Area 8: Science

Gathers information from discoveries and conducts investigations 8.1

Birth-12 months

A Notices objects and events in their environment 8.1.A

B Explores toys or other safe objects 8.1.B

C Reacts to changes in the environment 8.1.C

D Shows sensory likes and dislikes 8.1.D

Approximately 12-24 months

E Investigates objects to build understanding of the environment through repetitive play 8.1.E

F Uses five senses to identify and interact with new and familiar objects 8.1.F

Approximately 24-36 months

G Asks simple questions about observations of their environment using language, behavior and interactions 8.1.G

H Begins to explore scientific tools 8.1.H

I Uses sensory experiences to learn about and respond to surroundings 8.1.I

Approximately 3-4 years

J Asks questions about their environment: 8.1.J

- a Begins to identify and look for information that will help answer questions and solve problems 8.1.J.A
- b Uses scientific tools and technology purposefully to conduct investigations 8.1.J.B

K Uses the five senses as tools to make observations to describe the properties of objects and phenomena 8.1.K

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Approximately 4-5 years

L Plans and conducts simple investigations to answer questions or to design solutions to scientific or engineering problems 8.1.L

M Uses observational tools to extend the five senses 8.1.M

N Observes, investigates and describes objects, materials and other physical science phenomena in the classroom and outdoor environments 8.1.N

O Observes, asks questions and begins to recognize patterns and relationships in natural phenomena 8.1.O

Uses reasoning to make sense of information from discoveries and investigations 8.2

Birth-12 months

A Uses trusted relationships to gain understanding of the living and non-living world 8.2.A

B Shows understanding people exist when they cannot be seen and objects exist even when out of sight 8.2.B

C Notices and reacts to cause and effect 8.2.C

Approximately 12-24 months

D Manipulates unfamiliar items to see how they function 8.2.D

E Explores cause and effect relationships by engaging in problem solving through trial and error 8.2.E

F Intentionally repeats actions to produce a desired effect 8.2.F

Approximately 24-36 months

G Makes a choice to reach a desired outcome 8.2.G

H Begins to make comparisons and categorize non-living things based on observable characteristics 8.2.H

Approximately 3-4 years

I Compares and categorizes living and non-living things based on observable characteristics 8.2.I

J Observes, predicts and asks questions to understand how things work 8.2.J

Approximately 4-5 years

K Uses observations from investigations to notice similarities and differences in living things and to make guesses about their needs 8.2.K

L Describes and compares the properties and motions of objects in terms of speed and direction, based on exploration 8.2.L

M Uses prior experiences and/or data from observations to identify patterns in how living and nonliving things stay the same or change over time and/or when conditions change 8.2.M

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Analyzes what happened during an investigation to make meaning 8.2.N

Shares information and understanding about discoveries and investigations 8.3

Birth-12 months

A Vocalizes and gestures to communicate with others: 8.3.A

- a Gains attention 8.3.A.A
- b Shows preferences and dislikes 8.3.A.B

B Uses repetitive actions to demonstrate new learning experiences 8.3.B

Approximately 12-24 months

C Shares information and questions using gestures and/or facial expressions 8.3.C

D Responds to questions or statements to engage in learning and exploration 8.3.D

Approximately 24-36 months

E Communicates in a variety of ways to share information: 8.3.E

- a Expresses wonder and curiosity 8.3.E.A
- b Tells about a specific experience or activity 8.3.E.B
- c Draws simple pictures to represent objects 8.3.E.C

Approximately 3-4 years

F Communicates in a variety of ways to share information: 8.3.F

- a Tells about a specific experience, activity or observation 8.3.F.A
- b Answers questions using experiences and observations 8.3.F.B
- c Begins to ask questions to seek more information on a topic of interest 8.3.F.C
- d Draws simple pictures to represent observations of objects 8.3.F.D
- e Uses scientific vocabulary words with modeling and support from an adult 8.3.F.E

Approximately 4-5 years

G Generates explanations and communicates ideas and/or conclusions about investigations: 8.3.G

- a Communicates with others about questions, actions, ideas, observations or results using labels and adjectives 8.3.G.A
- b Draws increasingly complex pictures to represent their observations of objects and/or of changes to objects or the environment 8.3.G.B
- c Uses scientific content words when investigating and describing observable phenomena 8.3.G.C