

Senses Worksheet

A Complete the gaps with a word made from the word in brackets.

- The ear has two very important functions – it _____ us to hear and it functions as... (ABLE)
- The middle ear contains three tiny bones _____ as the auditory ossicles. (KNOW)
- The _____ structures of the inner ear are the vestibule, cochlea and semicircular canals. (BONE)
- The eyes are housed in orbits located within the _____ bones at the front of the skull. (FACE)
- The sclera is the white portion of the eye which serves as a _____ covering for the eye. (PROTECTION)
- The conjunctiva is _____, but appears white because it covers the sclera. (COLOUR)

B Is university damaging eyesight?

Students experience a marked decline ___(1) eyesight while at university, with too much "intensive" reading ___(2) blame, a study suggests. Researchers at Spain's Complutense University found 31.3% of first-years ___(3) short-sighted. Among those four to six years older, in their final year, the rate was 49%. Research author Dr Rafaela Garrido said many ___(4) the 270 students tested spent ___(5) to 10 hours at a time reading ___(6) poor light. She told BBC News Online: "Some students are spending ___(7) long in intensive near work with their eyes. It is also a problem with people ___(8) spend too long on a computer or using a microscope. It's difficult to ask students to do less reading, ___(9) it is essential to passing courses, but we have to find ways to deal with the stress on the eyes." Research is ___(10) carried out into lenses to prevent myopia among those involved in intensive reading or screen-viewing.

Reading

Glasses

- Discuss the questions with a partner.
 - For you, is wearing glasses positive or negative?
 - What is the price range for glasses with lenses in your country?
 - Imagine there were no glasses or contact lenses. How many of the people who you work with every day would not be able to work?
- Read the text. Match these titles with paragraphs A–F. One title is not needed.
 - The social effects of glasses _____
 - How glasses are made _____
 - Sight in the developing world _____
 - The invention of glasses _____
 - How glasses work _____
 - An important invention _____
 - The limited life of eyes _____

- Decide whether these statements are true (T) or false (F).
 - Most people of 45 need reading glasses.
 - Scientific progress in the Renaissance led to the invention of glasses.
 - Haloos are an example of an aberration.
 - A squint is a focusing problem.
 - People with hyperopia need glasses for reading.
 - Glasses doubled the hours that people could work in a day.
 - Cheaper glasses would help the economies of developing countries.
- Do you know of any charity that helps restore vision to people in the developing world? Tell the group about it.



THE IMPORTANCE OF SEEING CLEARLY

A

If you had to make a list of ten inventions that have changed the world, glasses would be on it.

B

Most people's eyes can work efficiently for only about 35 years, and after that they may need reading glasses. 800 years ago there was no such thing as correcting sight and early in life almost everyone became disabled by failing eyesight.

C

Glasses were invented in the fourteenth century and very quickly spread throughout the world. Their invention was vital to the creative and intellectual progress of the Renaissance – a period of rapid development in mathematics, science, commerce, medicine, and art.

D

Spectacle lenses correct focus, and can be used to correct other problems too, such as aberrations (seeing ghost images, haloos, waves, or rainbows) and squints (strabismus), when the two eyes do not point in the same direction. However, their most common use is to correct long-sightedness (hyperopia) – where you cannot focus on near objects, short-sightedness (myopia) – where you cannot focus on distant objects, and the loss, through ageing, of the eye's ability to change focus (presbyopia).

E

The invention of glasses freed people from the effects of ageing. At the point in their lives when their knowledge and skills were at their highest level, people could continue to read, do accounts, write, and do small-scale, detailed work. Glasses have effectively doubled the length of time one can expect to live a productive life.

F

The link between glasses and poverty can be seen in developing countries today. The World Health Organisation says that 28 million people in developing countries, where a pair of glasses can cost several months' salary, are blind from treatable conditions. Educated people like engineers and teachers have to retire early, and millions never learn to read, simply because they cannot see.



D Video – Ear

The ear has three parts: the outer ear or ____ (1), the middle ear and the inner ear. The auricle, the visible part of the ear, collects sound waves and directs them to the ____ (2) canal. The auditory, or ear canal is lined with ____ (3) and ceruminous glands. The ear ____ (4) from the ceruminous glands and the cilia protect the ear from entry by foreign matter. The thin tympanic membrane separates the outer ear from the middle ear. Sound waves cause it to vibrate. The three tiny bones of the middle ear are the hammer or malleus, ____ (5) or incus, and stapes or stirrup. These bones pick up the vibrations from the tympanic membrane and transmit them to the inner ear. The Eustachian tube of the middle ear opens into the ____ (6) and permits air pressure to equalize between the ear and the outside air.

The inner ear is maze-like, consisting of bony and membranous structures surrounded by fluid. The semi-circular canals are fluid-filled bony ____ (7) that help maintain our body's balance.

The cochlea is a fluid-filled, ____ (8) structure that houses the organ of Corti, the true organ of hearing. The fluid aids in the ____ (9) of vibrations. The organ of Corti changes the vibrations into nerve impulses that are picked up by the auditory nerve.

Sound waves are collected by the auricle or outer ear and sent to the auditory canal, tympanic membrane, ear bones and then to the cochlea where the vibrations are changed by the organ of Corti to nerve impulses and transmitted by the auditory or ____ (10) nerve to the temporal lobe of the brain for interpretation.

E Grammar point – Indirect speech

Reported speech

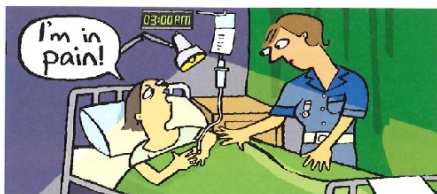
1 Study the cartoons and complete the dialogues.

1 Present tense reporting



- Nurse Dr Weston says she's sending a patient for observation.
- Ward manager We have a bed available.
- Nurse The ward manager says they _____^a.
- Dr Weston Good, thank you. I suspect he has concussion.
- Sarah The doctor says _____^b.

2 Past tense reporting



The next day

- Nurse Last night she told me she was in pain.
- Doctor Where did she have the pain?
- Nurse _____^a in her chest.
- Doctor How bad was it?
- Nurse _____^b unbearable.
- Doctor Were there any other symptoms?
- Nurse Yes, _____^c stomach-ache as well.

3 Reporting yes / no questions



- 11.00
- Nurse He asked if I could help him get out of bed.
- Doctor I see. Did he ask for any more help?
- Nurse Yes, he asked me _____^a get dressed.
- Doctor I see, and then?
- Nurse He asked me _____^b open a bottle of medicine.

4 Reporting wh- questions



- 4.00
- Patient He asked me what my date of birth was.
- Visitor Did he? What else did he ask you?
- Patient He asked me where _____^a.
- Visitor So you told him your address. Anything else?
- Patient Yes, he asked me when _____^b. I told him that I first became ill in July.