Lesson 2: Defining the Needs of the Users
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Grade Level(s)

Biology 9-10

Lesson 2 Overview

Students will work in small groups to interview one of the three users of the open space (City Developer, Neighborhood Resident, and Environmental Conservationist) into order to gather information to create an empathy map. Students will then use their empathy maps to generate a Point-of-View Statement.

Learning Objectives

- Students will develop speaking and listening skills while interviewing their user
- Students will learn how to create an empathy map and POV statement for their user

Standards

Utah Biology Standards

Students will understand that living organisms interact with one another and their environment.
Objective 1:   Summarize how energy flows through an ecosystem.
Objective 3:   Describe how interactions among organisms and their
                      environment help shape ecosystems. (Standard 1)

Next Generation Science Standards

Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. (MS-LS2-1)

Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. (MS-LS2-2)

Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations. (MS-LS2-4)

Evaluate competing design solutions for maintaining biodiversity and ecosystem services. (MS-LS2-5)

Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. (CCSS.ELA-Literacy.WHST.9-10.1.c)

Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. (CCSS.ELA-Literacy.WHST.9-10.8)

Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively. (CCSS.ELA-Literacy.SL.9-10.1)

Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence. (CCSS.ELA-Literacy.SL.9-10.3)

Preparation

For the interview process:
- Identify and contact the City Developer or a representative for your city.
- Identify and contact residents.
- Identify and contact local environmental/climate change experts.

Materials and Resources

- Copies of Empathy Map Diagram
- Copies of Three-Column POV Template

Activity 1: Creating User Groups (*25 minutes*)

- Assign students into small groups of three or four. Each group of students will represent a specific user (City Developer, Resident, and Environmental Conservationist). We will call these groups the "Empathy Groups." Although students will join new groups for the ideate and prototype process, students will ultimately return to their empathy groups to offer feedback.
- There will be multiple groups representing each user. Individually have each student generate a list of questions that are relevant to the situation in regard to the user they have been assigned. Have students work in their Empathy Groups to compare questions, eliminate repetitive questions or develop deeper questions from the simpler questions already created.

Activity 2: Interview the User (*35 Minutes*)

- Student groups will interview a specific user. If possible, make arrangements for three separate rooms to allow all three interviews to occur simultaneously.

Activity 3: Empathy Map Creation (*30 Minutes*)

- Students will use interview notes to complete the **Empathy Map Diagram** for their user

Activity 4: POV Statement (*30 Minutes*)

- Student groups will consider the information they added to their **Empathy Map Diagram** to complete the **Three Column POV Template** and then generate a POV statement.

Troubleshooting

It will be a challenge to have three different interviews occurring at the same time. It will be important to provide separate locations for each interview to take place in. It will also be important to obtain additional adult supervision so that each room has a responsible adult attending.

Assessment

Student groups will complete an empathy map and POV statement specific to their user.