FL Next Generation Sunshine State Standards	Learning Targets	
SC.912.L.14.1 **Cell Theory**	1	I can describe the **cell theory**.
	2	I can describe how continuous investigations and/or new scientific information influenced the development of the **cell theory**.
	3	I can identify ways in which a **scientific claim** is evaluated.
	4	I can identify what is **science** and what is not science.
	5	I can explain the development of a **theory** and recognize the differences between **scientific theories** and **laws**.
SC.912.L.14.3 **Prokaryotic &** **Eukaryotic Cells** **Animal/Plant Cells** **Cell Transport**	6	I can compare and contrast the **structures** found in **plant cells** and **animal cells**.
	7	I can compare and contrast the **structures** found in **prokaryotic** and **eukaryotic cells**, including **cell wall**, **cell (plasma) membrane**, **cytoplasm**, **plasmid**, **ribosomes**, **flagella**, **nucleus**, **nuclear envelope**, **nucleolus**, **chromatin**, **endoplasmic reticulum**, **microtubules**, **microfilaments**, **vacuoles**, **mitochondria**, **Golgi apparatus**, **chloroplasts**, **lysosomes**, **cilia**.
	8	I can describe how **structures** in cells are directly related to their **functions** in the **cell**.
	9	I can explain the role of the **cell membrane** during **active and passive transport**.
SC.912.L.14.7 **Plant Structures &** **Functions**	10	I can explain how **plant structures** (**roots**, **stems**, **leaves**, **flowers**, **fruits**, **cones**, **meristematic**, **ground dermal**, **vascular tissues**, **cambium**, **guard cells**, **phloem**, **seed**, **stomata**, **xylem**) are related to their role in **photosynthesis**, **cellular respiration**, **transpiration**, or **reproduction**.
SC.912.L.14.26 **Brain Parts**	11	I can identify the major parts of the **brain** on a diagram (**cerebrum**, **cerebellum**, **pons**, **medulla oblongata**, **brain stem**, **frontal lobe**, **parietal lobe**, **occipital lobe**, and **temporal lobe**).
SC.912.L.14.36 **Blood Flow**	12	I can identify the factors that affect **blood flow** (such as **blood pressure**, **blood volume**, resistance, disease, and exercise).
SC.912.L.14.52 **Immune System**	13	I can identify and/or explain the basic functions of the human **immune system**, including **specific and nonspecific immune responses**.
	14	I can describe how the human **immune system** responds to **vaccines** and/or **antibiotics**.
	15	I can explain the significance of **genetic factors**, **environmental factors**, and **pathogenic agents** to health from the perspective of both individual and public health.
SC.912.L.15.1 **Theory of** **Evolution**	16	I can identify evidence and/or explain how the scientific **theory of evolution** is supported by the **fossil** record, comparative **anatomy**, comparative **embryology**, **biogeography**, **molecular biology**, and observable evolutionary change.
	17	I can identify examples of and trends in **hominid evolution** from early **ancestors** to modern humans.
	18	I can describe how scientific **inferences** are made from **observations** and identify examples from biology.
	19	I can explain the development of a **scientific theory** and recognize the differences between **scientific theories** and **laws**.
	20	I can assess the **reliability** of sources of information according to scientific standards.
	21	I can identify what is **science** and what is not science.
	22	I can identify ways in which a **scientific claim** is evaluated.

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SC.912.L.15.6 Classification	23	I can **classify** organisms into a **domain** (Archea, Bacteria, Eukarya) and **kingdom** (Protista, Fungi, Plantae, Animalia) based on their distinguishing characteristics.
	24	I can describe how organisms are classified based on **evolutionary relationships**.
	25	I can explain the reasons for changes in how organisms are **classified**.
SC.912.L.15.8 Origin of Life on Earth	26	I can describe scientific explanations of the **origin of life** on Earth.
	27	I can identify situations or conditions contributing to the **origin of life** on Earth.
SC.912.L.15.13 Natural Selection	28	I can explain the conditions required for **natural selection**.
	29	I can explain/describe the scientific mechanisms (**genetic drift, gene flow, nonrandom mating**) that result in evolutionary change.
	30	I can explain/describe how **mutation** and **genetic recombination** increase **genetic variation**.
SC.912.L.16.1 Mendel's Laws Inheritance patterns	31	I can use **Mendel**'s **laws of segregation** and **independent assortment** to analyze patterns of **inheritance**.
	32	I can identify, analyze, and/or predict inheritance patterns caused by various modes of inheritance (**dominance, codominance, incomplete dominance, sex-linked, polygenic**, etc.).
	33	I can use **Punnett squares** to predict inheritance outcomes of a **single** or **dihybrid cross** as a percent, ratio, or fraction.
SC.912.L.16.3 DNA Replication Mutations Transcription & Translation	34	I can describe the process of **DNA replication** and its role in the transmission and conservation of **genetic information**.
	35	I can describe **gene and chromosomal mutations** in the **DNA sequence** and explain how they may or may not result in a **phenotypic change**.
	36	I can explain the basic processes of **transcription** and **translation**, and their roles in the expression of **genes**.
	37	I can explain that the basic components of **DNA** are universal in organisms.
	38	I can explain how similarities in the **genetic codes** of organisms are due to **common ancestry** and the process of **inheritance**.
SC.912.L.16.10 Biotechnology	39	I can evaluate examples and/or explain the possible impact of **biotechnology** on the individual, society, and the environment, including medical and ethical issues.
SC.912.L.16.13 Human Reproduction	40	I can identify and/or describe the basic **anatomy and physiology** of the human **reproductive system** (**penis, vas deferens, seminal vesicle, prostate gland, urethra, epididymis, scrotum, testes, vagina, uterus, ovaries, oviduct (fallopian tube), cervix**).
	41	I can describe how the **placenta, umbilical cord, amniotic fluid**, and **amniotic sac** are related to the development of the **fetus**.
	42	I can explain the role of **hormones** in the human **reproductive system**.
	43	I understand the early stages of **human development** (**implantation, morula, blastocyst, gastrulation, neurulation**).
	44	I can describe the process of **human development** from the **zygotic stage** to the end of the third **trimester** and birth.
SC.912.L.16.17 Mitosis/ Meiosis ⏷	45	I can describe the different processes of **mitosis** and **meiosis**.
	46	I can describe how **mitosis** forms new cells and maintains the **chromosome number** during **asexual reproduction**.
	47	I can describe the role of **meiosis** in **sexual reproduction**, including **independent assortment, crossing over**, and the formation of **haploid gametes** or **spores**.

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SC.912.L.16.17 Mitosis/ Meiosis, continued 🡢	48	I can describe how the processes of **sexual and asexual reproduction** impact **genetic variation**.
	49	I can describe what happens in each of the **stages** (G1, S, G2, M) of the **cell cycle** and **phases** (prophase, metaphase, anaphase, telophase, cytokinesis) of **mitosis**.
	50	I can explain how **cancer** may result from **mutations** that affect the **proteins** that regulate **cell cycle**.
SC.912.L.17.5 Carrying Capacity Populations	51	I can analyze how **population size** is determined by **births**, **deaths**, **immigration**, **emigration**, and **limiting factors** (**abiotic** and **biotic**) that determine **carrying capacity**.
	52	I can explain that different types of **organisms** exist within **aquatic systems** due to chemistry, geography, light, depth, salinity, and temperature.
	53	I can describe the potential changes to an **ecosystem** resulting from **seasonal variations**, **climate changes**, and/or **succession**.
	54	I can recognize the consequences that result from a reduction in **biodiversity** due to catastrophic events, climate changes, human activity, and the introduction of **invasive species**.
SC.912.L.17.9 Trophic Levels Biogeochemical Cycles	55	I can describe the **energy pathways** through the different **trophic levels** of a **food web** or **energy pyramid**.
	56	I can analyze the movement of **matter** through **biogeochemical cycles** (**water and carbon cycles**).
SC.912.L.17.20 Human Impact	57	I can predict the impact of individuals on **environmental systems** and how human lifestyles affect **sustainability**.
	58	I can evaluate possible **environmental impacts** resulting from the use of **renewable** or **nonrenewable resources**.
	59	I can discuss the need for adequate monitoring of **environmental parameters** when making **policy decisions**.
SC.912.L.18.1 Macromolecules Enzymes	60	I can identify and/or describe the basic molecular structure AND functions of **carbohydrates**, **lipids**, **proteins**, and **nucleic acids**.
	61	I can explain how **enzymes** speed up the rate of a biochemical **reaction** by lowering the **activation energy**.
	62	I can identify and/or describe the effect of environmental factors (**pH and temperature**) on **enzyme** activity.
SC.912.L.18.9 Photosynthesis & Cellular Respiration ATP	63	I can explain how products of **photosynthesis** are used as reactants for **cellular respiration** and vice versa.
	64	I can explain how **photosynthesis** stores energy and **cellular respiration** releases energy.
	65	I can identify the reactants, products and the basic function of **photosynthesis**.
	66	I can identify the reactants, products and the basic function of **cellular respiration**.
	67	I can discuss the role of **anaerobic respiration** in living things.
	68	I can connect the role of **ATP** to energy transfer within the cell.
SC.912.L.18.12 Properties of Water	69	I can discuss the special properties of water, including **cohesion**, ability to moderate temperature, expansion upon freezing, and versatility as a **solvent**.
	70	I can explain how the properties of water make it essential for life on Earth.
	71	I can explain how **hydrogen bonding** and **polarity** impact the special properties of water.

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**** white, red, green, blue, purple, yellow, orange for 7 units and 22 benchmarks assessed.