Ward's Digital Slides: High School Life Science Set

LS1: Molecules to organisms: Structures and processes

LS1.A How do the structures of organisms help them to perform life's functions? (Structure and Function)
Compare cells that perform similar functions in plants and animals. Compare epithelial cells of animal skin and epidermal cells of plants; vascular tissue of plants and animal arteries and veins; support structures of plants compared to bones; how is nutrition transported in plants and animals?

917444	Zea, Mature Root
917448	Zea Stem
917882	Dianthus leaf
923671	Frog Artery, Vein, Nerve
931214	Wood Fibers
933036	Stratified Squamous Epithelium
933319	Mammalian-Joint
933321	Mouse Tail
934534	Ileum-Peyer's Patches
940210	Cork
918142	Ranunculus Root
910466	Spyrogyra

LS1.B

LS1.C

LS1D How do organisms detect, process, and use information about the environment?(Information processing)
Sense organs detect information and pass it to the nervous system for processing. The common sense organs can be examined to see how they connect to the nervous system. The basic structures of a reflex arc can be discussed by following a sensory signal through the sensory ganglia and the spinal cord that generates a responsive signal out to the muscle cells.

933617	Giant Multipolar Motor Neurons
933657	Motor Nerve Endings
933703	Spinal Cord
933711	Spinal ganglion
933775	Cochlea-Inner Ear of Guinea Pig
933777	Crista Ampularis
933781	Eye General Structure
933787	Olfactory Epithelium
934458	Neuro-Epithelium
937018	Scalp-Unpigmented (Human)
917210	Lily flower bud (cs)
936540	Human Blood
936140	Bone- Ground preparation
933699	Spinal Cord
933546	Striated Muscle
933543	Skeletal muscle
933228	Adipose tissue
933234	Brown Adipose tissue

LS2: Ecosystems: Interactions, energy and dynamics

LS2.A

LS2.B How do organisms in an ecosystem get the materials and energy they need? (Flow of Matter and Energy Transfer in Ecosystems)
In a pond ecosystem, there are autotrophic, primary producers that convert light energy to food (algae, elodea) that is eaten by primary consumers (vegetarians) and secondary consumers (ex. carnivores). This occurs at the single cell level as well as the macroscopic level in the digestive systems of multicellular organisms. Decomposers, like bacteria, complete the cycling of matter and energy.

900557	Spirillum volutans
902042	Escherichia coli
910560	Mixed Green Algae
917128	Elodea-Submerged Leaf
920024	Amoeba proteus

920116	Euglena
920411	Paramecium caudatum
922050	Daphnia
923135	Zebra Fish Hatchling
934534	Ileum-Peyer's Patches
910270	Chlymdomonas
920005	Mixed Protozoa
910252	Chara
912474	Penicillium
917454	Zea Leaf
917456	Zea Kernal and embryo
917914	Helianthus stem
917940	Ligistrum leaf
918221	Sambucus stem
922401	Drosophila
923664	Skeletal muscle
923668	Frog heart
923805	Contour feather
931212	Starch Grains
937283	Oviduct
935023	Skin of hairy mammal
934562	Liver

LS2.C

LS2.D

LS3: Heredity: Inheritance and variation of traits

LS3.A How are the characteristics of one generation of organisms related to the next generation? (Inheritance of Traits) Traits are passed from one generation to the next through reproduction which transfers DNA to the next generation through several mechanisms. Look at examples of mitosis and meiosis, asexual reproduction in animals, and gametes in plants and animals.

918056	Tobacco Flower
920651	Hydra Adult With Bud
932240	Fish Blasto-disc
932244	Meiosis & Mitosis
932271	DNA in Animal Cells
935505	Rat Sperm
935524	Ovary-Oogenesis
938015	Drosophila Chromosomes
912501	Budding yeast
914042	Marchantia cupule
914043	Marchantia Antheridia
914047	Marchantia sporophyte
916544	Pine Archegonia
917040	Allium Root tip (LS)
917044	Allium Root tip (cs)
917212	Lilium Meiosis- Mother cells
917213	Lilium Meiosis- Synezesis
917214	Lilium Meiosis- Early prophase
917216	Lilium Meiosis- late prophase
917217	Lilium Meiosis- first metaphase
917218	Lilium Meiosis- 2nd division
917219	Lilium Meiosis-Pollen tetrads
917220	Lilium Meiosis- Mature Anther binucleate pollen
917221	Lilium Meiosis- Single celled microspores
917456	Zea Kernal and embryo
917808	Capsella embryos
918132	Arabidopsis flower

918147	Ranunculus Flower
922401	Drosophila
938101	Human Chromosomes
938110	Barr Bodies

LS3.B

LS4: Biological evolution: Unity and diversity

LS4A

LS4.B

LS4.C

LS4.D What is biodiversity and how do humans affect it and how does it affect humans? (Biodiversity and Humans)
This group contains examples from the major classifications of in a variety of classification schemes. Bacteria, Archaebacteria, Archaezoa, protista, chromista, plant , fungi, and animal (invertebrate and chordate) are represented. Additional examples representing other groupings are also available in this set.

900526	Mixed Archaebacteria
902039	Streptococcus pneumoniae
910560	Mixed Green Algae
913211	Mushroom Anatomy-Coprinus
917206	Lilium Leaf Epidermis
920116	Euglena
920630	Hydra Plain
920820	Planaria Plain
923013	Amphioxus
924233	Giardia lamblia-Trophozoites
900152	Bacteria smear 3 types
912501	Budding yeast
916503	Pine 5-needle type
917002	Pollen Types
923133	Zebra fish
924622	Plasmodium falciparum
924630	Plasmodium malariae
926521	Anopheles mosquito
938120	Sickle Cell Anemia
936539	White blood cells