California Science

Pre-K

Scientific Inquiry 1

1 Observation and Investigation 1.1.0

At around 48 months of age:

1. Demonstrate curiosity and raise simple questions about objects and events in their environment. 1.1.1--48
2. Observe1 objects and events in the environment and describe them. 1.1.2--48
3. Begin to identify and use, with adult support, some observation and measurement tools. 1.1.3--48
4. Compare and contrast objects and events and begin to describe similarities and differences. 1.1.4--48
5. Make predictions and check them, with adult support, through concrete experiences. 1.1.5--48
6. Make inferences and form generalizations based on evidence. 1.1.6--48

At around 60 months of age:

1. Demonstrate curiosity and an increased ability to raise questions about objects and events in their environment. 1.1.1--60
2. Observe objects and events in the environment and describe them in greater detail. 1.2.1--60
3. Identify and use a greater variety of observation and measurement tools. May spontaneously use an appropriate tool, though may still need adult support. 1.3.1--60
4. Compare and contrast objects and events and describe similarities and differences in greater detail. 1.4.1--60
5. Demonstrate an increased ability to make predictions and check them (e.g., may make more complex predictions, offer ways to test predictions, and discuss why predictions were correct or incorrect). 1.5.1--60
6. Demonstrate an increased ability to make inferences and form generalizations based on evidence. 1.6.1--60

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2 Documentation and Communication 1.2.0

At around 48 months of age:

1. Record observations or findings in 2.1 various ways, with adult assistance, including pictures, words (dictated to adults), charts, journals, models, and photos. 1.2.1--48
2. Share findings and explanations, 2.2 which may be correct or incorrect, with or without adult prompting. 1.2.2--48

At around 60 months of age:

1. Record information more regularly and in greater detail in various ways, with adult assistance, including pictures, words (dictated to adults), charts, journals, models, photos, or by tallying and graphing information 1.2.1--60
2. Share findings and explanations, which may be correct or incorrect, more spontaneously and with greater detail. 1.2.2--60

Physical Sciences 2

1 Properties and Characteristics of Nonliving Objects and Materials 2.1.0

At around 48 months of age:

1. Observe, investigate, and identify the characteristics and physical properties of objects and of solid and non-solid materials (size, weight, shape, color, texture, and sound). 2.1.1--48

At around 60 months of age:

1. Demonstrate increased ability to observe, investigate, and describe in greater detail the characteristics and physical properties of objects and of solid and non-solid materials (size, weight, shape, color, texture, and sound). 2.1.1--60

2 Changes in Nonliving Objects and Materials 2.2.0

At around 48 months of age:

1. Demonstrate awareness that objects and materials can change; explore and describe changes in objects and materials (rearrangement of parts; change in color, shape, texture, temperature). 2.2.1--48
2. Observe and describe the motion of objects (in terms of speed, direction, the ways things move), and explore the effect of own actions (e.g., pushing pulling, rolling, dropping) on making objects move. 2.2.2--48

At around 60 months of age:

1. Demonstrate an increased aware ness that objects and materials can change in various ways. Explore and describe in greater detail changes in objects and materials (rearrangement of parts; change in color, shape, texture, form, and temperature). 2.2.1--60
2. Demonstrate an increased ability to observe and describe in greater detail the motion of objects (in terms of speed, direction, the ways things move), and to explore the effect of own actions on the motion of objects, including changes in speed and direction. 2.2.2--60

Life Sciences 3

1 Properties and Characteristics of Living Things 3.1.0

At around 48 months of age:

1 Identify characteristics of a variety of animals and plants, including appearance (inside and outside) and behavior, and begin to categorize them. 3.1.1--48

2 Begin to indicate knowledge of body parts and processes (e.g., eating, sleeping, breathing, walking) in humans and other animals. 3.1.2--48

3 Identify the habitats of people and familiar animals and plants in the environment and begin to realize that living things have habitats in different environments. 3.1.3--48

4 Indicate knowledge of the difference between animate objects (animals, people) and inanimate objects. For example, expect animate objects to initiate movement and to have different insides than inanimate objects. 3.1.4--48

At around 60 months of age:

1 Identify characteristics of a greater variety of animals and plants and demonstrate an increased ability to categorize them. 3.1.1--60

2 Indicate greater knowledge of body parts and processes (e.g., eating, sleeping, breathing, walking) in humans and other animals. 3.1.2--60

3 Recognize that living things have habitats in different environments suited to their unique needs. 3.1.3--60

4 Indicate knowledge of the difference between animate and inanimate objects, providing greater detail, and recognize that only animals and plants undergo biological processes such as growth, illness, healing, and dying. 3.1.4--60

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2 Changes in Living Things 3.2.0

At around 48 months of age:

1 Observe and explore growth and changes in humans, animals, and plants and demonstrate an under standing that living things change over time in size and in other capacities as they grow. 3.2.1--48

2 Recognize that animals and plants require care and begin to associate feeding and watering with the growth of humans, animals, and plants. 3.2.2--48

At around 60 months of age:

1 Observe and explore growth in humans, animals, and plants and demonstrate an increased understanding that living things change as they grow and go through transformations related to the life cycle (for example, from a caterpillar to butter y). 3.2.1--60

2 Develop a greater understanding of the basic needs of humans, animals, and plants (e.g., food, water, sunshine, shelter). 3.2.2--60

Earth Sciences 4

1 Properties and Characteristics of Earth Materials and Objects 4.1.0

At around 48 months of age:

1 Investigate characteristics (size, weight, shape, color, texture) of earth materials such as sand, rocks, soil, water, and air. 4.1.1--48

At around 60 months of age:

1. Demonstrate increased ability to investigate and compare charac teristics (size, weight, shape, color, texture) of earth materials such as sand, rocks, soil, water, and air. `4.1.1--60`

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2 Changes in the Earth `4.2.0`

At around 48 months of age:

1. Observe and describe natural objects in the sky (sun, moon, stars, clouds) and how they appear to move and change. `4.2.1--48`
2. Notice and describe changes in weather. `4.2.2--48`
3. Begin to notice the effects of weather and seasonal changes on their own lives and on plants and animals. `4.2.3--48`
4. Develop awareness of the importance of caring for and respecting the environment and participate in activities related to its care. `4.2.4--48`

At around 60 months of age:

1. Demonstrate an increased ability to observe and describe natural objects in the sky and to notice patterns of movement and apparent changes in the sun and the moon. `4.2.1--60`
2. Demonstrate an increased ability to observe, describe, and discuss changes in weather. `4.2.2--60`
3. Demonstrate an increased ability to notice and describe the effects of weather and seasonal changes on their own lives and on plants and animals. `4.2.3--60`
4. Demonstrate an increased aware ness and the ability to discuss in simple terms how to care for the environment, and participate in activities related to its care. `4.2.4--60`