

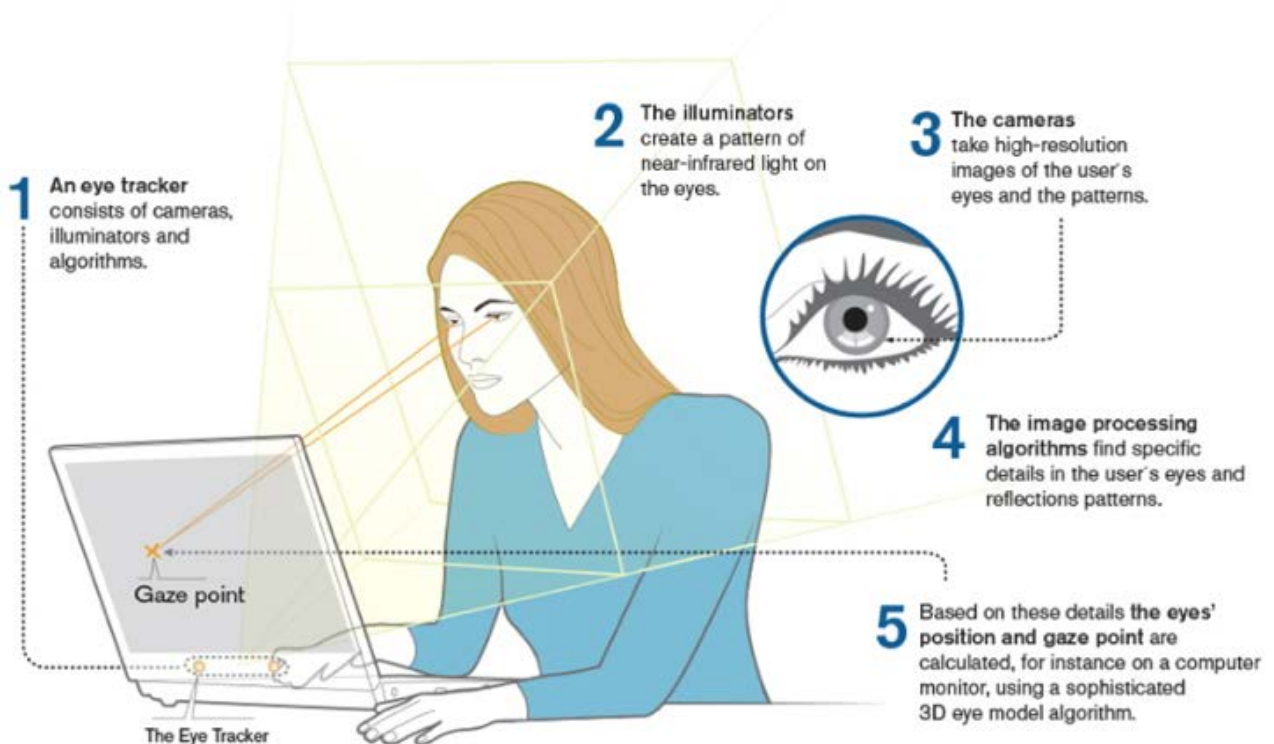
# An Introduction to Eye Gaze Devices: What are they? Why use them? What equipment do I need?

## What is an Eye Gaze Device?

A device or computer equipped with a camera that tracks eye movement to enable hands-free operation. An eye gaze camera can either be an addition to a computer or an inbuilt feature.

## How does it work?

The eye camera provides light to illuminate the eye causing visible reflections. The camera then captures an image of the eye showing these reflections. A series of calculations are then used to estimate the position of the eye and the point of gaze.



## Why use an Eye Gaze Device?

For some students eye gaze may be the only access method available due to limited movement control. For others, eye gaze may be a more efficient and less fatiguing means of access in comparison to switching. It is a direct access method and there are no intermediary steps in making a selection (Najari, Friday, Robertson, 2008).

Eye gaze can be used to control a computer, AAC device and environmental controls.

## Eye Gaze Equipment

### Eye Gaze Trackers

There are now a range of eye trackers and software, which can be attached to computers, laptops and some tablets to enable these to be used with eye control. Each eye tracker will have particular specifications as to the devices it is suitable for use with. Certain AAC devices also have the option of adding an eye tracker to an existing device.

### Eye Gaze Devices

There are devices available with in an inbuilt eye tracker. These are often used when an individual is using a dedicated eye gaze device for communication and computer access.

An up to date list of available eye gaze devices can be found on NED (National Equipment Database) via this link: [http://ilcaustralia.org.au/search\\_category\\_paths/703](http://ilcaustralia.org.au/search_category_paths/703)

### References

How do Tobii Eye Trackers Work? Retrieved November 2, 2016 from [www.tobii.com](http://www.tobii.com)  
L. Najafi, M. Friday, Z. Robertson, (2008), Two case studies describing assessment and provision of eye gaze technology for people with severe physical disabilities, Journal of Assistive Technologies, Vol. 2 Iss. 2, 6-12.