Lesson 2: Understanding Your User

Overview

Question of the Day: How can we make sure a product is meeting the needs of a user?

Designers need to understand their users' needs in order to create useful products. This lesson encourages students to think about how to design for another person by role-playing as someone else using a user profile and reacting as that user to a series of products. Each student is assigned a user profile describing a person, which they then use to choose appropriate products, critique product design, and suggest improvements to design.

Purpose

This lesson builds on the previous by asking students to not only consider that there *is* a user that products are designed for, but also empathize with those potential users. Throughout this unit, students will work to apply the problem solving process from Unit 1 to problems for other people. Empathy is a key element of this kind of user-centered design and a difficult skill for students at this age to master.

Assessment Opportunities

1. **Critique a design through the perspective of a user profile.**

   Activity Guide, page 1: Students should connect the information in the user profile to their predictions about the user's preferences.

2. **Design improvements to a product based on a user profile.**

   Activity Guide, page 2: In the first discussion question, students should make explicit connections between the user profile and their added features.

Standards

Full Course Alignment

CSTA K-12 Computer Science Standards (2017)

- **CS** - Computing Systems

Agenda

Objectives

Students will be able to:

- Critique a design through the perspective of a user profile.
- Design improvements to a product based on a user profile.

Preparation

- Print out enough user profiles for all students, ensuring as much variety as possible
- Print an activity guide for each user
- Prepare prompt questions for warm up exercise
- Label four corners of the room as A, B, C, and D
- Arrange room in table groups of 4, and place a number on each table group (1, 2, 3,...)

Links

Heads Up! Please make a copy of any documents you plan to share with students.

For the teachers

- **CSD Unit 4 - The Design Process** - Slides

For the students

- **Profile 1** - User Profile
- **Profile 2** - User Profile
- **Profile 3** - User Profile
- **Profile 4** - User Profile
- **Reacting as your User** - Activity Guide

Vocabulary

Warm Up (5 minutes)
Journal

Activity (35 minutes)
Think Like a User

Wrap Up (5 minutes)
Journal

- **Usability** - How easy, efficient, and satisfying it is to use a human-made object or device (including software).

Teaching Guide

Warm Up (5 minutes)

Journal

Prompt: Let's think about products that look good vs products that are easy to use.

- Can you think of any examples of a product that looked good but was hard to use?
- What about something that was easy to use, but you didn't like how it looked.

Discuss: Have students journal their thoughts. As they share with their neighbors what they wrote, ask them to also discuss whether they care about a product being usable or looking good. After a couple of minutes allow a couple of partners to bubble up what they discussed.

Discussion Goal

Goal: Highlight that there are many kinds of user needs that we need to empathize with as designers. In particular call out that usability of a product is an important and separate consideration from whether it is merely aesthetically pleasing.

Remarks

> Clearly we have a lot of needs when using products. The *usability* of our designs will affect whether a user can use the product in the first place. However, If a product isn't attractive, it may never be used at all. As we think more about designing for other people, we'll want to have many different kinds of needs in mind.

Question of the Day: How can we make sure a product is meeting the needs of a user?

Activity (35 minutes)

Distribute: a User Profile handout to each student. Try to vary the user profiles within student groups so they are not all the same.

Teaching Tip

Reducing Printed Materials

The User Profiles are used for reference only. Students can look at digital versions during this activity. Assign each student a link, rather than handing out the actual profiles.

If you choose to print out the user profiles, they can be reused, as long as the students are told not to write on them.

Remarks

> Take a few minutes to read over your assigned user profile - you'll need to "get in the head" of your user for our activity today. In fact, for the rest of the day you will be learning to empathize with you users, and respond to situations as your users might.

Circulate: Give students a few minutes to read over their profiles, encouraging them to think like their assigned user, almost like they are playing a role in a movie or play. For the rest of the day students will be attempting to empathize with their users and respond to situations as their users should

Think Like a User

Display: The next three slides contain different choices for the same product - a pet, a backpack, and a car. For each slide, ask students to choose a corner based on which picture *their user* would be drawn to. Then have students walk to the corner (A, B, C, or D) that they have chosen to discuss with other students.

Share: Have the groups in each corner briefly discuss (1-2 minutes) why they think their user is drawn to this version of the product. Have one or two students or groups share what they discussed with the whole class. Repeat this for each of the slides.

Group: After repeating this activity for all the objects in the slides, place students in groups of 3-5 based on their assigned user profile - students with the same profile will be working together through the next activity.

Distribute: Hand out copies of the activity guide to each student.

Teaching Tip

Reducing Printed Materials

Online Option: The Activity Guide can be completed online. Students can "circle" their chosen ratings by putting a border around them, or by typing the rating in the box. For the chair design, students can either draw their design online or submit a paper version of their design separately.

Journal Option: This activity can be completed as a journal entry. Students can use a digital version of the Activity Guide as a prompt, copying the charts and questions into their journals.

Tip: Multiple windows or tabs open on the same computer can be confusing. Have groups work together with one computer displaying the User Profile while another displays the Activity Guide.

Reacting as Your User

Display: The next three slides contain different products for each user group to react to - waterproof boots, a bicycle, and chocolate cupcakes. Students will react to each product as their user by filling out a row in the activity guide. The guide asks students to make a distinction between the *usability* of an item for their user and whether a user likes or dislikes it. You may want to go through the first one as a group so you can model that a product may be aesthetically appealing, but not very usable, or usable but not aesthetically appealing.

Teaching Tip

Adapting the Activity: The provided slides include several products already, but you could add some additional products and images that you think will resonate with your students.

Circulate: Monitor students as they complete the activity guide, ensuring that they are taking on the role of their user rather than reacting to the product as themselves. Remind students that this is an intentional part of the activity - to see the world through the eyes of another person rather than just themselves.

Assessment Opportunity

On the first page, check that students' reasoning includes references to the user profile and reasonably connects the description of the user to the preference that the student has chosen.

On the bottom of the second page, check that students have made explicit connections between the user profile and the features that they have added to their chair.

Share: Have a few groups share out their reactions to each product.

Display: The final slide contains a table with several chairs, which is used for the second page of the activity guide. Students can work individually on the second page, which asks them to consider which of the chairs displayed best fits their user. After reflecting on the features that lead them to choose a specific chair, students have a space to design an even more appropriate chair for their user. This is a creative activity, and students can choose to approach it in whatever way is most expressive for them, including drawing their design.

Share: Circle around the room to share some of the chair designs, prompting students to define what specifically makes their design a better choice for their user.

Wrap Up (5 minutes)

Journal

Prompt:

- What were 3 things about your user that were different from you personally?
- What were 2 times that you found it hard to empathize with your user?
- What was 1 thing you think your user would really like about the chair you designed?