

Title: How Have Human Impacts Changed Over Time?

Time: 60 minutes

Description: In this lesson, students will learn how typical living conditions for humans have changed over time. They will examine a specific area of human habitation, then share and discuss what they learned with other students in a jigsaw group.

Objectives:

- Students will identify specific examples of the ways humans have changed their habitation over time
- Students will describe the positive and negative effects of changes in habitation for humans and for the environment
- Students will discuss why features of habitation have become more elaborate and resource-intensive while basic needs have remained largely the same

Standards:

NSE (Science)

2. Principles and theories of physical science: structure of atoms, structure and properties of matter, chemical reactions, motions and forces, conservation of energy and increase in disorder, interactions of energy and matter

3. Principles and theories of life science: cell, molecular basis of heredity, biological evolution, interdependence of organisms, living systems, behavior of organisms

4. Principles and theories of earth and space science: energy in the earth system, geochemical cycles, origin and energy of the earth system, origin and evolution of the universe

6. Means to understand and act on personal and social issues: personal and community health, population growth, natural resources, environmental quality, natural and human-induced hazards, science and technology in local, national, and global challenges

NCSS (Social Studies)

2. Time, Continuity, and Change: study of the past and its legacy

8. Science, Technology, and Society: study of relationships among science, technology, and society

Materials:

- Transparency #7 Habitation Features Over Time Guided Notes
- Handout #1A: Food preparation area, Handout #1B: Bedroom, Handout #1C: Bathroom, Handout #1D: Building material, Handout #1E: Exterior of the home

Background: This lesson helps students understand that human lifestyles aim to meet needs that are far beyond the goal of survival. Humans have prospered in recent history, and have learned how to create living conditions far superior to those of our ancestors in terms of addressing both basic and additional needs. These have become more elaborate and resource-intensive over time with multiple effects. Students will begin to understand that there is both a positive and negative impact to technological advances in habitation.

Do Now: Have students create two lists in their notebooks. In the first, they should identify ten things they believe they could not live without. In the second, they should pretend they are living 15,000 years ago when people were nomadic hunter-gatherers and identify ten things they believe they could not live without.

Mini-Lesson:

1. Direct the students' attention to the homework.
2. Have students share their Do Now responses by collecting their ideas on a T-chart. Write "Present" on one side of the chart and record items from the first list. Write "Past" on the other side and record items from the second list.
3. Have students compare and contrast the items on the two lists by facilitating a brief discussion. Ask, *What types of things did people need 15,000 years ago and what needs did they fulfill? What types of things do people need today and what needs do these items fulfill? What changes do you see between the two lists and what might explain these changes? What things on the lists remain the same and what might explain this?*
4. Explain to students that they are going to work in groups to examine changes in specific areas of habitation over time. They will become experts on one topic, and then form new groups to share what they learned with other students.

Activity:

1. Divide students into five groups and assign the following topics:
 - Group A: Food preparation area/kitchen
 - Group B: Sleeping chamber/bedroom
 - Group C: Bathroom
 - Group D: Building material for home
 - Group E: Exterior of the home
2. Project *Transparency #7: Habitation Features Over Time Guided Notes* and review the directions with the students. Have students create the matrix in their notebooks.
3. Provide each group with their corresponding handout (**Note:** see materials list). Have them examine the information individually to complete their notes. Then, students should discuss their ideas with their group members and add to their notes. Allow adequate time (about 15 minutes) for groups to prepare their notes.
4. After all groups have completed their notes, tell students that they are now "experts" on their topic and will share what they learned in a new group. Form new groups consisting of one member from each of Groups A-E. One at a time, students should share their notes with their groups. Group members should use this information to record notes on the other topics.
5. If time allows, have students report out for each topic. Have students share what they learned on a topic other than the one for which they served as the "expert" for their group.
6. Hold a class discussion. Ask,
 - *What do you think is the most interesting change humans have made to their habitation over time? What is most important?*
 - *How are these changes in features possible? What resources and time are necessary?*
 - *If our basic needs (food, water, shelter) have remained largely unaltered over time, why do you think habitation features have become more elaborate and resource-intensive?*
 - *What is the most significant positive effect of these changes for humans and for the environment? What is the most significant negative effect?*
 - *Are there more positive or negative effects of these changes in habitation features?*



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Assessment: Have students complete an Exit Slip in which they summarize in a paragraph the modifications, positive effects, and negative effects for a topic other than their original one. They should conclude with a sentence stating whether or not they believe there are more positive or negative effects and why.

Homework: There is no related homework for this lesson.

Modifications:

- Model the activity for one of the five topics by completing the process for the notes and discussion as a class. Then, divide students into four groups and assign the remaining topics. Follow the procedures to complete the activity. [SN]
- Complete the activity as a class. Have students examine the information for the first topic, and then complete the notes together as a class. Repeat this process for the remaining four topics. [ELL]

Extensions:

- Students can create models of the various structures.