

INVENT DESIGN CHANGE PROJECT: INTERACTION

A 10-week after school program that teaches high schoolers to use design to change their communities.

They will learn valuable skills in storytelling, communication, collaboration, creative thinking and problem solving while being exposed to interaction design as a potential career opportunity. Using New York City as a catalyst for creative thought and exploration, we will challenge students to approach problems using a variety of design methods. Students will be encouraged to tackle issues that matter to them with the prospect of creating viable solutions.

Curriculum Overview

BEFORE CLASS

Survey

Before coming to class, students will fill out a survey about their existing knowledge about design so we can better gauge their understanding of the material.

WEEK 1

Look at Times Square What is design? What is interaction?

Times Square, one of the most recognizable places in the world, is an environment that has benefited from the skills and expertise of designers from several disciplines. This location will be the stimulus for an introduction to interaction and design.

KEY CONCEPTS

Great designers are creative, observant, empathetic, and curious. Students will learn that they already possess these important characteristics plus many more that are key to developing creative and influential ideas. In looking at design, students will be exposed to a variety of products and services and learn how an interaction designer influences their designs.

EXERCISE

Everyone is a designer. Students will split up into groups and be given a bag of materials and artifacts to quickly prototype a product. They will also develop a story about their product to describe its purpose and how it will be used.

For next week: Think of a place in New York City that is used for something different than how it was originally intended. How do you know that it has been changed?

WEEK 2

High Line Coming up with Ideas

The High Line has been repurposed as an elevated park from its original function as a railroad, but its current state was not the first idea put on the table. We'll take a look at some of the hundreds of designs that were proposed for the High Line renovations before it arrived at its final form.

KEY CONCEPTS

It's good practice to come up with a lot of ideas before deciding on a few to pursue, especially when approaching a problem where the best solution is not immediately apparent. Students will be encouraged to think broadly even if they aren't sure that their idea is a good one. They will learn that coming up with a wide variety of ideas is essential to explore all possible solutions to a problem before deciding on the best one. In the ideation phase, it's okay that many ideas never get used.

GOAL

To introduce students to design as a career practice. Develop an understanding of how other subjects - specifically art, math, and science - influence design.

LEARNING OUTCOMES

- Define design as a career discipline
- Define interaction design
- Define what makes up an interactive product
- Examine products and services from an interaction designer's point of view
- Define audience, goal, purpose, evolution of usage of common objects
- Determine what skills and interests they possess that will make them successful designers
- Use storytelling techniques to describe a product's purpose and usage

GOAL

To relate what students already know about brainstorming to the process of ideation as a thinking tool in interaction design.

LEARNING OUTCOMES

- Use observation skills to reveal details and context clues
- Quickly determine the value of an idea
- Gain experience coming up with ideas and throwing some out
- Identify connections between ideas

EXERCISE

Students will practice brainstorming and concept mapping by creating a mood board around a central idea. They will be tasked with thinking broadly about a topic then organizing their thoughts into a meaningful structure.

For next week: Think about a place where you often like to go. What are the qualities that make it stand out in your mind?

WEEK 3

Union Square, a Place for Everyone Studying People & Environment

Everyday an eclectic mix of students, artists, skateboarders, musicians, and green market enthusiasts crowd Union Square. As designers, we must consider the space in context of the needs of this diverse population. Through discovery, we'll reveal some of the specific features of Union Square that make it accessible to so many people with different cultures, backgrounds, and personalities.

KEY CONCEPTS

Successful commercial products and services must involve the user throughout the design process. Interaction designers are responsible for understanding their users' wants, needs, and behaviors and also the environment in which the product will be used. Students will learn techniques to help them examine people and the world around them.

EXERCISE

Students will creatively describe a place that they go to everyday through writing and drawing. They will work with a peer to edit their work to ensure clear communication.

For Next Week: How might the ideas we've discussed over the past few weeks affect your work in other classes in school and beyond?

GOAL

To help students understand the concept and importance of user-centered design and how a person or product's environment shapes and influences design solutions.

LEARNING OUTCOMES

- Describe how user-centered design is critical to great design
- Demonstrate techniques for understanding and modeling users
- Use storytelling techniques to describe an environment

WEEK 4

Into the Wild Field Trip

A classroom lesson only goes so far when learning about the professional practice of interaction design. We'll visit a working design studio to see many of the concepts we've discussed in class put to action.

KEY CONCEPTS

Design is not just an idea that we think about in a classroom. It exists in the real world and there is an entire industry of people who make a living practicing it. Usually there are many people involved in a design process and it's important that a team work together to achieve a cohesive outcome.

EXERCISE

During a studio visit, students will be able apply what they've learned so far and will be able to ask questions of practicing designers.

For Next Week: Write a list of things you wouldn't be able to do if you lost your cell phone.

GOAL

To make abstract ideas about design practice become concrete through observation and inquiry.

LEARNING OUTCOMES

- Determine what skills and interests they possess that will make them successful designers
- Define design as a career discipline
- Gain access to practicing designers

WEEK 5

Did you check in here? Mobile Technology

The majority of mobile interactions are centered around location. Looking at the popular app Foursquare, we will discuss the components of this experience as they relate to the city setting.

KEY CONCEPTS

Some design problems require interaction designers to look beyond the desktop for the right solution. Mobile technology and the capabilities of today's smartphones provide designers with an expansive toolkit to creatively solve design problems. Students will understand the impact of designing for mobile devices on environment, design, people and their privacy, as well as future opportunities and implications of this domain.

GOAL

To consider the possibilities of mobile technology in creating products and services for health, education, entertainment and more.

LEARNING OUTCOMES

- Demonstrate how mobile technology is different from desktop technology
- Define the benefits and limitations of mobile

EXERCISE

Body storming! Students will split up into groups and demonstrate how accessibility to information changes with location-based tools in the past, present, and future.

For Next Week: Pay attention when you ride the public transportation. What do you notice people doing? What are some things that everyone does? What are some things that people do differently?

WEEK 6

How to Find Information in NYC Goods vs Services

What is a service and how is it different from a physical product we might purchase at the store? We'll examine how the 311 system acts as a service to the residents of New York City.

KEY CONCEPTS

The world we live in is shifting from a focus on products (objects and consumer goods) to the delivery of services such as museum visits, ATMs, grocery delivery, car sharing and home movies. As young people living in NYC, our students will already be familiar with the idea of community sharing of products and services but may be less familiar with how a designer impacts each service.

EXERCISE

With the help of a guest designer, students will work in teams to brainstorm ways to improve an existing service they already use. In a guided exercise, they will identify the service's touch points, where the consumer and service interact, and where they can make a tangible difference as a designer.

For Next Week: What is one thing you encounter every day that, if changed, would have a significant impact on your daily routine?

WEEK 7

Green Buildings Thinking about the Future

With concerns for the environment becoming a bigger topic in the design community, designers are addressing sustainability in every part of a product or service design. New York City is full of examples where designers have used technology to improve the environment in which we live.

KEY CONCEPTS

Designers possess a unique skill set that allows them to solve big problems. Design methods along with creative problem solving techniques give designers the capability to create and test innovative ideas. Critical and creative brainstorming skills will be utilized in the discussion of possible futures.

EXERCISE

Introduction to Final Project.

Final Project

In a team of 3–4 people, students will design a product or service for solving a problem they have observed or experienced in New York City. Students may choose from our list of suggestions, or think of their own ideas.

- Crowded public transportation
- Long lines...everywhere!
- Finding green places
- Commuting to school or work
- Signage, or lack thereof
- Utilizing the city's waterways
- Graffiti prevention, control and maintenance
- Classroom of the Future
- Lack of Public Spaces
- Access to fresh fruits and vegetables

For Next Week: Start to investigate your final project topic by observing the problem. Take notes, photos or video.

- Define ubiquitous computing and its implications for designers
- Use storytelling techniques to explain design concepts

GOAL

Understand the difference between a product as a material good, and a service, which is often an intangible good that impacts our behavior in similar ways.

LEARNING OUTCOMES

- Identify a service and its touch points
- Gain access to practicing designers
- Use storytelling techniques to explain design concepts

GOAL

To look at some creative problem solving methods that designers can use to approach problems of the present and future.

FINAL PROJECT OUTPUT

Create a poster and narrative in a format that best tells the story of your problem and solution. Consider the use of writing, comics, photos, video and more in your plan. While finding a solution to the problem is ideal, the most important thing is to fully investigate the problem and be able to clearly communicate your findings to the group.

WEEK 8

Project & 10 Minute Speaker

Work on Final Projects.

SPEAKER

TBD.

For Next Week: Continue to investigate your final project topic through observation and by talking to people involved. Take notes, photos or video. Begin to write a clear statement that defines the problem you've been observing. Come up with at least 10 ideas for how it might be solved. (They don't have to be your final ideas!)

WEEK 9

Project & 10 Minute Speaker

Work on Final Projects.

SPEAKER

TBD.

For Next Week: Create an image and a story that tells about your project's problem and a solution you'd like to propose.

WEEK 10

Reflection

In an informal setting, students will be encouraged to ask questions and critique and applaud each others' successes. We'll discuss other ways students might pursue their interest in design, including formal outlets such as college and university programs or professional organizations. We will talk about other informal resources like blogs and books.

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EXERCISE

Final project presentations.

GOAL

Students will have an opportunity to share the work they've completed in their final projects.

LEARNING OUTCOMES

- Students will feel confident to pursue additional research
- Use storytelling techniques to explain design concepts and projects
- Define interaction design, product, service