

## BIOLOGY MODULE- ROUGH PLAN

**THEME: Victorian era (Industrial Revolution and Crimean war)**

**Duration: 2 days**

Background:

In the year 2025, a group of doctors are working in infectious disease research accidentally activate the prototype time machine they created to observe historical disease evolution, instead of observing the Victorian era through simulation they are transported to 1850s in the midst of Industrial Revolution and Crimean war. The stranded doctors have no other way to get back than to prove their trust to the Victorian society to get help in getting back.

**DAY 1 (4 hours) :**

People across the city are getting sick, no-one knows why and the local physicians keep blaming ‘the bad air’ The doctors are supposed to prove that it's more than a bad air through their expertise in diagnosis and hands on experiment.

**Phase 1 (around 40 minutes)**

**Each team receives:**

**3 Case files, 1 interview sheet,**

3 patients are lying in the Victorian infirmary, The team has to go through the case file, which includes their symptoms, background information like diet and environment in 10 minutes and then have to interview the patients from the question sheet provided.

The 3 diseases would be Cholera, Typhoid fever or small pox) Tuberculosis

**Submit a preliminary diagnosis with reasoning (30 points)**

Phase 2 ( 1hr 15 minutes)

**They have to perform 3 experiments, To prove the diseases they identified scientifically (30 points)**

Experiment 1 ( PH test the water provided for cholera)

Experiment 2 (identify the slide of tuberculosis)

Experiment 3 ( not confirmed)

Phase 3 ( 2hr)

Create a medical report which provides the information that they collected through diagnosis and experiment that shows the disease name, how it spreads, short term measures that should be taken and long term prevention strategies by creating policies and then **pitch the policies or solution through a model/poster** in the most convincing way as they have to earn the trust of Victorian community . **(40 points)**

### **TOP TEAMS QUALIFY TO DAY 2**

**Day 2 (3 HOUR DURATION):** The british soldiers are suffering from battle wounds, infections, and unsanitary camps during the time of Crimean war, The participants enter warzone to save the war affectees, After dealing with the emergency they are supposed to create their own quarantine and infection control ward for the infected soldiers.

Phase 1 (warzone): 15 minutes each group

participants have to label soldiers with injuries priority wise with labels red( immediate care) , green ( minor injury) and yellow( delayed care) by looking at their condition.

Phase 2:

**Theme:** Quarantine & Infection Control (early hospital hygiene)

**Duration:** 1.5 hour

**Objective:** Design and demonstrate a isolation setup for infected soldiers using available materials.

Teams are given limited resources:

- Cloths, sheets, ropes, wooden sticks/cardboard
- Soap, lime (symbolic disinfectant), or vinegar bottles
- Buckets and markers

They must construct a layout of a small army camp showing:

- Division between healthy and infected zones
- Proper waste and water disposal area
- Pathway of clean vs contaminated movement

