

# Diseases Teacher Guidance

This fun power point can be used as a starter or plenary when learning about diseases.

The quizzes reveal hidden pictures. To reveal the picture, pupils are required to answer the questions on the slide. Pupils can either choose a number or there is a 9-sided virtual dice available on the internet.

The answers to the questions are shown below. There is some repetition with some of the questions to reinforce certain facts that pupils often forget.

## Picture 1 – Edward Jenner

1. What is a pathogen?

**A micro-organism causing disease.**

2. Define the term non-communicable disease.

**These diseases cannot be passed from one organism to another.**

3. State three facts about bacteria.

**Very small, produce toxins, reproduce rapidly and damage cells and tissues.**

4. Name five ways diseases can be transmitted.

**Water, air vectors, body fluids, food, contact.**

5. How does tobacco mosaic disease affect plants?

**Makes leaves discoloured and therefore cannot photosynthesis well.**

6. Why is an ELISA test used?

**A method of identifying pathogens in plants.**

7. Name three ways the human body tries to prevent the entry of pathogens.

**Skin, production of mucus, tears, hydrochloric acid.**

8. How do vaccinations work?

**A weakened form of the disease is injected into the body and white blood cells produce antibodies to destroy the disease. The cells remember the pathogen and if it enters the body again they can produce the antibodies very quickly.**

9. What are double blind tests?

**When neither the doctors or patients know who is taking the drug or placebo.**

## Picture 2 – Virus

1. Name the four types of pathogen.

**Bacteria, viruses, protists, fungi.**

2. Define the term communicable disease.

**Communicable disease can be passed from one person to another.**

3. What is HPV?

**A virus that infects the skin and cells that line the body cavities.**

4. State three facts about viruses.

**Extremely tiny, they replicate inside cells causing them to burst releasing the virus.**

5. Name a disease transmitted by drinking dirty water.

**cholera**

6. Name four ways the spread of disease can be prevented in humans.

**Vaccination, killing vectors, washing hands, isolating individuals.**

7. Name two plants that naturally produce antibacterial chemicals.

**Mint and witch hazel.**

8. What are saponins?

**Chemicals that destroy cell membranes of fungi.**

9. What acid does the stomach produce?

**Hydrochloric Acid**

## Picture 3 - Fungi

1. What type of cells are protists?

**eukaryotic**

2. Name a disease spread by animal vectors.

**malaria**

3. What are blind tests?

**The patients do not know who is taking the drug and who the placebo.**

4. What parts of the body does CVD effect?

**Heart and blood vessels.**

5. What are statins?

**Medication which reduce the amount of cholesterol in the blood.**

6. What is the PCR test?

**To find out if part of the pathogen DNA is present.**

7. State three facts about fungi.

**Single celled, contain hyphae, produce spores.**

8. What are the effects of crown gall disease?

**These cause growths on the plant restricting the flow of water.**

9. Name four ways the spread of disease in plants can be prevented.

**Chemical and biological control; crop rotation and destroying infected plants.**

## Picture 4 – Bacteria

1. Name two diseases spread by air.

**Flu, TB, chicken pox.**

2. Why should the complete course of antibiotics be taken?

**To ensure all the bacteria are destroyed.**

3. Describe how to carry out aseptic techniques.

**Disinfect work surfaces, sterilise glass wear. Place the inoculating loop through the Bunsen burner to destroy microbes. Flame the neck of the glass wear containing the bacteria; work quickly and efficiently.**

4. What is a placebo?

**A fake drug.**

5. What are monoclonal antibodies?

**These are clones of antibodies.**

6. Name four lifestyle factors that can lead to non-communicable diseases.

**Diet, lack of exercise, alcohol, smoking.**

7. State three ways white blood cells destroy pathogens.

**Producing antibodies, antitoxins, or engulfing them.**

8. What are antihypertensive drugs?

**Help reduce blood pressure.**

9. Name the four types of pathogen.

**Bacteria, viruses, protists and fungi.**