

LESSON 4: Fungal History

Unit Theme: Historical Uses of Fungi

Conceptual Lens: Folklore

Concepts: Symbolism, Anecdotes

Vocabulary (Students should look up these terms prior to the lesson):

[Antibiotic](#)

[Medicinal](#)

[Homeopathic](#)

Enduring Understandings:

- Fungi have many uses beyond being edible.
- Some mushrooms are extremely poisonous.
- Many cultures use fungi as a daily therapeutic treatment.
- Some groups have developed superstitions about certain mushrooms because of folklore.

Guiding Questions:

1. Do we use mushrooms or any other types of fungi in medicines or treatments?
2. Do mushrooms have a bad reputation for being dangerous in our region?
3. Are mushrooms good to eat? Are they nutritious?

Critical Content:

Fungi have long been at the center of controversy and misunderstanding. Because of folklore and literature, and the truths about poisonous mushrooms, many cultures have developed anecdotal stories about the dangers of mushrooms. However, many cultures also use fungi medicinally, including our own; penicillin is one of the most widely used antibiotics and its made from a mold called *penicillium notatum*. And let's not forget their many uses in food...yum!

Skills:

Illinois: Language Arts 5A, 5B; History 16A

National: Technology 5; Science G3; Language Arts 7, 8

Instructional Activities & Methods:

1. Ask students what pops into their heads when you say 'mushroom'? What is the image they first see? Have them draw it as your discussing the history. Research shows that most people think of the Fly Agaric (*amanita muscaria*), even though most people do not know the common name for it, the red cap with the white spots. Why do you think that is?
2. Show the painting "Advice from a Caterpillar" by Gwynedd Hudson. Can we think of other mushroom symbols or ways that mushrooms are used in our culture? **(Be**

prepared. Most students will know about the psychotropic effects of some mushrooms. This might be a good ‘teaching moment’ to discuss drug use or paranoia about mushrooms.)

Culminating Performance Assessment:

What? Research an issue about fungus to determine whether it is fungal history or fungal folklore.

Why? To understand the cultural, medicinal, nutritional and political history of Kingdom Fungi.

How?

Have students choose a topic from the Fungal History or Fungal Folklore list. Add to this list if you have other ideas, but make sure that YOU can find at least 3 sources. They should research their topic and write up their report according to the research guidelines. Or, if you have a creative group, have them write their own mushroom stories. Encourage them to include drawings of the types of mushrooms in their stories and why they chose them.

You may want to have students present their research papers to the class, in a mock-seminar style that scientists often use.

Assessment Codes: WS, P

Credits:

British Mycological Society and BBSRC, “How the Mushroom Got its Spots”
Advice from a Caterpillar © 1922 Gwynedd Hudson



Advice from a Caterpillar © 1922 Gwynedd Hudson

Fungal History or Fungal Folklore?

Topics List

1. Ancient Egypt (3000 B.C.) – Only the Pharaoh may eat mushrooms
2. Ancient Rome (54 A.D.) – Agrippina used mushrooms to kill Emperor Claudius
3. Italy (Neolithic era- 3300 B.C.) - Oetzi the Ice Man used *Fomes fomentarius* for firewood
4. Salem, Mass. (1692) – *Claviceps purpurea* the cause of “bewitchment”
5. Germany (19th century) – Dragons flying in circles create ‘fairy rings’ as stools for fairies
6. Central Europe (18-19th centuries) – Who put the Fly Agaric in Christmas?
7. England (1922) – Sir Alexander Fleming uses mold to create antibiotic
8. Paris (1983) – Fungi close down Eiffel Tower
9. Ireland (1845) – *Phytophthora infestans* causes nearly 1 million deaths as a result of hunger and disease
10. China (last 2,000 years) – *Ganoderma lucidum* popular remedy
11. North/South/Central Americas – Is Amanita the sources of shamanic visions?

*** Or see if you can find your own fungal story to research!

Research Guidelines for Fungal History or Fungal Folklore

- Describe your topic in terms of who, what, why, where and when.
- Summarize the problem or consequence with the fungi in this topic.
- Demonstrate how your fungi could or could not have been the reason for the topic (i.e. is it poisonous?)
- Explain your findings and where you found your sources.
- Integrate what you've discovered with your own opinions on the matter.
- Evaluate whether or not this topic is fungal history or fungal folklore. (i.e. did it really happen? Was your topic used to teach people an idea or warning?)

Remember:

- Your paper should be between 2-3 pages long.
- You must use at least 3 primary sources in your research.
- Cite your sources!!