Comparing Microorganisms

Characteristics	Monera (Bacteria)	Protista (Protozoan) (Animal-like)	Protista (Algae) (Plant-like)	Yeast (Fungi)	Mold (Fungi)	Club (Fungi)
Size	1/25,000 inches	1/100,000 inches	1/25,000+ inches	4/25,000+ inches	4/25,000+ inches	Varies in size from small to big.
Number of Cells	Mostly one but could have more	One cell	Single and multi-celled	Single celled	Single celled	Single and Multi-cellular
Where Found	Everywhere—water, ground, ice, air	Water, soil, our bodies	Water	Skins of fruits, vegetables, humans, insects.	Anywhere moisture is present	Terrestrial habitat, woodlands, mossy grass areas
How to See Them	Microscope	Microscope	Microscope	Microscope	Microscope	They are big enough to see with our eyes.
Ways They are Harmful to People	Causes diseases: staph, strep, pneumonia	Causes diseases. They multiply quickly.	Contaminates food with toxins	Infection in our bodies; serious damage to crops and trees.	They produce allergens, skin irritants, and toxic substances.	Some can produce toxins that kill grains. Many are poisonous for people to eat.
Ways They are Helpful to People	Found in the stomach, yogurt, dairy products, break down dead organisms	Fortifies soil, eat dangerous bacteria, used in water treatment	Food for many water animals, bio-filters for waste water,	Yeast is a natural decomposer in the environment; use to make foods and beverages	Breakdown dead organic matter-leaves and trees; made into penicillin	Mushrooms are edible. They serve as decomposers. They can provide food for their hosts.
Food Source	All types of food **we** like	Feed on bacteria	Make their own food	Sugar in plants, animals, insects, and humans	Wet dead, organic matter	Decaying vegetation and dead wood.
How Do They Move?	Flagella, cilia	Flagella, cilia	They cannot move freely; they plant themselves in something; they make their own food.	They cannot move, but can be moved by the wind.	Air will only carry mold spores where they land and plant themselves.	The spores are carried by the wind. They multiply and spread on their host.
Names of Some Kinds	Staph, strep salmonella, e-coli, skin diseases	Giardia, coccidian	Euglena, algae, seaweed, kelp,	Fruit yeast, potato yeast, grain yeast, beverage yeast	Allergenic, Pathogenic, Toxigenic, Alternaria, Aspergillum	Gill, pore, stinkhorns, coral, puffballs, bird nests, jelly, rusts, smuts, stem rot
Special Characteristics	Can live and grow in harsh environments	Multiply quickly; can be big or small	Make their own food and plant themselves; marine environment	Yeast does not need oxygen to grow. They need moisture and warmth to grow.	Grows on anything with moisture and proper temperature.	Spores plant themselves and grow off a host. They divide and spread.