

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Pakistan School  
Kingdom of Bahrain

# Microorganisms & Diseases 3

GRADE: 9TH

# RULES OF THE CLASS

- ❖ Be on **time**
- ❖ Enter the class with your **name** and **CPR number**
- ❖ **Respect** all participants
- ❖ Do **not** create any disturbance
- ❖ **Raise your hands** for questions (the teacher will respond when the time is suitable)
- ❖ Pay **attention** to the teacher
- ❖ Follow the **time table**

# Objectives:



By the end of the lesson, the students will be able to describe the ways to protect from germs and diseases:

1. Sterilization
2. Pet animals
3. Isolation
4. Cleanliness
5. Water supply
6. Sewage disposal
7. Immunization & antibiotics



A collection of medical supplies is arranged on a dark, textured background. In the foreground, several pairs of nitrile gloves in white, teal, blue, and purple are laid out. To the left, a teal surgical mask is partially visible. Scattered around are several glass vials with white caps, some containing a clear liquid, and a syringe with a needle. The word "Protection" is centered in a bold, white, sans-serif font.

**Protection**

# Protection From Germs & Diseases

Microorganisms or germs are present all around us in the air, water and soil

We can save ourselves from these germs by observing the following precautions

## 1. Sterilization:

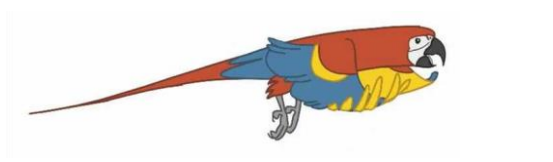
- ❖ Most germs get killed by **boiling water** (hence, raw milk is boiled before using)
- ❖ Surgical instruments must be **sterilized** before use otherwise there is chance of infection
- ❖ **Disposable** syringes must be used





## 2. Pet Animals:

- ❖ Animals carry germs of diseases, they must be **washed regularly**
- ❖ Animals carrying diseases must be **killed** and buried in the soil
- ❖ Pet animals are **vaccinated** so they become immune to diseases



## 3. Isolation:

- ❖ Patients suffering from **infectious diseases** are isolated from the rest of people
- ❖ Their **clothes** and **utensils** are also isolated
- ❖ This helps **save lives** and the health of the rest of society



## 4. Cleanliness:



- ❖ An effective and simple way to live healthy is by keeping yourself **clean**
- ❖ **Bath** regularly, **wash hands** before every meal, brush your **teeth** and keep your **surroundings** clean
- ❖ Germs grow in **dirty** places

## 5. Water Supply:

- ❖ **Water** is a major source for spreading of germs
- ❖ **Boiled water** kills all germs and becomes suitable for **drinking**



## 6. Sewage Disposal:

- ❖ **Proper disposal** of sewage is essential to keeping areas clean
- ❖ Otherwise, it **mixes** with drinking water and food which is **dangerous** for our health

## 7. Immunization:

- ❖ Proper use of vaccines especially at infancy makes the body **immune** against many fatal diseases





## 8. Antibiotics:

- ❖ A type of medicine that **kills** or stops the **growth** of germs
- ❖ Antibiotics have saved mankind from various fatal diseases
- ❖ Use of antibiotics should be under **medical advice**



# Smoking: A Bad Habit

Smoking is injurious to health, it causes several **fatal diseases** and must be **discouraged** at all levels

When smoking, we inhale **toxic** gases into our lungs which then diffuse into the blood and get taken to all parts of our body

Smoking causes the following **diseases**:



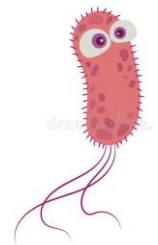
# 1. Respiratory Diseases:

- ❖ The disease of the **throat**, **windpipe** and **lungs** are called respiratory diseases
- ❖ It may also cause **cancer** of lungs

# 2. Heart Diseases:

- ❖ People who smoke have higher chance of getting a **heart attack** and other **cardiac disorders**
- ❖ **Cancer** **blood pressure** & **skin diseases** are also caused by smoking





## Bacterial Diseases

- ❖ Tuberculosis - Mycobacterium
- ❖ Whooping cough - Bordetella Pertussis
- ❖ Diphtheria - by corynebacterium diphtheriae
- ❖ Tetanus - by clostridium tetani
- ❖ Typhoid - salmonella typhi
- ❖ Cholera - by vibrio cholera bacteria

## Viral Diseases

- ❖ Smallpox
- ❖ Poliomyelitis
- ❖ Influenza
- ❖ Measles
- ❖ Aids
- ❖ Hepatitis





# Other Important Diseases

1. **Cancer** - by drugs, chemicals, smoking etc
2. **Malaria** - by Plasmodium falciparum
3. **Ringworm** - by a fungus
4. **Ascariasis** - by Ascaris lumbricoides
5. **Threadworm** / **Pinworm** - by threadworm



A stylized illustration in a dark purple color scheme. In the background, there are several large, interlocking gears. Overlaid on these gears are silhouettes of people in various poses: a person on the left, a person in the center with arms raised, and a person on the right in a dynamic pose. The word "ACTIVITIES" is written in large, white, bold, sans-serif capital letters across the middle of the image.

# ACTIVITIES

# **ACTIVITY 1:**

## **Fill In The Blanks**

- 1) We must use \_\_\_\_\_ syringes.
- 2) Raw milk contains germs including \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
- 3) \_\_\_\_\_ helps to save the life and health of the family members.
- 4) Proper disposal of the \_\_\_\_\_ helps in keeping the area clean.
- 5) Water is one of the major \_\_\_\_\_ for the \_\_\_\_\_ of germs.

# **ACTIVITY 2:**

## **True / False**

- 1) If sewage is not properly disposed off, it mixes with drinking water. \_\_\_\_\_
- 2) Proper immunization of the infants prevents them from diseases. \_\_\_\_\_
- 3) Antibiotics do not kill the growth of bacteria. \_\_\_\_\_
- 4) Pet animals do not carry the germs, like E.coli (a bacteria). \_\_\_\_\_
- 5) Most of the germs are killed by sterilization. \_\_\_\_\_





**FINALLY...**

# PLENARY: MCQS

1) Most of the germs are killed in water which has been:

- a)** boiled                      **b)** cooled down                      **c)** kept at room temperature **d)** frozen

2) Smoking can cause the cancer of:

- a)** mouth and lungs   **b)** liver only                      **c)** stomach                      **d)** blood

3) The medicines that kill the bacteria are called:

- a)** anthelmintic              **b)** antibiotics                      **c)** antivirals                      **d)** antifungal

4) The diseases of throat, windpipe and lungs are called:

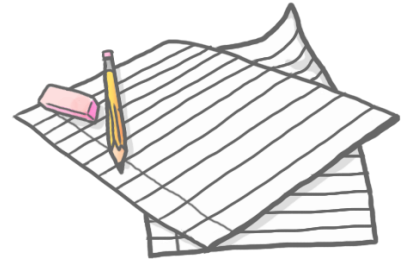
- a)** heart diseases    **b)** digestive tract diseases   **c)** respiratory diseases **d)** spinal diseases



# HOMEWORK

**Q1)** How can we protect ourselves from germs?

**Q2)** Describe why is smoking a bad habit.



السَّلَامُ عَلَيْكُمْ وَرَحْمَةُ اللَّهِ وَبَرَكَاتُهُ

**CLASS IS OVER!**



**YOU ARE DOING GREAT, MASHA'ALLAH!**

**SEE YOU NEXT CLASS INSHA'ALLAH!**