DALE HYDER
Design Ideation I
Winter 2011

Developing An Icon System
For The Five Senses
PROJECT ONE

For this particular project, I first went through various media researching everything relating to the five human senses (seeing, hearing, touching, smelling, and tasting). After further analysis, I decided to have my application be relating science, particularly to a chemistry lab.
Eyesight involves receiving light through the retinas.
- The eyes are sensitive to many elements.
- Eye protection such as googles are needed in many activities.
- Too much damage to the eyes can result in blindness.
- People who are unable to see must depend on their other senses.
- Macular degeneration is a disease where the center of vision is obstructed.
• The initial iterations have the action of seeing with lines.
• Eye protection is shown with the goggles.
• The majority of the iterations are showing the warnings of what could happen in a chemistry lab.
• Hearing is the process of receiving sound waves.
• The range of frequencies humans can hear are rather limited compared to dogs and cats.
• Sounds that are too loud can cause permanent hearing damage.
• Devices that are used to enhance hearing are hearing aids, and stethoscopes to monitor heartbeats or one’s respiratory system.
Throughout my iterations, I explored all of the possible situations regarding hearing.

- Ear protectant is shown with headphones.
- Explosions from chemical reactions are shown throughout the rest of the icons. This shows the caution needed to work in a chemistry lab.
Smell is a unique sense in that it is directly correlated with taste.

Harmful gases such as carbon monoxide is odorless yet is deadly, so sensors are needed to detect any in the area.

Devices can be used to enhance breathing through the nose, such as a nasal strip shown to the left.

The sense of smell is the strongest one in triggering memories of past events.
• My initial icon iterations explored the possibilities of how the action of smell looks like, or rather how a smell would reach the nose.
• Nose protection was established on the second one down by having a dust mask.
• Many different container shapes were tested, such as an octagonal shape to represent the notion to stop.
• The nose and top of the test tube are used in the majority of the iterations because it’s more important to just have the instance rather than the entire head and test tube.
PROJECT ONE FINAL: SMELLING
• Taste is directly correlated with the sense of smell. If smell is obstructed it greatly reduces the body’s ability to taste food.
• There are different sized taste buds on the tongue that taste different types of flavors, such as salty, sweet, and sour.
• Foods that are too spicy, for example, can harm the mouth and tongue, effecting the body’s ability to taste.
• Protection for the mouth can be a gas mask or dust mask.
My initial iteration sketches shows the process of tasting or rather ingestion.

Several containers were tested, some working better than others. The container that tapers at the bottom is to give a sense of tension or caution, representing a similar shape of an exclamation point.

Many of the iterations show a chemical being splashed up from a test tube, showing the danger of what could happen in a chemistry lab.
PROJECT ONE FINAL: TASTING
• Touch is a unique sense because it can be generated throughout the entire body, and not just from the head like every other sense.
• The sense of touch is usually represented with a finger or hand since we engage the world with our hands. The ends of our fingertips also have many nerve endings, giving it a more heightened sense of touch.
• Touch can measure the texture or density of an object, but can also determine temperature.
My initial iterations show different ways the sense of touch can be represented.

Touch is being represented in the iterations with a finger as well as an entire hand.

Different types of objects have been used to show the possibility of pain, such as a flame or acid dripping out of a test tube.

Many of the iterations show just the instance of a test tube and hand in order to focus on the interaction.
PROJECT TWO

For the next step of this process, I decided to focus on my sight icon and developed three additional icons that supplement the original. I researched and made many iterations that deal with the various hazardous situations that could occur in a chemistry lab.
• Many different objects are made of glass in a chemistry lab.
• Broken glass can cause major cuts lacerations.
• Graduated cylinders have rubber discs on them to prevent them from shattering.
Most of the iterations have to deal with glass one way or another.

Subjects of science were represented in several iterations, such as the Petri dish, atom, microscope, and DNA molecule.

Many of these iterations are sketches, while some have been created on the computer.

Triangles are used a lot because of its simplicity and to convey sharp edges.
PROJECT TWO FINAL: BROKEN TEST TUBE
• A flash of light, explosion, or lightening can seriously damage one's eyesight.
• A reaction to bright would be to squint, such as the man in the picture above.
Light is represented in three different ways: fire, lightning, and from a blast or explosion.

There are many variations in the style and placement of these elements, such as being placed over the eye to make a more heightened sense of danger.

A flash of light was shown in the iteration second down on the right by not having a fill in the eye, eyebrow, and chemical in the test tube.
• A common occurrence in chemistry is bubbling of two chemicals undergoing a chemical reaction.
• Any chemical bubble that bursts outside of its container can be very harmful if in contact of an eye.
Many iterations were made exploring the possibilities of various materials coming out of a test tube and coming in contact with the eyes.

Cloud of dust was tested in several icons, along with powder and bubbling.

Many of the iterations involve the popping of bubbles, some being more complex than others.
PROJECT THREE

For the final stage of this process, I wanted to apply my icon system in the setting of a chemistry lab. My icons are to let people know the cautions of what could happen in the lab, and to let them be aware of their surroundings.
There are many materials and equipment found in a chemistry lab.

Lab safety is imperative since many accidents could happen.
PROJECT THREE DEVELOPMENT: CHEMISTRY LAB

- All of the pictures were taken in areas that could the icon system can be implemented.
- The only labels found in the images are of just small text on small strips of white paper.
CONCLUSIONS

I feel that I have learned a lot through this process. Not only did I learn a lot about the human senses, but I gained knowledge in the process of making an icon system. From testing users, I learned that simplicity is important. An image that is too complicated can confuse the viewer, yet one that is too simple can be vague and open to interpretation. I also learned that icons in a system need to be unified with similar line weight and overall style to help communicate more effectively.