Biological Hazard

- Viruses
  - Ebola
    - transmitted among humans through close and direct physical contact with infected bodily fluids, the most infectious being blood, faeces and vomit.
      - those working in the health sector will be at risk for contracting the virus,due to contacts with infected patients.
        - health workers are between 21 and 32 times more likely to be infected with Ebola than people in the general adult population
    - The 2014-2016 epidermic killed more than 500 health workers in Guinea, Liberia and Sierra Leone
  - are micro-organisms that can reproduce when contact with living cells
    - Viruses attack the body cells and multiply themselves in the human cell. Viruses attack upper part of the respiratory system,causing common cold symptoms. They can affect the whole body, such as with an influenza virus, leaving one with all over muscle soreness and fever.
    - virus cause infectious diseases such as the common cold, flu and warts and severe illnesses such as HIV/AIDS, smallpox, Ebola and even death.
  - Eg. human immunodeficiency virus[HIV],which eventually causes aids.
    - The virus is common among social sex workers,who were involved in unprotected sex.
      - Sex workers are 13 times more at risk of HIV compared with the general population, due to an increased likelihood of being economically vulnerable, unable to negotiate consistent condom use, and experiencing violence, criminalisation and marginalisation.
      - HIV prevalance in southern and eastern Africa are extremely high.
        - In Lesotho, Malawi, South Africa and Zimbabwe more than 50% of sex workers are living with HIV.
    - HIV can only be transmitted from an infected person to another through direct contact of bodily fluids such as blood,semen and vaginal secretion.
- Bacteria
  - can be found in the air, water,soil and in living or dead animals and plants
  - cause diseases
    - such as typhoid, plague, cholera,tuberculosis, gonorrhea, and syphilis
    - cause fever,diarrhea.
      fatigue.
      muscle aches.
      coughing,constant vomiting,if left untreated,may also lead to death.
  - exist in workplaces that involve working around other people, unsanitary conditions, in labs, or in the environment
    - eg, in the agricultural sector,Farmers often work with animals and with soil, and are therefore exposed to considerable risk of infectious diseases
      - E.g,Anthrax, which is caused by the bacteria Bacillus anthracis, is primarily a disease of plant eaters, such as cows and sheep.
        - The anthrax bacteria survive in the environment by forming spores. Farmers can contract the disease directly or indirectly from infected animals, due to exposure to infected or contaminated animal products, or if they come in contact with spores
        - The bacteria will multiply,spread out in the body and cause poison,leading to serious illnesses or even death.
- Toxins
  - produced by microorganisms responsible for microbial pathogenicity and/or evasion of the host immune response
    - Toxins can poison enzymes,displace structural minerals, resulting in weaker bones,damage cell membranes,organs and impair our ability to detoxify.Toxins can also lead to health rish such as cancer.
  - Eg.Mining industries which release significant amounts of toxic metals into the surrounding environment.
    - toxic metals frequently associated with mining include mercury, arsenic and lead.
      - Arsenic is known to cause cancer of the skin, liver, bladder and lungs. Mines can release arsenic into the air and miners breathing arsenic from the air may have a higher risk of getting lung cancer.
    - Dust emissions from the mine site during blasting and mining operations could contain any toxic metals.
      - overtime,mining workers may be at risk of asthma due to breathing in too much of the harmful dust particles.