

■ **Figure 13.11** In some areas, tornado shelters are common. If you are caught in a tornado, take shelter in the southwest corner of a basement, a small downstairs room or closet, or a tornado shelter like this one.



Tornado safety In the United States, an average of 80 deaths and 1500 injuries result from tornadoes each year. In an ongoing effort to reduce tornado-related fatalities, the National Weather Service issues tornado watches and warnings before a tornado strikes. These advisories are broadcast on local radio stations when tornadoes are indicated on weather radar or spotted in the region. During a severe thunderstorm, the presence of dark, greenish skies, a towering wall of clouds, large hailstones, and a loud, roaring noise similar to that of a freight train are signs of an approaching or developing tornado.

The National Weather Service stresses that despite advanced tracking systems, some tornadoes develop very quickly. In these cases, advance warnings might not be possible. However, the threat of tornado-related injury can be substantially decreased when people seek shelter, such as the one shown in **Figure 13.11**, at the first sign of threatening skies.

Section 13.2 Assessment

Section Summary

- Intense rotating updrafts are associated with supercells.
- Downbursts are strong winds that result in damage associated with thunderstorms.
- Hail is precipitation in the form of balls or lumps of ice that accompany severe storms.
- The worst storm damage comes from a vortex of high winds that moves along the ground as a tornado.

Understand Main Ideas

1. **MAIN Idea** Identify the characteristics of a severe storm.
2. **Describe** two characteristics of thunderstorms that lead to hail formation.
3. **Explain** how some hail can become baseball sized.
4. **Compare and contrast** a macroburst and a microburst.
5. **Identify** the steps that change wind shear into a tornado.
6. **Identify** the conditions that lead to high winds, hail, and lightning.

Think Critically

7. **Explain** Why are there more tornado-producing storms in flat plains than in mountainous areas?
8. **Analyze** the data of the Fujita scale, and determine why F5 tornadoes have a longer path than F1 tornadoes.

WRITING in Earth Science

9. Design a pamphlet about tornado safety.