THE HUMAN BODY

AR BUCH TESTSEITE

LIEBE INTERESSENTIN, LIEBER INTERESSENT,

mit Hilfe dieser Testseite kannst du das AR Erlebnis kostenlos ausprobieren. Wir haben eines unserer 40 Themen als Beispiel gebracht, so kannst du herausfinden, was dich in dem Buch erwartet.

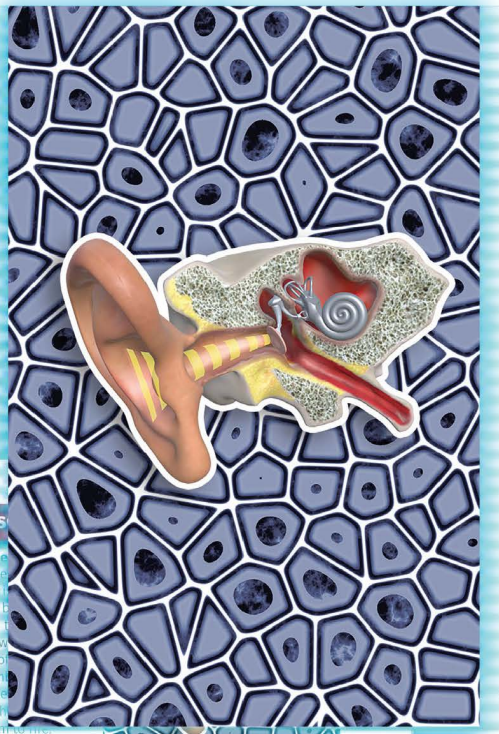
WIE FUNKTIONIERT ES?

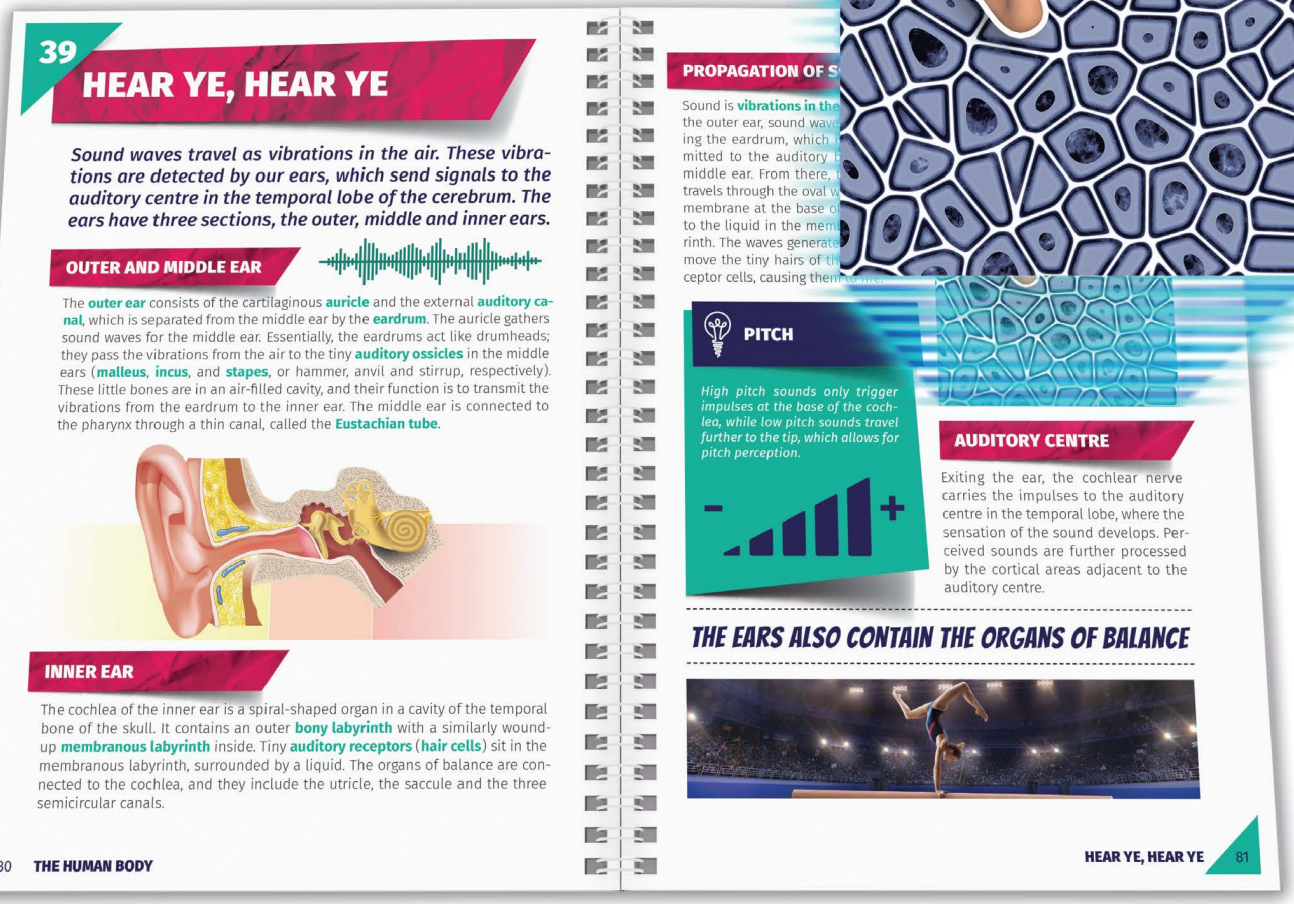
1. Drucke diese Seite in Farbe oder schwarz-weiss.
2. Lade unsere **AR Books LibrARy** herunter.
   arbookslibrary.de/app
3. Registriere dich in der App.
4. Klicke auf die Plus Taste und gib den Code der Testseite an. **Der Code ist: hearing**
5. Klicke auf die heruntergeladene Datei "Hearing". Lese mit der App das AR Target.

Viel Spaß beim Film!

JETZT BEI Google Play

Laden im App Store





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HEAR YE, HEAR YE

Sound waves travel as vibrations in the air. These vibrations are detected by our ears, which send signals to the auditory centre in the temporal lobe of the cerebrum. The ears have three sections, the outer, middle and inner ears.

OUTER AND MIDDLE EAR

The **outer ear** consists of the cartilaginous **auricle** and the external **auditory canal**, which is separated from the middle ear by the **eardrum**. The auricle gathers sound waves for the middle ear. Essentially, the eardrums act like drumheads; they pass the vibrations from the air to the tiny **auditory ossicles** in the middle ears (**malleus**, **incus**, and **stapes**, or hammer, anvil and stirrup, respectively). These little bones are in an air-filled cavity, and their function is to transmit the vibrations from the eardrum to the inner ear. The middle ear is connected to the pharynx through a thin canal, called the **Eustachian tube**.

INNER EAR

The cochlea of the inner ear is a spiral-shaped organ in a cavity of the temporal bone of the skull. It contains an outer **bony labyrinth** with a similarly wound-up **membranous labyrinth** inside. Tiny **auditory receptors** (**hair cells**) sit in the membranous labyrinth, surrounded by a liquid. The organs of balance are connected to the cochlea, and they include the utricle, the saccule and the three semicircular canals.

PROPAGATION OF S

Sound is **vibrations in the** the outer ear, sound wave ing the eardrum, which mitted to the auditory middle ear. From there, travels through the oval membrane at the base to the liquid in the me rinth. The waves generate move the tiny hairs of t ceptor cells, causing them

PITCH

High pitch sounds only trigger impulses at the base of the cochlea, while low pitch sounds travel further to the tip, which allows for pitch perception.

AUDITORY CENTRE

Exiting the ear, the cochlear nerve carries the impulses to the auditory centre in the temporal lobe, where the sensation of the sound develops. Perceived sounds are further processed by the cortical areas adjacent to the auditory centre.

THE EARS ALSO CONTAIN THE ORGANS OF BALANCE