

# **Kingdom Vacation - Day 6** (50-minute class period)

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## **Grade Level(s)**

7th grade Science

## **Lesson Overview**

Students will plan and built a prototype to represent the ideal vacation for their kingdom.

## **Learning Objectives**

Students will organize, synthesize, and produce a prototype based on their collective brainstorm from the day before.

## **Standards**

Standards (Utah Science Grade 7):

- Objective 3 - Classify organisms using an orderly pattern based upon structure.
  - o Identify types of organisms that are not classified as either plant or animal.
  - o Arrange organisms according to kingdom (i.e., plant, animal, monera, fungi, protist).

Learning Goals:

- Academic: Students will be able to. . .
  - o Define research/interview questions
  - o Organize information according to organism need
- Socio-affective:
  - o Build empathy for non-human organisms
  - o Interact productively in groups towards shared generation of a novel product

## **Preparation**

- Bring in as many crafting and building materials as possible for prototype building

- Consider the role and consequence of anthropomorphizing non-human organisms. The goal of the challenge is to increase empathy and identification with each kingdom by deeply considering the needs of each. At points, it is important to remind students that these are non-human organisms, and because of this we can never be certain about what they feel or want (but that this uncertainty should only motivate more concern and stewardship on the part of humans).

## Materials and Resources

Students need:

- as many and as diverse a collection of crafting materials as possible

Teacher needs:

- timekeeping device
- room(s) set up for effective prototyping (maximum group-centered table/floor surface)

### Activity 1: Organize your Ideas (10 minutes)

Ask students to, in teams, organize their brainstormed ideas by physically moving their sticky notes into columns, a web, or some other visual demonstration of relationship. They may choose the categories and methods of organization, but each group member should be able to explain why each note is where it is. To maintain equitable cognitive and physical access to the task, students may *only move their own* sticky notes.

### Activity 2: Prototype! (40 minutes)

Groups build their ideas using the materials provided. Each group member knows what they are building, and can directly link the component of their design on which they are working to the needs statement. (You may want to clarify these expectations before releasing the class to build, and you may want to write them on the board as a reminder.)

## Troubleshooting

*Activity 1* - Depending on your class culture, consider clarifying the reality that there is too much to do in too little time, and too many ideas for anyone to take over or not contribute.

*Activity 2* - 40 minutes to prototype is difficult, especially for your students who struggle with perfectionism. Decide if this is something you'd like to address, and, if so, do so by acknowledging "representational" and "draft" qualities of a prototype.

## Assessment

Evidence of successful student achievement:

- A prototype that models the ideal vacation for a given kingdom based on the needs statement, with each group member able to articulate the components they designed and how they connect to the needs statement and/or information gained from the interview and research.