

What is 3D?

3D is short for 3-dimensional (e.g. width, length, and depth). Our physical environment is three-dimensional and we view the world in a 3D way every day. Humans have two eyes which are about 2 inches apart so we are able to perceive the spatial relationship between the things just by looking at them. Thus we see the surrounding objects from two different perspectives which will be processed together in the brain and generate the sense of depth for a 3D visual experience.

Why 3D?

It is hard to grasp things we cannot see with our eyes. Visual learning helps us learn how things work and comes together, as a whole. Especially in children, the imagery created by 3D makes it possible to dive deeper into more complex issues.

Reflection

What are the benefits of 3D viewing?

What is the highest grossing 3D movie of all time?

How could the use of 3D help in the classroom?



THE HISTORY OF 3D

A TIMELINE

300 BC

Euclid observes that

differently - and is

intrigued



Johannes Kepler notices that binocular involves disparities and double vision





Oliver Wendell Holmes invents the cheap simple 'Stereonticon' and the 3D craze takes off in the USA. 300 million stereoscopic photographic pairs are published and sold. 'A stereo viewer in every parlor was the claim.



3D movie scenes are displayed at the Astor Theater in New York 1936 The first color 3D movie - thought to be the first is displayed in Berlin public exhibition of 3D 'Zum Griefen Nah' (You Can Nearly Touch It) and the Nazi Party produces

two propaganda films

1932 Edwin Land patents 'Polaroid Filters

1952 The seminal 'Bwana Devil' produced and directed by Arch Oboler is the first color 3D feature film presentation, starring

American Optometric Association

Robert Stack, Barbara Britton and Nigel Bruce

1954 'Dial M for Murder by Alfred Hitchcock is thought to be one of the best 3D films ever made, despite (or because of) Hitchcock's resistance to

the new technique.

2010 3D@Home Consortium - 3D Symposium on **Human Factors**

2011 The AOA and 3D@ **Home Consor** sign Memorandum of Understanding.

www.3deyehealth.org is launched.



Leonardo da Vinci suggests that it is binocular (two-eyed) vision that adds a quality of depth to the perception of objects







1833 Sir Charles Wheatstone concludes that image disparities and parallax are the source of depth perception - or stereopsis. Later (1838) he coins the word 'Stereoscope' to describe his 3D viewing







the Kinetoscope, a movie display device housed in



The Lumiere Brothers invent the Cinematographe and begin projecting their movies at Le Salon Indien du Grand Café in Paris.



1928

"John Logie Baird

Produces Moving Images

Which Are Given the

Appearance of Solidity"

Radio News 1928... the

first demonstration of



Chrysler Motors displays the 3D assembly of a Plymouth sedan at the New York World Fair. Titled 'New Dimensions, more than 1.5 million people see it.

Warner Bros releases House of Wax, starring Vincent Price It was the highest grossing 3D movie ever (at the time). Directed by Andre de Toth - who had only one

1953



READY DLP 3D technology is introduced into

