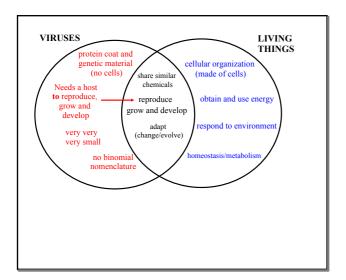


## CHARACTERISTICS OF LIVING THINGS

- Cellular organization
- atoms compounds elements → molecules → organelles → cells
- obtain and use energy
- respond
- grow and develop
- reproduce
- adapt



Edward Jenner 1796

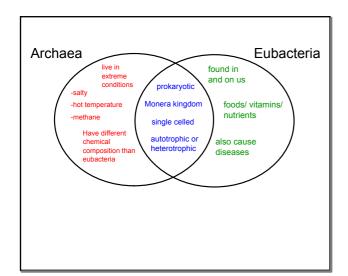
Developed first successful vaccine for smallpox with vaccinia virus for cowpox

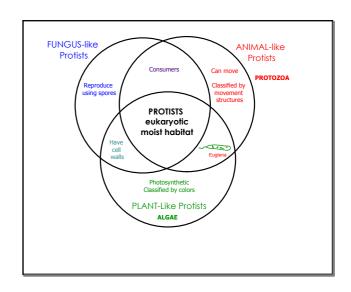
Jonas Salk 1954

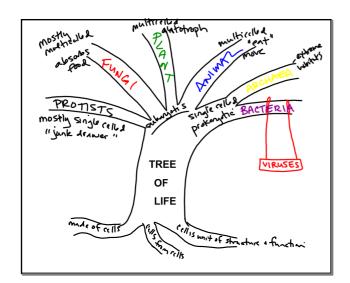
Developed first safe and effective polio vaccine

Alexander Fleming 1929

accidentally discovered penicillin (antibiotics)





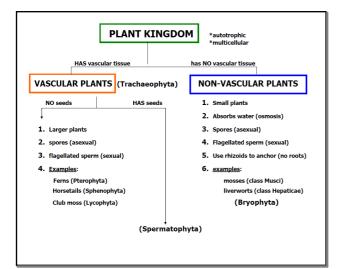


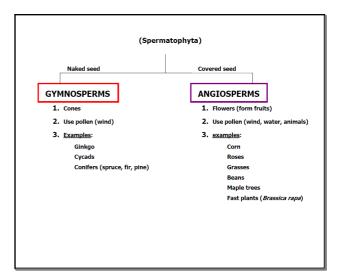
## **FABULOUS FUNGI FACTS**

 $\begin{array}{ll} \textbf{fungus} \ (\text{plural: fungi}) = & \text{a spore-producing organism with complex cells} \\ & \text{and no chlorophyll} \end{array}$ 

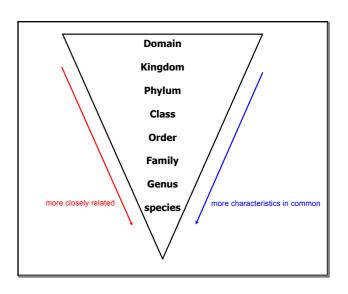
## **CHARACTERISTICS OF THE FUNGI KINGDOM:**

- eukaryotic
- have cell walls
- heterotrophs (consumers) that ABSORB food
- reproduce with spores
- decomposers
- mostly multicellular
- · classified (grouped) by spore structure
- bodies made of HYPHAE (branching threadlike tubes)





What are all the animals in the world? Phylum: PORIFERA (sponges) Phylum: CNIDARIA (jellyfish, corals) Phylum: PLATYHELMINTHES (tapeworms, planaria) Phylum: NEMATODA (roundworms, rotifers) Phylum: ANNELIDA (earthworms, leeches) Phylum: MOLLUSCA: Gastropoda (snails, slugs) Class: Bivalva (clams, oysters) Class: Cephalopoda (octopus, squid) Phylum: ARTHROPODA: Arachnida (spiders, ticks) Class: Insecta (insects)
Crustacea (lobsters, shrimp, daphnia)
Myriopoda (millepedes, centipedes) Class: Class: Phylum: ECHINODERMATA (starfish, sea urchins) Phylum: CHORDATA: (subphylum: Vertebrata) Class: Agnantha (jawless fish) Chondricthyes (sharks, rays) Osteichthyes (bony fishes) Amphibia (frogs, toads, salamanders)
Reptilia (snakes, turtles, crocodiles)
Aves (birds—tweet, tweet) Class: Remember YOU Class: are an animal! Class: Mammalia (us, cats, bats, rats)



4 Pathogens Song.mp4