The ancient Maya once occupied a vast geographic area in Central America. Their civilization extended to parts of what is now Mexico, Honduras, and El Salvador, and most of Guatemala and Belize. From the third to the ninth century, Maya civilization produced awe-inspiring temples and pyramids, highly accurate calendars, mathematics and hieroglyphic writing, and a complex social and political order. Looking at the impressive remains of ancient Maya civilization, it's hard to imagine how such a society could collapse.

Looking for clues at Copán
Clues to this collapse can be found at Copán, a Maya site in western Honduras. Copán was once a Classic Maya royal center, the largest site in the southeastern part of the Maya area. Covering about 29 acres, it was built on the banks of the Copán River on an artificial terrace made of close to a million cubic feet of dirt. Over time, people spread out from the central core and built homes in outlying areas that had formerly been used for crops. Copán's nobles built smaller, rival complexes on sites that were increasingly further from the core.

In spite of its wealth, power, and size, Copán collapsed. No monuments seem to have been produced after A.D. 822. Does this mean that the collapse was sudden? Or is it possible that the society collapsed more gradually? To explore why Copán collapsed, try an archaeological activity and discover what scientists recently found when they examined the site.

Monuments
Maya rulers carved elaborate monuments that told stories of their ascent to the throne, their lineage, important battles, or other events. The Maya had a sophisticated and accurate calendar and a system of hieroglyphic writing. They dated many monuments and included the names of kings and when they reigned. There is one unfinished monument at Copán that can provide you with clues.

Unfinished altar
This stone monument, an altar, might have been carved for use as a throne platform for a Maya ruler. One side was completed, but the other sides were left unfinished. On one
of these unfinished sides, the Maya text shows a date, equivalent to February 10, A.D. 822. The remaining text was never finished. There are no known monuments at Copán dated after A.D. 822.

**People**

Today, there are many people living in the Copán Valley. They grow corn, like the ancient Maya did before them. These modern farmers can provide clues to how ancient Maya farmers used the land. There are now about 25,000 people living in the Copán Valley, about the same number that lived there before Copán collapsed.

**Modern farmers**

When you talk to a modern farmer cultivating fields in the Copán Valley, he reports that he is getting less and less corn from his fields. Each year, the crop is getting smaller. Other farmers report the same thing. They also report that the land is being cultivated every year, with no time for the land to rest. This resting time is called a fallow period. In order to feed the large population in the valley, farmers are growing crops on their land every year, but getting less and less corn from their farming.

**Bones**

There are two bone samples you can examine. They are both skulls of residents of Copán. Both were found buried a few miles from Copán's center (or acropolis). What do these clues reveal about Copan? Record your thoughts in your journal.

**Skull #1**

This skull shows evidence of severe anemia, which probably killed this Copán citizen. The spongy-looking areas at the back of the skull are caused by a lack of iron in the diet. This person suffered from malnutrition. 80 percent of the skeletons found at Copán show evidence of anemia.
Skull #2
This skull shows evidence that the head was wrapped during childhood to form it into a shape that was pleasing to the ancient Maya. The teeth have also been carved into an intricate pattern, something that was done by Maya of the upper social classes. Spongy-looking areas at the back of the skull show that this Maya noble had anemia.

Botany
Plant and soil evidence can provide clues to what happened in the past. You may want to examine this pollen slide, which comes from a sample taken from the bottom of a bog in a farming area outside of Copán.

Mahogany pollen
This slide is of mahogany pollen, dating to around A.D. 1200-1250. It shows that the Copán Valley had largely returned to forest by that time. Before A.D. 1200-1250, there is little evidence of mahogany pollen in the sample. Mahogany pollen would be present in areas of tall forest, but not in areas of heavy farming.

Houses
Studying the royal centers reveals a great deal about Maya life, but there is also evidence to be found in simple houses that lie miles away from Copán's center. Looking at evidence from settlements that surrounded Copán, you can pick up clues from obsidian blades and erosion debris.
Erosion debris
Some Copán houses found near hillsides show debris from erosion. The probable cause of this erosion is that people were over-farming the hillsides. The erosion seems to have begun in the mid-eighth century (based on evidence from obsidian dates) and to have continued for a long time afterward. At some point, these houses were abandoned. Eventually, some houses were completely buried by erosion debris.

Obsidian blades
The Maya used obsidian, a glass-like mineral, to make cutting blades. Obsidian blades were widely used in households in Copán, and many blades have been found. The dates of these blades reveal how populated the valley was. Obsidian blades found in Copán households show a range of dates, from A.D. 500 to 1200. After A.D. 950-1000, the number of blades drops off.