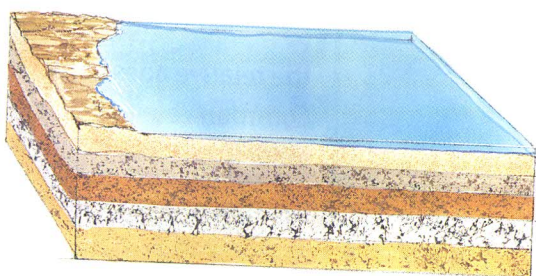


Unconformities

Figure 13

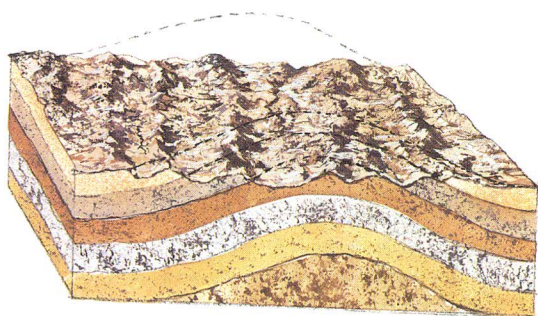
An angular unconformity results when horizontal layers cover tilted, eroded layers.



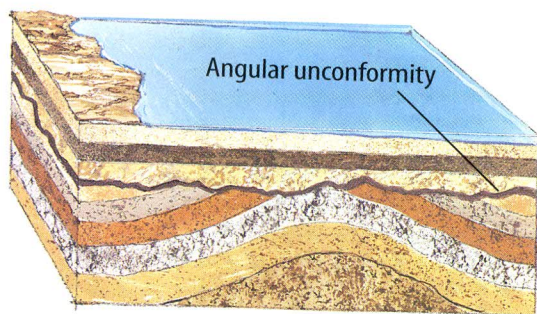
A Sedimentary rocks are deposited originally as horizontal layers.



B The horizontal rock layers are tilted as forces within Earth deform them.



C The tilted layers erode.



D An angular unconformity results when new layers form on the tilted layers as deposition resumes.

A sequence of rock is a record of past events. But most rock sequences are incomplete—layers are missing. These gaps in rock sequences are called **unconformities** (un kun FOR mihteez). Unconformities develop when agents of erosion such as running water or glaciers remove rock layers by washing or scraping them away. They also form when a period of time passes without any new deposition occurring to form new layers of rock.

✓ Reading Check

How do unconformities form?

Angular Unconformities Horizontal layers of sedimentary rock often are tilted and uplifted. Erosion and weathering then wear down these tilted rock layers. Eventually, younger sediment layers are deposited horizontally on top of the eroded and tilted layers. Geologists call such an unconformity an angular unconformity. **Figure 13** shows how angular unconformities develop.

Disconformity Suppose you're looking at a stack of sedimentary rock layers. They look complete, but layers are missing. If you look closely, you might find an old surface of erosion. This records a time when the rocks were exposed and eroded. Later, younger rocks formed above the erosion surface when deposition of sediment began again. Even though all the layers are parallel, the rock record still has a gap. This type of unconformity is called a disconformity.

Nonconformity Another type of unconformity, called a nonconformity, occurs when metamorphic or igneous rocks are uplifted and eroded. Sedimentary rocks are then deposited on top of this erosion surface. The surface between the two rock types is a nonconformity. Sometimes rock fragments from below are incorporated into sediments deposited above the nonconformity. All types of unconformities are shown in **Figure 14**.