

Category: Student Work

Project: Evolution of Lenses

What was the challenge?

The challenge I was presented with for this project was to create an infographic poster to highlight an invention that utilizes glass. I chose eyeglasses as my subject and I wanted to focus on their evolution – specifically, the different materials that were used to make them and how their design changed and adapted throughout history. The goal was to create a concise and compelling design that would get the message across clearly and with an eye-catching presence.

What was the solution?

After doing research, I decided to pick three key versions of eyeglasses from various time periods. They each represent models with the most major changes that occurred throughout the history of the construction of eyeglasses. It starts with the first pair of eyeglasses ever made, followed by the first that had ear fasteners, and finally a modern design – which are the most widely used today. Under the illustration of each pair are short descriptions of their significance. I created icons stemming from each lens to visually depict qualities that they share or set them apart from each other: weight, breakability, cost, and scratch-resistance.

What was the effect?

The outcome is a clear, visually appealing presentation of how glass has been used to benefit the vital human sense of sight from as early as the 15th century. It shows the often overlooked impact and importance that glass has in our daily lives. Although glass is no longer the leading material choice for lenses, it was the foundational element that enabled the essential adaptations that led us to the glasses we know and wear today.

Contact:

name: Mary Horohoe

e-mail: mhoroho1@binghamton.edu

website: <https://mhoroho1.wixsite.com/maryhorohoe>

## Design Concepts and Sketches:

Project 2GL: Glass Infographic statement

1. Object



2. Quality: Transparency, low refractive index, low dispersion  
- what each type of lens is made up of  
- soda-lime, crown glass, Trivex

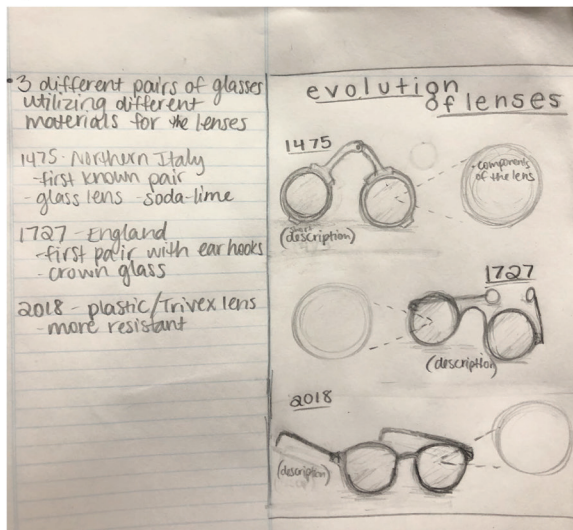
Sources:

Optical Arrt by Sarah Leslie

Open Glass Composition (soda-lime and other types)

Opacity and Transparency, and In-between by Dr. G. Jane Cook

3. Design strategy

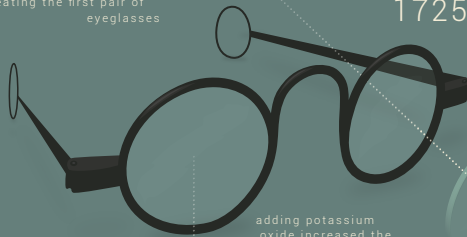


# evolution of lenses



1475

glass was blown into two discs and placed in frames connected by a rivet, creating the first pair of eyeglasses



1725

adding potassium oxide increased the clarity and optical quality of lenses, which were set in frames that could be fastened to the wearer



2018

replacing the glass with polycarbonate lenses made for safer, lightweight, and more durable eyewear

soda-lime glass



crown glass



polycarbonate

