

# MICROORGANISMS

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## OBJECTIVES/RATIONALE

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Many microorganisms are pathogenic, however some are beneficial. The student will identify characteristics and diseases caused by the protist groups.

TEKS 121.14 5C

TAKS ELA 1, 4  
Mathematics 8  
Science 1, 2

National Science Education Standards A9-12; C9-12; E9-12; F9-12

National Health Care Skills Standards .01, .07, .09

National Curriculum Standards for School Mathematics S11

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## KEY POINTS

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- I. Protist groups
  - a. bacteria
  - b. fungi
  - c. viruses
  - d. protozoa
  - e. rickettsias
  - f. helminthes
- II. Beneficial microbes
  - a. Streptococcus Lactis
  - b. Penicillan
- III. Diseases caused by protists
  - a. Strep throat
  - b. Athlete's foot
  - c. AIDS
  - d. Rocky Mountain Spotted Fever
  - e. Giardia
  - f. Hook worm

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## ACTIVITIES

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- I. Complete the **Protist Groups Laboratory Investigation**.
- II. Complete the **Microorganisms Worksheet** and discuss answers in cooperative groups.
- III. Participate in the **Microorganisms Game**.

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## MATERIALS NEEDED

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3x5 index cards  
Pens, markers  
Prepared slides of protist groups  
Microscopes  
Gloves  
Laboratory coat or apron  
Goggles  
Biohazard containers  
Surface disinfectant  
Paper towels

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### **ASSESSMENT**

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Member of a Team Rubric

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### **ACCOMMODATIONS**

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For reinforcement, the student will design a poster to depict the physical characteristics of each Protist group.

For enrichment, the student will read and review on the movie or book <Outbreak>.

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### **REFLECTIONS**

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## Microorganism Worksheet

	Definition	Characteristics	Mode of Transmission	Diseases Caused	Identification	Beneficial/Harmful
Bacteria						
Viruses						
Fungi						
Yeast						
Molds						
Protozoa						
Rickettsias						
Helminthes						

## **Microorganism Game**

### **Question Development**

1. Divide class into teams and assign each team a Protist group (bacteria, fungi, viruses, protozoa, rickettsias, and helminthes)
1. Each team will prepare questions about significant facts for their assigned Protist groups.
2. Group will create cards with questions and correct answers and assign point values from 100-1000.

### **Game**

#### **Computerized Jeopardy Template**

1. Reassign the class into mixed abilities teams.
2. During the game a caller will ask questions to each team. Teams will choose from Protist groups (bacteria, fungi, viruses, protozoa, rickettsias, and helminthes) and will be asked the question for that particular point value.
3. Game is conducted similar to a “Jeopardy Game”

#### **NOTE**

Students will get loud during this activity!

# **PROTIST GROUPS LABORATORY INVESTIGATION**

**NAME:**

**DATE:**

**PURPOSE:**

In this laboratory investigation, the student will examine and study prepared slides of different Protist groups.

**BACKGROUND INFORMATION:**

**MATERIALS:**

Prepared slides of Protist groups

Microscope

Gloves

Laboratory coat or apron

Goggles

Biohazard containers

Surface disinfectant

Paper towels

**PROCEDURE:**

1. Wash hands and put on gloves and goggles.
2. Assemble equipment and materials.
3. Prepare work area.
4. View prepared slides of Protist groups
5. Clean work area with surface disinfectant. Remove goggles and gloves and wash hands.

**DATA:**

Draw and label Protist cells

**CONCLUSION:**

1. Compare and contrast the protist cells.
2. Under what situations can beneficial organisms become harmful?
3. Explain how microbes are used in food and industry.