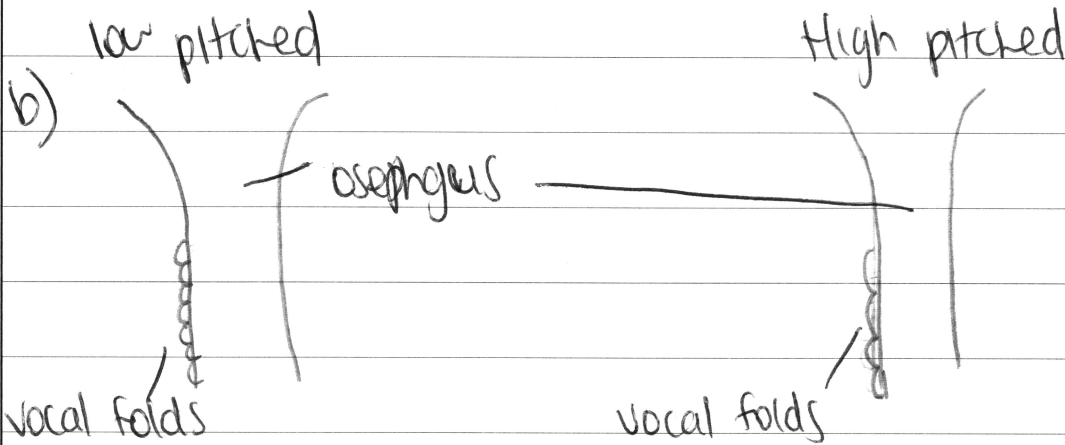


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a) Structures to detect vibrations

Insects	Insects have drum like objects connected to each leg. These objects pick up vibrations.
Fish	
Mammals	use their ear to accept sound waves into their auditory canal.



When a person is talking in a low pitched voice the vocal folds come closer together and compact. When a person is in a high pitched tone the vocal folds separate.

c)(i) light detection.

(ii) The cones contain an iodopsin pigment. There are 3 types of cones red, blue and green. The cones are structured closer to the front of the retina and also backwards towards the optical nerve. The cones are situated mostly at the front of the retina as they pick up light and transfer it to colour when they are stimulated. This sends the optical nerve a message to deliver to the brain to produce a colour image.

(iii) Rods contain a pigment called Rhodopsin. The rhodopsin pigments are black and white, because of this rods are more effective in low intensity light. The Rod cells are used for peripheral vision and are located throughout the eye.

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d)(i) Damage may have been caused to the cerebrum damaging the action potential of the neurones. Another possible cause could be that it is genetically inherited disorder that could be unrelated to the fall.

(ii) The mammal could have difficulty in motor movement as no action potentials are being transmitted. The animal's vision could also be affected. The mammal may no longer be able to be independent and move freely.

e) Using our knowledge of the eye and ear we can produce such technologies shown in the source. The eye and ear are delicate and mechanical pieces of equipment we rely on everyday, using them to our benefit creates enjoyment through the knowledge we obtain about them.

In the use of surround sound we eliminate the sound shadows. Sound shadows are when a sound is emitted using wavelengths but it is either absorbed or eliminated by objects in its path therefore not getting to the auditory canal in the ear. Having surround sound (sound coming from all angles) eliminates the likelihood of a sound shadow

occurring giving great sound in cinemas.

In the eye we have photoreceptor cells, these cells are responsible for different things. Rod cells in the eye are more for ~~peripheral~~ peripheral vision and are at their best in low intensity light. Cone cells are inside the retina and obtain iodopsin pigment of three colours red, blue and green. Using 3D glasses one eye picks up one image while the other picks up a separate one. Together they form a 3D picture, with the use of red and blue glasses.

Through the understanding of the eye and ear we can eliminate the bad qualities of our own mechanisms by instituting things such as surround sound systems and 3D movies. This leaves us to enjoy the good qualities about the ear and the eye leading us to better technologies for the future.

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