

HANDOUT 1: Science Domain Map



Scientific Inquiry		Physical Sciences		Life Sciences		Earth Sciences	
<i>At around 48 month</i>	<i>At around 60 months</i>	<i>At around 48 month</i>	<i>At around 60 months</i>	<i>At around 48 month</i>	<i>At around 60 months</i>	<i>At around 48 month</i>	<i>At around 60 months</i>
1.0 Observation and Investigation		1.0 Properties and Characteristics of Nonliving objects and Materials		1.0 Properties and Characteristics of Living Things		1.0 Properties and Characteristics of Earth Materials and Objects	
1.1 Demonstrate curiosity and raise simple questions about objects and events in their environment.	1.1 Demonstrate curiosity and an increased ability to raise questions about objects and events in their environment.	1.1 Observe, investigate, and identify the characteristics and physical properties of objects and of solid and nonsolid materials (size, weight, shape, color, texture, and sound).	1.1 Demonstrate increased ability to observe, investigate, and describe in greater detail the characteristics and physical properties of objects and of solid and nonsolid materials (size, weight, shape, color, texture, and sound).	1.1 Identify characteristics of a variety of animals and plants, including appearance (inside and outside) and behavior, and begin to categorize them.	1.1 Identify characteristics of a greater variety of animals and plants and demonstrate an increased ability to categorize them.	1.1 Investigate characteristics (size, weight, shape, color, texture) of earth materials such as sand, rocks, soil, water, and air).	1.1 Demonstrate increased ability to investigate and compare characteristics (size, weight, shape, color, texture) of earth materials such as sand, rocks, soil, water, and air.
1.2 Observe objects and events in the environment and describe them.	1.2 Observe objects and events in the environment and describe them in greater detail.	2.0 Changes in Nonliving Objects and Materials		1.2 Begin to indicate knowledge of body parts and processes (e.g., eating, sleeping, breathing, walking) in humans and other animals.	1.2 Indicate greater knowledge of body parts and processes (e.g., eating, sleeping, breathing, walking) in humans and other animals.	2.0 Changes in the Earth	
1.3 Begin to identify and use, with adult support, some observation and measurement tools.	1.3 Identify and use a greater variety of observation and measurement tools. May spontaneously use an appropriate tool, though may still need adult support.	2.1 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).	2.1 Demonstrate an increased awareness 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).	1.3 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.	1.3 Recognize that living things have habitats in different environments suited to their unique needs.	2.1 Observe and describe natural objects in the sky (sun, moon, stars, clouds) and how they appear to move and change.	2.1 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.
1.4 Compare and contrast objects and events and begin to describe similarities and differences.	1.4 Compare and contrast objects and events and describe similarities and differences in greater detail.			1.4 Indicate knowledge of the difference between animate objects (animals, people) and inanimate objects. For example, expect animate objects to initiate movements and to have different insides than inanimate objects.	1.4 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.	2.2 Notice and describe changes in weather.	2.2 Demonstrate an increased ability to observe, describe, and discuss changes in weather.
1.5 Make predictions and check them, with adult support, through concrete experiences.	1.5 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).			2.2 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 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.	2.0 Changes in Living Things	
1.6 Make inferences and form generalizations based on evidence.	1.6 Demonstrate an increased ability to make inferences and form generalizations based on evidence.			2.1 Observe and explore growth and changes in humans, animals, and plants and demonstrate an understanding that living things change over time in size and in other capacities as they grow.	2.1 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 butterfly).	2.4 Develop awareness of the importance of caring for and respecting the environment and participate in activities related to its care.	2.4 Demonstrate an increased awareness and the ability to discuss in simple terms how to care for the environment, and participate in activities related to its care.
2.0 Documentation and Communication				2.2 Recognize that animals and plants require care and begin to associate feeding and watering with the growth of humans, animals, and plants.	2.2 Develop a greater understanding of the basic needs of humans, animals, and plants (e.g., food, water, sunshine, shelter).		
2.1 Record observations or findings in various ways, with adult assistance, including pictures, words (dictated to adults), charts, journals, models, and photos.	2.1 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.						
2.2 Share findings and explanations, which may be correct or incorrect, with or without adult prompting.	2.2 Share findings and explanations, which may be correct or incorrect, more spontaneously and with greater detail.						



Scientific Inquiry

1.0 Observation and Investigation

<i>At around 48 months of age</i>	<i>At around 60 months of age</i>
<p>1.1 Demonstrate curiosity and raise simple questions about objects and events in their environment.</p>	<p>1.1 Demonstrate curiosity and an increased ability to raise questions about objects and events in their environment.</p>
<p>Examples</p> <ul style="list-style-type: none"> • Wondering why the toy car does not roll down the ramp, picks up the car and discovers that it is missing one wheel. • When building with blocks, puts more and more blocks on top to find out how tall the tower can get without falling apart. • Participates in preparing play dough, and asks, “How did it turn blue?” • Sees a snail and wonders, <i>Why is it hiding inside? When is it coming out?</i> • A child who is nonverbal gestures to his friend to join in observing how the guinea pigs (the class pets) eat their food. He points, on his communication board, to the photo of a child eating and then points to the guinea pigs. • During lunchtime, mixes her sour cream with applesauce, and notices that sour cream changes its color. Then tries it out to find out what it tastes like. • Picks up small “roly poly” bugs from under a rock and asks, “Why do they roll up in a ball?” 	<p>Examples</p> <ul style="list-style-type: none"> • When playing in the block area, creates a sloped ramp with blocks and rolls different toy cars down the ramp. Checks which car goes the farthest when rolling down the ramp. • While digging in the mud, sees a worm and wonders, <i>Does it live in the ground? I see another one. Is it their home?</i> Another child observes the worm and asks, “Why does the worm not have eyes? How does it see to move?” • On the playground, looks up and asks the teacher, “How come I can see the moon in the daytime?” • Observes a ladybug in the yard and asks what would happen if she put it in a box with dirt and grass. Asks, “Can it be our class pet?” • While sorting different rocks, picks up one of the rocks and washes it with soap and water. Then gets the magnifying glass to observe it more closely. • On a nature walk in the preschool yard, notices holes in the ground, points to the holes and calls out to get the teacher’s attention, and asks, “What’s there?”