

Self- Evaluation Checklists for Seventh Grade

These checklists are designed to allow students to self-assess their understanding. The checklists use student friendly science language that aligns with the Georgia Standards of Excellence for the different grade levels.

The following checklists are available:

[S7L1- Diversity of Living Organisms](#)

[S7L2- Cells](#)

[S7L3- Inheritance of Traits](#)

[S7L4- Interdependence of Organisms and the Environment](#)

[S7L5- Theory of Evolution](#)

How to use:

Teacher directions: Give the students the relevant self-evaluation tool section as you move through the unit. Dotted lines have been provided to assist in dividing the sections of the tool based on the standard elements. At first, help students fill it in but after doing it with them a few times let the students use it as they see fit. Help the students see that it can be used to identify areas that they are excelling in and areas where they need help. Feel free to refer to this when students are struggling with the material or come for tutoring. Also note the *underlined and italicized science and engineering practices* and the **bolded cross cutting concepts*** that are highlighted throughout the checklist.

*Multiple crosscutting concepts can match each standard. The crosscutting concept that fits best is dependent on the way in which the DCI and SEP are presented in class. These checklists just contain suggestions of crosscutting concepts that could be used but should not limit teacher choice for the CCC. *

S7L1 Teacher Evaluation and Reflection Tool

Directions: Consider what we have learned and where you are at the end of class every day. If **you feel that you have mastered the topic**, then you may **check it off and record the date**. On the back, **record evidence** of your mastery. Evidence could include grades, explanations or description of project/assignments that support your mastery.

Diversity of living organisms

- Develop a model that categorizes organisms based on common characteristics.

- Defend a model that categorizes organisms based on common characteristics.

- Evaluate historical models of how organisms are classified based on physical characteristics and how that led to the six-kingdom system (currently archaea, bacteria, protists, fungi, plants and animals).
 - Examples of common characteristics
 - Prokaryotic
 - Eukaryotic
 - Unicellular
 - Multicellular
 - Sexual reproduction
 - Asexual reproduction
 - Autotroph
 - Heterotroph
 - Unique cell structures

Crosscutting concept – Structure and function

S7L2 Teacher Evaluation and Reflection Tool

Directions: Consider what we have learned and where you are at the end of class every day. If **you feel that you have mastered the topic**, then you may **check it off and record the date**. On the back, **record evidence** of your mastery. Evidence could include grades, explanations or description of project/assignments that support your mastery.

Cells

- Develop a model** that shows how the following organelles work together to obtain nutrients in order to grow, reproduce, make needed materials and process waste for the cell as a part of a living **system**.
 - Nucleus
 - Cytoplasm
 - Cell membrane
 - Cell wall
 - Chloroplast
 - Mitochondria
 - Lysosome

- Explain** how the following organelles work together to obtain nutrients in order to grow, reproduce, make needed materials and process waste for the cell as part of a living **system**.
 - Nucleus
 - Cytoplasm
 - Cell membrane
 - Cell wall
 - Chloroplast
 - Mitochondria
 - Lysosome

- Develop and use models to** show how cells are organized into tissues, tissues into organs, organs into organ **systems** and **systems** into organisms.

- Construct an argument and support it using evidence that **systems** of the body work together to carry out life processes.
 - Cardiovascular
 - Excretory
 - Digestive
 - Respiratory
 - Muscular
 - Nervous
 - Immune

Focus on how systems work together to keep organisms alive

S7L3 Teacher Evaluation and Reflection Tool

Directions: Consider what we have learned and where you are at the end of class every day. If **you feel that you have mastered the topic**, then you may **check it off and record the date**. On the back, **record evidence** of your mastery. Evidence could include grades, explanations or description of project/assignments that support your mastery.

Inheritance of Traits

- Construct an explanation supported with scientific evidence of the role of genes and chromosomes in the process of inheriting a specific trait.

- Develop and use a model to describe how asexual reproduction can result in offspring with identical genetic information.

- Develop and use a model to describe how sexual reproduction results in genetic variation. Models could include, but not limited to:
 - Using monohybrid Punnett squares
 - To demonstrate the passing of genes
 - Identification of heterozygous genotypes
 - Identification of homozygous genotypes
 - Comparison of genotype vs. phenotype

- Ask questions to gather and synthesize information about the ways humans influence the inheritance of desired traits through selective breeding (artificial selection).

Crosscutting concept patterns to show cause and effect

S7L4 Teacher Evaluation and Reflection Tool

Directions: Consider what we have learned and where you are at the end of class every day. If **you feel that you have mastered the topic**, then you may **check it off and record the date**. On the back, **record evidence** of your mastery. Evidence could include grades, explanations or description of project/assignments that support your mastery.

Interdependence of organisms and environments

- Construct an explanation for the **patterns** of interactions observed in different ecosystems in terms of the relationships among and between organisms and abiotic components of the ecosystem. Interactions include but are not limited to:
 - Predator-prey relationships
 - Competition
 - Mutualism
 - Parasitism
 - Commensalism

- Develop a model to describe the cycling of **matter and the flow of energy**, among biotic and abiotic components of an ecosystem.
 - Cycling of matter
 - Flow of energy

- Analyze and interpret data for how factors can **affect** individual organisms, populations, communities and ecosystems.
 - Resource availability
 - Disease
 - Climate
 - Human activity

- Ask questions to gather and synthesize information from multiple sources to differentiate between Earth's major terrestrial biomes by looking for **patterns** in such things as climate, availability of food and water, and location.
 - Tropical rain forest
 - Savanna
 - Temperate forest
 - Desert
 - Grassland
 - Taiga
 - Tundra

- Ask questions to gather and synthesize information from multiple sources to differentiate between Earth's major aquatic ecosystems by looking for **patterns** in such things as climate, availability of food and water, and location
 - Freshwater
 - Estuaries
 - Marine

***The focus is on factors that influence patterns across biomes such as climate, availability of food and water, and land (cause and effect) ***

S7L5 Teacher Evaluation and Reflection Tool

Directions: Consider what we have learned and where you are at the end of class every day. If **you feel that you have mastered the topic**, then you may **check it off and record the date**. On the back, **record evidence** of your mastery. Evidence could include grades, explanations or description of project/assignments that support your mastery.

Theory of evolution

- Use mathematical representation to evaluate explanations of how natural selection leads to changes in specific traits of populations over successive generations. (This can include data from research or simulations. Be sure to reference the data in your explanations of the principles of natural selection.)

- Construct an explanation based on evidence that describes how the probability of survival and reproduction of a species is based on the following two factors.
 - Genetic variation
 - Environmental factors

- Analyze and interpret data for **patterns** in the fossil record that document the existence, diversity, and extinction of organisms and their relationships to modern organisms.

The crosscutting concept for this standard is patterns