Science

Early learning experiences will support children to apply scientific practices.

1 Questioning and Defining Problems

See Curiosity and Initiative learning progression in Cognition

1. Observe and make comments on things observed through the senses S.24.1
2. Ask simple questions related to things observed through the senses ("what" and "why") S.36.1
3. Ask more detailed questions including the relationship between two things or cause and effect relationships S.48.1
4. Define a problem to be solved, including details and limitations to be considered (e.g., "We need to figure out how to reach that shelf, but we aren't allowed to stand on the chairs.") S.60.1

2 Investigating

See Cause and Affect learning progression in Cognition

1. Manipulate materials and comment on the impact of own actions S.36.2
2. Intentionally vary actions in order to observe the effect of these actions on materials S.48.2
3. Engage in collaborative investigations to describe phenomena or to explore cause and affect relationships S.60.2
4. Gather data by drawing, counting or otherwise documenting observations S.60.3

3 Using Evidence

See Personal Preferences learning progression in Social and Emotional Development

1. Provide personal reasons or evidence for decisions or opinions (e.g., "I made this picture green because my mom likes green.") S.36.3
2. Cite examples to support their ideas (e.g., "I think the plant will die because when I forgot to water my plant it died.") S.48.3
3. Give evidence from observations or investigations S.60.4
4. Begin to distinguish evidence from opinion S.60.5

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Skip to main content

1 Design Cycle

Gather information to help determine if something has been designed by humans S.36.4

2 Identify a problem and, with adult assistance design a solution (e.g., device or process) to address that problem S.48.4

3 Identify a problem and, with adult assistance, design a solution, test and refine design elements S.60.6

Early learning experiences will support children to understand patterns, process and relationships of living things.

1 Unity and Diversity of Life

1 Explore characteristics of different plants and animals S.24.2

2 Observe features of plants and animals and explore function of features S.36.5

3 Compare and contrast basic features of living things (e.g., body parts and their uses) between and across groups S.48.5

4 Recognize changes in living things over their lifespan by observing similarities and differences between babies and adults S.48.6

5 Group and classify living things based upon features, providing evidence to support groupings S.60.7

6 Demonstrate an understanding of how living things grow and change through predictable stages (e.g., birth, growth, reproduction, death) S.60.8

2 Living Things and Their Interactions with the Environment and Each Other

1 Observe living things S.24.3

2 Observe how a variety of living things obtain food as a source of energy for surviving S.36.6

3 Explore how animals depend upon the environment for food, water and shelter S.48.7

4 Provide examples of how animals depend on plants and other animals for food S.60.9

Early learning experiences will support children to understand physical sciences.

1 Energy, Force and Motion

1 Use trial and error to explore the way different objects move S.24.4

2 Observe different ways objects move (e.g., roll, bounce, spin, slide) and what happens when they interact (collide) S.36.7

3 Investigate how objects' speed and direction can be varied S.48.8

4 Make predictions and conduct simple experiments to change direction, speed and distance objects move S.60.10

5 Determine cause and effect of push/pull/collision that make objects, start, stop and change direction S.60.11

2 Matter and its Properties

1 Observe simple attributes of materials (e.g., hard, soft) S.24.5

Observe and describe attributes of materials that are related to their function (e.g., flexibility, transparency, strength) S.36.8

Skip to main content

3 Compare and contrast attributes of common materials related to their function (e.g., flexibility, transparency, strength) S.48.9

4 Evaluate the appropriateness of a material for a given purpose based upon its properties S.60.12

5 Observe how heating and cooling cause changes to properties of materials (e.g., Ice melts when we bring it inside. Plastic becomes brittle when it is left outside in the cold.) S.60.13

Early learning experiences will support children to understand features of earth.

1 Earth's Features and the Effects of Weather and Water

1 Observe natural features of the earth (e.g., land, rain) S.24.6

2 Describe common features of the earth (e.g., sky, land and water) and what is found there (e.g., birds, fish, stars) S.36.9

3 Observe, record, and note patterns regarding weather and the effects on the immediate environment (e.g., Rain over a period of days causes flooding. Sunny days cause the flower bed to dry out.) S.48.10

4 Investigate how water interacts with other earth materials (e.g., sand, dirt, pebbles) S.48.11

5 Give examples of ways in which weather variables (hot/cold temperatures, amount and intensity of precipitation, wind speed) affect us and/or cause changes to earth's features (e.g., The stream has greater water flow after snow melts.) S.60.14

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2 Earth and Human Activity

1 Talk about different foods humans eat S.24.7

2 Give examples of natural resources that humans use to survive (e.g., food, water) S.24.10

3 Investigate how humans use design solutions to adapt natural resources to meet basic needs (e.g., cut trees to build houses, make applesauce out of apples) S.48.12

4 Explore how humans' use of natural resources impacts the environment (e.g., If we catch all the salmon, this can no longer be a food source. Cutting down trees can cause erosion.) S.60.15