

Name: ..... Date: .....

# The Turning Point

No one knows for sure when humans made the big switch from hunting to herding. Thus far, no one has found direct evidence. Still, Melinda Zeder, an archaeologist at the Smithsonian, feels she has found some compelling evidence. According to Zeder (*Discover*, May 2000, p. 20), the change occurred about ten thousand years ago, and may have been centered in the country of Iran. Zeder bases her conclusion on the discovery of an abundance of female goat bones, and an absence of male bones within the same area. Apparently, herders favor female animals, which produce both milk and young, and tend to slaughter the male animals early on. It is fairly simple to tell male from female bones because of the difference in size; the bones of male livestock animals are significantly larger.

Why is this change in human habits so important, though? For several reasons. First, an agricultural and herding society would favor a different manufacturing style, needing more farming implements than weapons. Second, a society that raised animals and food for those animals would seek very different geographic surroundings from a society that focused on hunting

Source: "What's Bred in the Bone." May 2000. *Discover Magazine*. P. 20.

## Score the Paper

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Mark the score that this paper should receive in the trait of IDEAS. Read the rubric to help you decide. Be prepared to defend your response with specific references to the rubric and to the paper. After scoring the paper, compare your score with your partner's. If you are two or more points apart, try to pinpoint the reason.

\_\_\_ 1 \_\_\_ 2 \_\_\_ 3 \_\_\_ 4 \_\_\_ 5 \_\_\_ 6

## CHAPTER 23

# Delegates and Anonymous Methods

**D**elegates are similar to interfaces in that they specify a contract between a caller and an implementer. Rather than specifying an entire interface, though, a delegate merely specifies the form of a single function. Also, interfaces are created at compile time and are a fixed aspect of a type, whereas delegates are created at runtime and can be used to dynamically hook up callbacks between objects that weren't originally designed to work together.

Delegates are used as the basis for events in C#, which are the general-purpose notification mechanisms used by the .NET Framework.

## Using Delegates

The specification of the delegate determines the form of the function, and to create an instance of the delegate, you must use a function that matches that form. Delegates are sometimes referred to as *safe function pointers*, which isn't a bad analogy, but they do a lot more than act as function pointers.

Because of their dynamic nature, delegates are useful when the user may want to change behavior. If, for example, a collection class implements sorting, it might want to support different sort orders. You could control the sorting based on a delegate that defines the comparison function:

```
using System;
public class Container
{
    public delegate int CompareItemsCallback(object obj1, object obj2);
    public void Sort(CompareItemsCallback compare)
    {
        // not a real sort, just shows what the
        // inner loop code might do
        int x = 0;
        int y = 1;
        object item1 = arr[x];
        object item2 = arr[y];
        int order = compare(item1, item2);
    }
}
```