Identify the differences between bacteria, viruses, fungi and parasites essay sam...

Science

Bacteria are living things that are neither plants nor animals, but belong to a group all by themselves. They are very small–individually not more than one single cell–however there are normally millions of them together, for they can multiply really fast. Bacteria are prokaryotes (single cells that do not contain a nucleus). Every species has a great ability to produce offspring and its population expands until it runs out of food or it is limited by competition, its own waste products, or some other factor. Changes in climate or introduction of a new species from elsewhere can greatly affect the balance of nature. Viruses:

Connecting link of living and nonliving things.
A virus is a small infectious agent that can replicate only inside the living cells of organisms. Most viruses are too small to be seen directly with a light microscope. Viruses infect all types of organisms, from animals and plants to bacteria and archaea. All viruses have genes made from either DNA or RNA, long molecules that carry genetic information; all have a protein coat that protects these genes; and some have an envelope of fat that surrounds them when they are outside a cell. Fungi:

These are Eukaryotes.. when compared to bacteria(prokaryote) and virus. Like plants and animals, fungi are eukaryotic multicellular organisms. One major difference is that fungal cells have cell walls that contain chitin, unlike the cell walls of plants, which contain cellulose. The chitin adds rigidity and structural support to the thin cells of the fungus, and makes fresh mushrooms crisp Most members of the kingdom Fungi lack flagella; the structures are completely absent in all stages of their life cycle. The only exception are the chytrids, which produce flagellated gametes Parasites:

A parasite is an organism that lives on or inside another organism to the detriment of the host organism. These are of various forms and types.
A parasite is an organism that lives on or in a host and gets its food from or at the expense of its host. Parasites can cause disease in humans. Some parasitic diseases are easily treated and some are not. The burden of these diseases often rests on communities in the tropics and subtropics, but parasitic infections also affect people in developed countries.

The parasites may be bacteria, fungi, algae, plants, animals etc…… true parasites usually weaken but rarely kill their hosts.

1. 2: identify common illnesses and infections caused by bacteria, fungi, viruses and parasites.

Illnesses/infections caused by bacteria: Salmonellosis, tuberculosis, MRSA, coccidiosis, food poisoning, dysentery, bronchitis, ear infections, strep throat/tonsilitis, pneumonia, gonorrhea, syphilis, chlamydia

Viruses: Influenza, common cold, stomach flu, pneumonia, ear infections, HIV/AIDS, herpes, warts, dengue, West Nile Virus, encephalitis

Fungi: Valley fever, athlete’s foot, ringworm, yeast infection

Parasites: Worms, schistosomiasis, malaria, sleeping sickness (trypanosomiasis), leishmaniasis

1. 3: describe what is meant by “ infection” and “ colonisation.

Colonisation occurs whenever any one or more species populate an area and infection is the invasion of body tissues by disease-causing microorganisms, their multiplication and the reaction of body tissues to these microorganisms and the toxins that they produce

1. 4: explain what is meant by “ systemic infection” and localised infection.

Systemic means it’s in the blood stream and is spreading/has spread through the body. Septicaemia is an example of a systemic infection.

Localised means the infection is restricted to one small area only. An infected cut or ulcer is an example of this.

A localised infection can spread and become systemic

1. 5: identify poor practices that may lead to the spread of infection.

poor practice that could help lead to the spread of infection would be, not washing hands, not complying with food safety, unproper disposal of needles and sharpies.

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2. 1: explain the conditions needed for micro organisms to grow. Because microorganisms are living things, to grow and multiply, they need an adequate food source, warmth, moisture, and time. Some also need oxygen, or to be shielded from direct light. Inhibiting any of these factors can break the chain of bacterial growth.

2. 2: explain the ways an infective agent might enter the body.

Mouth, lungs, cuts, contact with skin or any other external organs such as eyes, entry via any orifice (ears, urinary tract, anus, nose, vagina) and mixing of bodily fluids (though this may entail access via one of the above).

2. 3: identify common sources of infection.

Common sources of infection include food, water, sick people (colds and flu or winter vomiting virus), animals and poor housing (invaded with pests such as rats and mice or damp and mouldy).

2. 4: explain how infective agents can be transmitted.

You can acquire diseases in many ways: intradermal – by piercing the skin and letting germs enter through respiratory tract – by inhaling it you can absorb some things through the skin, such as chemicals – dmso mixed with other things makes it easier to absorb. you can acquire diseases through having sex with infected person you can be injected deep into muscle, through infected needles or other sharp objects you can be infected through contaminated IVs

you can ingest (eat) something that has infectious germs
you can get urinary tract infections by wiping the wrong way with soiled toilet tissue.
you can get vaginal infections by wiping the wrong way with soiled toilet tissue

2. 5: identify the key factors that will make it more likely that infection will occur.

compromised immune system

lack of good safety precautions – handwashing, proper cleaning of all surfaces exposure to more infectious agents in a hospital setting

handling of body fluids