HANDOUT 11

Glossary

Scientific Language Cheat Sheet

1. Animate objects	Animate objects are living things with the capacity to impart motion or activity. The term refers to animals (including humans) and is distinguished from inanimate objects such as plants or nonliving objects (e.g., a car or rock).
2. Cause and effect	Cause is what makes something else happen (e.g., kicking the ball), and effect is what happens as a result of the cause (e.g., the ball rolled).
3. Classify	The sorting, grouping, or categorizing of objects according to established criteria.
4. Communication	The skill of expressing ideas, describing observations, and discussing findings and explanations with others, either orally, through sign language, or in written form (e.g., drawings, charts, pictures, or symbols).
5. Compare and contrast	Looking at similarities and differences in real objects and events.
6. Constructivist approach	According to this approach, children construct knowledge and build theories through active experimentation and interaction with objects and people in their environment, rather than passively taking in information.
7. Documentation	Different forms of recorded information, including drawings, photographs, written transcripts, charts, journals, models, and constructions.
8. Earth materials	Naturally occurring materials found on earth, including minerals, rocks, soil, and water.
9. Earth sciences	The study of the earth, which includes topics related to properties of earth materials (i.e., soils, rocks, and minerals), the ocean, weather, and forces that shape the earth. Major components of earth sciences are geology and oceanography.
10. Habitat	The home, place, or environment where an organism or a biological population normally lives.
11. Hypothesis	A proposed explanation for an observable phenomenon that can be tested by an experiment. A confirmed hypothesis supports a theory.
12. Inferences	Logical assumptions or conclusions that are based on observations but are not directly observed.
13. Investigation	Part of the process of scientific inquiry that involves asking a question and conducting systematic observations or simple experiments to find an answer.
14. Life cycle	The series of changes in the growth and development of humans, animals, or plants.

15. Life sciences	The study of living things, including plants and animals, their characteristics, life cycles, habitats, and their interrelationships with each other and the environment. The life sciences encompass biology, physiology, and ecology.
16. Living things	Living organisms that have the capacity for self-sustaining biological processes such as growth, breathing, reproduction, and responding to stimuli. Examples of living things are humans, animals, and plants.
17. Measurement tools	Simple tools used to measure length, volume, or weight. Examples include rulers, scales, measuring cups, and spoons.
18. Observation	The process of gathering information about objects and events using the senses of sight, smell, sound, touch, and taste, and noticing specific details or phenomena that ordinarily might be overlooked.
19. Observation tools	Tools to extend observations, such as magnifying glasses.
20. Patterns	Regularities or elements in events or objects that repeat in a predictable manner.
21. Physical characteristics of objects	Attributes or properties of objects, such as the size, color, shape, and material the object is made of.
22. Physical properties	Observable features of a material, such as how it looks (e.g., shape and/or color), feels (e.g., solid, liquid, or texture), or behaves (e.g., sinks in water).
23. Physical science	The study of nonliving matter and energy. These sciences deal with physical properties and transformations of substances, as well as the nature of motion, force, and energy (e.g., mechanical energy, heat, sound, light, and electricity). The two major branches of physical sciences are physics and chemistry.
24. Prediction	A guess or estimation that is based on prior observations, knowledge, and experiences.
25. Predisposition	A tendency or inclination for something. In the context of early childhood science, young children have the predisposition—the inclination and capacity—to learn abstract concepts from biology and physics.
26. Reclaimed materials	Any materials that have been used before and are reused (e.g., hollow tubes, corks, lids, planks, and empty bottles).
27. Record	To set down information or knowledge in writing, drawing, or other permanent forms for the purpose of preserving evidence or tracking data over time.

28. Scientific inquiry	The diverse ways in which scientists explore and develop knowledge and understanding of scientific ideas. The process involves making observations, posing questions, planning investigations, using tools to gather information, making predictions, recording information, and communicating findings and explanations.
29. Simple machines	Six mechanical devices that make it easier to move or lift something: levers, wheels on axles, pulleys, inclined planes, wedges, and screws. These are the elementary building blocks of many complicated machines used in daily life.
30. Sorting	Grouping together objects with similar properties or that belong to the same category.
31. STEM	An acronym that stands for science, technology, engineering, and mathematics.
32. Substance	Any material with a definite chemical composition (e.g., water, salt, sugar, or gold).
33. Terrarium/Vivarium	An enclosed environment, such as a transparent open container, where small animals and plants are raised and kept in natural conditions for observation and study.
34. Variation and diversity	Differences among individuals of the same species; for example, humans vary in physical structure, behavior, and physiological characteristics. Diversity represents the variety or differences that exist among organisms.