

# 8<sup>th</sup> Grade Living Environment 2021-2022

Pacing Calendar

Scope & Sequence

Week	Topic
1	<b>Scientific Method / Process</b>
2	<b>Scientific Method / Process</b>
3	<b>Characteristics of Living Things:</b> How can we differentiate between living and nonliving? How are living things both similar to and different from each other (cell theory, cell structure, cell transport, mitosis)?
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8	<b>Nutrients, Energy, and Biochemical Processes:</b> How do plants generate their own food (photosynthesis)? How does food provide energy for life processes (cellular respiration)? How do substances move in and out of a cell (cell transport)? How is food broken down and used by the body to fuel life processes (enzymes)?
9	<b>Nutrients, Energy, and Biochemical Processes:</b> How do plants generate their own food (photosynthesis)? How does food provide energy for life processes (cellular respiration)? How do substances move in and out of a cell (cell transport)? How is food broken down and used by the body to fuel life processes (enzymes)?
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11	<b>Homeostasis in Human Body systems:</b> How do regulate and maintain body temperature (Circulatory, Excretory, Respiratory, and Muscular systems)? How do humans regulate and maintain glucose levels (Endocrine system)? How do body systems interact to maintain homeostasis (Endocrine and Nervous system? How do humans maintain and regulate water levels (Circulatory and Excretory systems)?
12	<b>Homeostasis in Human Body systems:</b> How do regulate and maintain body temperature (Circulatory, Excretory, Respiratory, and Muscular systems)? How do humans regulate and maintain glucose levels (Endocrine system)? How do body systems interact to maintain homeostasis (Endocrine and Nervous system? How do humans maintain and regulate water levels (Circulatory and Excretory systems)?
13	<b>Homeostasis in Human Body systems:</b> How do regulate and maintain body temperature (Circulatory, Excretory, Respiratory, and Muscular systems)? How do humans regulate and maintain glucose levels (Endocrine system)? How do body systems interact to maintain

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	homeostasis (Endocrine and Nervous system? How do humans maintain and regulate water levels (Circulatory and Excretory systems)?
14	<b>Homeostasis in Human Body systems:</b> How do regulate and maintain body temperature (Circulatory, Excretory, Respiratory, and Muscular systems)? How do humans regulate and maintain glucose levels (Endocrine system)? How do body systems interact to maintain homeostasis (Endocrine and Nervous system? How do humans maintain and regulate water levels (Circulatory and Excretory systems)?
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17	<b>Disease and Disruption of Homeostasis:</b> How does the human system fight nonspecific threats? Why does the immune system respond to known pathogens such as viruses? Why have antibiotics become less effective? Why are such disease, such as diabetes, challenging to prevent & treat?
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21	<b>Comparative Reproduction:</b> How are eggs across species similar and different (meiosis)? How do organisms fertilize gametes in different environments (gamete production & fertilization)? Why are there similarities and differences between embryos (comparative embryology)? Why do some organisms reproduce asexually and others sexually (comparing sexual & asexual reproduction)?
22	<b>Comparative Reproduction:</b> How are eggs across species similar and different (meiosis)? How do organisms fertilize gametes in different environments (gamete production & fertilization)? Why are there similarities and differences between embryos (comparative embryology)? Why do some organisms reproduce asexually and others sexually (comparing sexual & asexual reproduction)?
23	<b>Genetics:</b> How are traits inherited (structures & mechanisms of genetics)? How does the structure of DNA support its role in heredity (DNA structure)? How can biotechnology be used to modify traits? What are some of the advantages & disadvantages (Biotechnology)?

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28	<b>Climate change &amp; Human impact: Extinction vs. Evolution:</b> Evolution (evidence & patterns), Natural selection, and Extinction. History of life & Classification. Mechanisms and effects of climate change
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31	<b>Ecology:</b> Components of a stable ecosystem, Ecosystem disruption & recovery, Population dynamics (patterns & succession), Invasive species. Intro to plants & levels of organization, Flow of energy & environmental cycles, Niche & symbiotic relationships
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35	<b>Human Impact:</b> Human population growth & Natural resources, Threats to biodiversity & Conservation
36	<b>Human Impact:</b> Human population growth & Natural resources, Threats to biodiversity & Conservation
37	Regents Review & Preparation
38	Regents Review & Preparation
39	Regents Review & Preparation