Pathway of a Sound Wave

1. The sound waves arrive at the pinna (auricle), the only visible part of the ear.
2. Once the sound waves have passed the pinna, they move into the auditory canal (external acoustic meatus) before hitting the tympanic membrane (eardrum).
3. Once the sound waves reach the tympanic membrane, it begins to vibrate and they enter into the middle ear.
4. The vibrations are transmitted further into the ear via three bones (ossicles): malleus (hammer), incus (anvil), and the stapes (stirrup). These three bones form a bridge from the tympanic membrane to the oval window.
5. Once sound passes through the oval window, it enters into the cochlea in the inner ear.
6. Hair cells in the organ of Corti (within the cochlea) are stimulated which in turn stimulates the cochlear branch of the vestibulocochlear nerve.
7. The cochlear nerve then transmits electrical impulses to the auditory region of the brain in the temporal lobe.