

Biology

The eye

Learning objectives

- Students learn about the human eye.
- In the project stage, they carry out a class survey and produce a webpage from the results.

Warmer

Write eyes on the board and ask students to work in groups to write down everything they know about the human eye, for example, how far it can see, what conditions help it to see better and what colours it can be. Invite different groups to share their ideas with the rest of the class.

- 1 Before class, find a simple diagram of an eye to draw on the board. Ask students to copy the diagram and in small groups to label the different parts. Write the following words around the diagram to help them: *iris, cornea, pupil, lens, optic nerve, retina*.


When they have finished, invite different students to draw lines between the words and the parts of the eye on the board. Ask them to compare the words in English with their own language. Ask 'Are any of the words the same or similar?'

- 2 Tell students that they are going to do a quiz about eyes. Elicit the eye facts that they discussed in the Warmer.

Draw their attention to the Key words box. Ask students to read the definitions. Then check understanding by asking them to cover the keywords and inviting stronger students to provide definitions.

Ask students if they notice anything unusual about the quiz heading, *Eye didn't know that!* Explain the joke (eye is pronounced the same as I) and tell them that this is called a *pun*.

Students then do the quiz in pairs. Tell them that they must agree on each answer and write them on a separate piece of paper. Ask each pair to exchange their papers with another pair.

- 3  2.34 Play the recording for students to listen and mark the answers in front of them. Go through the answers in turn, and then tell pairs to add up the points to find the winning pair. Award a bonus point for any teams which guessed question 6 correctly.

Audioscript

Narrator 1

Speaker The eye is the one part of your body that doesn't grow as you get older. Well, it grows a little, but not much. Every human being has similar-sized eyes and they weigh about eight grams.

Narrator 2

Speaker The human eye is very powerful. If you look up into the sky at night, you should be able to see the Andromeda Galaxy – a collection of stars that are about two point five million light years away – that's about 25 billion kilometres. This also means that on a clear night, in the right place, humans can see any of the planets Mercury, Venus, Mars, Jupiter or Saturn.

Narrator 3

Speaker There are about 45 million blind people in the world. That's about 0.6%.

Narrator 4

Speaker There are more long-sighted people than short-sighted people in the world, but for teenagers, it's the opposite. Most teenagers who need to wear glasses wear them because they are short-sighted.

Narrator 5

Speaker We aren't exactly sure when glasses were invented. However, people believe that they were first used in Italy between 1268 and 1289.

Narrator 6


Speaker There are lots of types of food that can improve your eyesight. Your eyes need vitamin A to stay healthy and you can find this in carrots, beef and even cheese! But if you're short-sighted or long-sighted, eating these foods won't mean you can throw away your glasses!

Narrator 7 and 8

Speaker Blinking is important for the health of our eyes. And we usually blink about 15 times every minute. That's about eight billion times in a year! Children blink less than adults and cats blink very little – just twice every minute.

Answers

1 A 2 C 3 A 4 A 5 A 6 all of them 7 B 8 B

- 4  2.34 Books closed. Play the recording again and ask the students to listen very carefully to the facts but not to make any notes.

Books open. Ask students to work in pairs to see what they can remember. Play the recording again, pausing after each question to check answers.

Ask students what surprised them most about what they heard.

Answers

1 It doesn't grow as you get older. 2 five 3 about 45 million 4 Italy 5 vitamin A 6 twice a minute

Mixed ability

In order to support weaker students with the listening activity, you may like to ask them to read the questions before listening the first time, and identify what they need to listen out for (e.g. differences, numbers/names of planets).

- 5 Tell students that they are going to find out some more facts about eyes. Ask them to read the key words in the box and their definitions, and predict in pairs what facts they might find out about. Invite some suggestions from the class. Drill pronunciation of the key words, paying attention to *sweat* /swet/ and *tear* /tɪə/.

Ask students to read the text. They should then read the questions and find the answers with their partner. Invite different students to give the answers, and ask their partner to read out the part of the text which gives the answer.

Refer them back to the title of the first section of text, *Eye Choo!* and ask them whether it reminds them of anything. If not, ask them to re-read the text below the title and ask again. Explain that this part of the text is about sneezing, and we say *Achoo!* when we sneeze, which sounds like *Eye Choo!*

Ask students what they found interesting or surprising.

Fast finishers

Ask fast finishers to write two more questions about the text, which they then test the rest of the class on.

Extension activity

Note: This activity requires internet access. If you do not have access to the internet in your classroom, students can complete the initial stage at home, and then complete the activity in the next class.

Give students a few minutes to find pictures of different animals' eyes online and print them out. Ask each group of three to find ten different animal eyes; the more unusual the better.

Students then create a quiz by sticking the eye pictures onto a larger piece of paper and drawing lines for students to write on under each one. They then join another group of three to guess the animals and write their names underneath.

The groups check each others' work. Then ask them to play another guessing game, by describing one of the eyes for the rest of the group to guess, e.g. This eye is small but it has a very large pupil, and the iris is green.

Answers

- 1 the eyelids 2 the iris and the skin 3 the tear gland
4 the eyelashes 5 the nose 6 the pupil

Cooler

Draw one of the items of eye vocabulary from the text on the board very slowly, e.g. iris, eyebrows, pupil, eyelids and eyelashes, and encourage students to call out the word. The first student to say the word correctly then takes a turn to draw for the rest of the class to guess. Stop the game when all the words have been tested or after five minutes.

Project

Tell students that they are going to carry out a survey about other students in the class and then produce a webpage showing the results.

Ask them to read the questions and prepare a piece of paper with columns for each question/answer and each student's name down the left-hand side (if you have a very large class, or wish to add some comparison to the activity, you may prefer to split the class in half for this activity instead).

Students then mingle, asking their classmates the questions in turn. Allow plenty of time for this.

You could do question 6 as a whole-class activity. Time one minute and then ask how many students managed not to blink more than five times. Ask students to keep a record of this number.

Students then work in pairs to look at their findings, producing figures for each question (for example, *Nine students have brown eyes, one has green eyes and four have blue eyes; seven are short-sighted, one is long-sighted and eight have perfect eyesight*).

Ask students how they can present their findings using charts and diagrams. Draw, or ask a student to draw, an example of a pie chart, bar chart and graph on the board.

Students prepare their charts and then produce a webpage showing the survey questions and the results. Display these around the classroom for other students to read.