

- Pharmaceutical microbiology:
Manufacture of vaccines and antibiotics
- Recombinant DNA technology:
Alteration of microbial genes to synthesize useful products.

WHAT ARE THE BASIC CHEMICAL REACTIONS OF LIFE?

Biochemistry:

The study of metabolism - the chemical reactions that occur in living organisms.

HOW DO GENES WORK?

Microbial Genetics

Genetics:

The scientific study of inheritance.

- ✦ Genes are contained in molecules of DNA
- ✦ A gene's activity is related to the function of the specific protein coded by that gene.

Molecular Biology

Molecular Biology:

Combines aspects of biochemistry, cell biology, and genetics to explain cell function at the molecular level.

→ Particularly concerned with genome sequencing.

Recombinant DNA Technology

Recombinant DNA Technology:

The joining together of DNA molecule from two different species that are inserted into a host organism to produce new genetic combinations that are value to science, medicine, agriculture, etc.

Gene Therapy:

Gene Therapy:

A process that involves inserting a missing gene or repairing a defective one in human cells.

1.19 List 4 major questions that drive microbiological investigations today

1: How can we develop successful programs that either control or eradicate infectious disease?

Campaign to have more people aware of how to prevent the spread of a