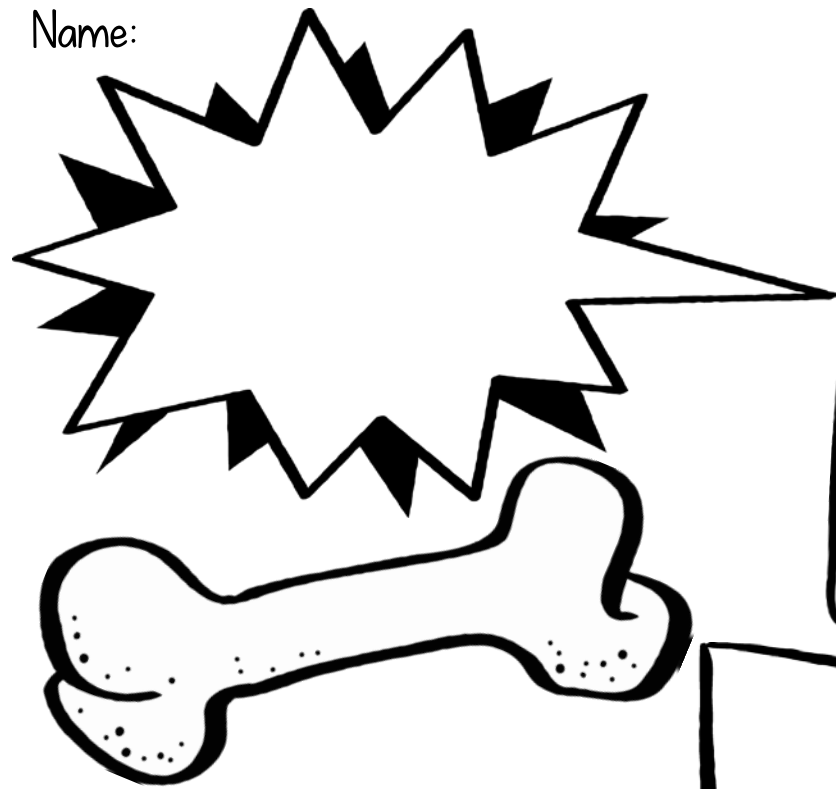
Othniel Charles Marsh was born on October 29, 1831 in New York. He came from a modest family and earned a scholarship to Yale University. He became an American paleontologist who made great contributions to the study of fossils. Upon his uncle's death, he inherited \$100,000 which allowed him to fund his passion for fossil hunting. Marsh was known to be a loner and very suspicious of people - he would even hide his fossils from others. He was a cautious worker who was often jealous and territorial over his bones. Marsh died of pneumonia in 1899 with only \$186 in his bank account.

What words describe Cope?

What words describe Marsh?

How are the two men similar?

Name: _____



Name:

THE GREAT DINOSAUR RUSH BEGINS

Who knew that dinosaurs could lead to two brilliant and wealthy paleontologists losing all of their money and destroying their reputations? The race to be the greatest paleontologist led to the destruction of Edward Drinker Cope and Othniel Charles Marsh.

What caused this to happen? A hunt for dinosaur bones led to an intense rivalry between the pair who were once friends. The two met while studying paleontology in Germany in 1864 and their friendship began to grow. They would write to each other, share fossils, and each even named a fossil discovery after the other.

How did their relationship begin to fall apart you are wondering? Two major events are responsible for the development of this feud. Remember the fossils they named after each other as a sign of admiration? It turns out that the fossil Marsh had found and named was discovered at a dig site first discovered by Cope. Marsh went behind Cope's back and made a deal with the owner of the dig site to obtain all fossils found there. Cope was furious when he found out about this!

Then, Cope invited Marsh to see a 35-foot-long fossil he had found and assembled (*Elasmosaurus playturus*) at the Academy of Natural Sciences in Philadelphia. Marsh found a mistake - sharing with Cope that the head and the tail were in the wrong spots. Instead of talking about it, they began arguing and asked Joseph Leidy to assist. In the end, it was decided that Marsh was correct, embarrassing Cope. Regrettably, he had already published a paper with an illustration of the fossil which he now knew to be incorrect. After this incident, they began arguing through letters and talking poorly about each other in the *American Journal of Science*.

The Bone Wars had started! Over a period of 30 years, the two would battle to see who could name the most new dinosaur species.

*Evidence suggests that Joseph Leidy was positioned to be the third member of this rivalry. He did not have the money to fund fossil hunting that compared with that of Marsh and Cope. He eventually quit paleontology.

They were in constant competition! In the 1870s, more railways were being built throughout the western United States, making travel easier. Marsh would take Yale students with him to dig for fossils, paying for military escorts to help keep the group safe from the Sioux and other tribes. Unfortunately for the people he hired, he would often forget to pay them.

Once Cope heard about Marsh's work, he began assembling his own expeditions. The area where he often worked was a desert, there was a lack of water and food and an abundance of heat and direct sunlight.

Bitter battles! As news of new fossil discoveries would reach Cope and Marsh, they would race to be first to the site. They would set up quarries right next to each other, attempt to bribe employees, and even spy on their opponent. There are stories of one team locking the other out of the train station so that they could not transport their finds. At one point, rocks were thrown back and forth. When they would finish digging in a quarry, they would use dynamite to destroy the remains - just in case they had missed a discovery.

Often, Marsh was the leader in the race. He had more money and political connections. He also had funding from Yale. By this time, Cope was struggling with funding. He had spent a great deal and had no new sources for his projects. At one point, he invested in a silver mine in New Mexico that led to him losing everything. His new goal became to destroy Marsh.

Over the years, Cope had collected evidence of improper scientific practices completed by Marsh. He gave his findings to a journalist and an article titled "**Scientists Wage Bitter Warfare**" was published. The two went back and forth until both of their reputations had been destroyed.

One positive that came from this rivalry is that they fueled an interest in dinosaurs among people across the country. Before this competition, dinosaurs were not popular. This changed as a result of their discoveries and battle. Cope is said to have discovered 56 new dinosaur species while Marsh can claim 80 new discoveries.

On a negative note, the speed with which they uncovered fossils resulted in damage to many fossils. They also incorrectly named and assembled many of their finds. Across the world, they caused American paleontologists to earn a poor reputation.

Name:

DISCOVERIES

Some of the most well-known dinosaurs Marsh and Cope discovered are below. Research to find facts to share about each. Include who discovered the dinosaur.

allosaurus	apatosaurus	brontosaurus
diplodocus	stegosaurus	triceratops

What do you predict you will learn about in this article? Use the bold words to help you make your predictions.

Write a question that begins with who.

Write a question that begins with when.

Write a question that begins with where.

Write a question that begins with why.

Write a question that begins with I wonder.

Find a word that you had to think about the meaning of.

Look at the question in bold: How did the relationship begin to fall apart you are wondering? Answer this question.

Look at the first paragraph. Answer the question the article begins with.

Highlight 10 - 15 important words. Use those words to write a summary.

Talk with a partner about what you think were the three most important parts of the article.

Share something interesting you learned with a partner.