



*compression* continues outward from the source in a wavelike motion. You can illustrate this wave motion by arranging dominoes as pictured at the top of page 66. By pushing the domino at one end, you can observe the wavelike motion of the falling dominoes. Sound travels in almost the same way. But the dominoes do not stand back up again to get ready for the next compression wave. In sound waves the molecules move both forward and backward.

The vibrating tuning fork only compresses the air molecules during one-half of each vibration. During the other half, a partial vacuum is produced. This causes the air molecules to spread out to form what is called a *rarefaction*. This rarefaction area also spreads outward from the source in a wavelike motion. The movement of

compression and rarefaction areas through air is much like the ripples that spread outward on the surface of a pool when a stone is dropped into it.

Although loud sound waves can



*Which travels faster, the sound in the air or the sound in the steel rails?*