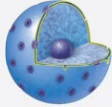
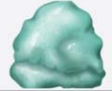






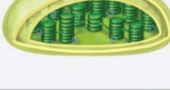

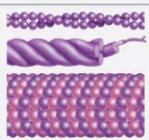



Table 3.2 Structures and Functions of Eukaryotic Organelles: A Summary

Organelle	Structure	Function(s)	Plant Cells?	Animal Cells?
Nucleus		Perforated sac containing DNA, proteins, and RNA; surrounded by double membrane	Yes	Yes
Ribosome		Two globular subunits composed of RNA and protein	Yes	Yes
Rough endoplasmic reticulum		Membrane network studded with ribosomes	Yes	Yes
Smooth endoplasmic reticulum		Membrane network lacking ribosomes	Yes	Yes
Golgi apparatus		Stacks of flat, membranous sacs	Yes	Yes
Lysosome		Sac containing digestive enzymes; surrounded by single membrane	Rarely	Yes
Central vacuole		Sac containing enzymes, acids, water-soluble pigments, and other solutes; surrounded by single membrane	Yes	No
Peroxisome		Sac containing enzymes, often forming visible protein crystals; surrounded by single membrane	Yes	Yes
Chloroplast		Two membranes enclosing stacks of membrane sacs, which contain photosynthetic pigments and enzymes; contains DNA and ribosomes	Yes	No
Mitochondrion		Two membranes; inner membrane is folded into enzyme-studded cristae; contains DNA and ribosomes	Yes	Yes
Cytoskeleton		Network of protein filaments and tubules	Yes	Yes
Cell wall		Porous barrier of cellulose and other substances (in plants)	Yes	No