

Chapter 24 Project

Draw a Fungal Jungle

Project Goal + Timeline

In this project, we will be reviewing your knowledge of the kingdom Fungi by creating a poster depicting a mushroom's role in its ecosystem. This project should be completed by yourself or with a group.

Directions

Part 1: Mushroom Ecosystem Poster

To start, choose a mushroom species and at least two other organisms, such as insects, plants, or animals, to make up your ecosystem. Select species for which you can easily explain their ecological relationships to the mushroom.

For your poster's images, you must make them yourself. Either (a) draw the images or (b) create the images yourself using a computer program.

Develop a two-color label system using your colored paper. Make labels as instructed and then attach them to the poster. Color #1 will be for names, such as species and the terms of anatomical structures. Color #2 will be for adding explanations and details and answering specific questions. For reference, write those colors in the table.

Color #1 (Use for Names)

Color #2 (Use for Explanations)

Instructions for your ecosystem's mushroom:

- Choose a specific mushroom species. You cannot choose generic mushrooms.
- Include the following structures: mycelium, thallus, hyphae, and spores.
- Include any structures that allow for the mushroom's reproduction.
- Using label color #1, label your mushroom figure with the common and scientific names and indicate its phylum. Then, label the mycelium, thallus, hyphae, spores, and reproductive structures.
- Using color #2, indicate three features characteristic of the kingdom Fungi on your mushroom. Then indicate one feature characteristic of this mushroom's phylum.
- Using color #2, create a second label for the mycelium. This label should detail the mycelium's composition and explain the mycelium's role in the mushroom's mode of nutrition.
- Using label color #2, create a label to indicate and explain the mushroom's mode of reproduction.

Instructions for the rest of your ecosystem:

- Your model must include at least two other life forms to make up a simple ecosystem. These two organisms can be any type of life form—plant, microbe, animal, or otherwise.
- Feel free to depict these two organisms as living or dead, whichever is more relevant to their relationship with the mushroom.
- Using label color #1, specify both species' common and scientific names.
- Using color #2, explain the ecological relationship between each species and the mushroom. Use arrows to reinforce these relationships. The ecological connection can be either (a) specific to this exact species or (b) a nonspecific link (such as a general decomposition relationship). However, the indicated relationship must be different for the two species.
- Complete your ecosystem's landscape. Depict grass, sand, or other backgrounds to complete the terrain. The finished product should be an entire landscape, not just a simple picture of a mushroom and two life forms.

Part 2: Review Questions

Complete this project by answering the following critical thinking questions.

1. List the five fungi phyla and describe each in terms of a major representative species.
2. What is one example of fungi's implications on agriculture?
3. What is one example of fungi's implications on pharmaceuticals?

Project Materials

- 1 poster board
- Drawing supplies
- Glue and/or tape
- Paper in two colors (for labels)
- Pen

 Student Checklist

- ☐ Complete poster images
- ☐ Label poster with both label colors
- ☐ Complete the review questions