



Developmental Progression of Inquiry Skills

This handout describes the inquiry skills children from birth to eight years use to develop understanding of science concepts and phenomena. Refer to the [California Infant/Toddler Learning and Development Foundations](#), the [California Preschool/Transitional Kindergarten Learning Foundations](#), the [California Next Generation Science Standards](#), and the [Preschool Through Third Grade \(P-3\) Learning Progressions](#) in science for more information on these skills.





Progression of Inquiry Skills

Infant

- Explore the world using their senses, like touching, listening, mouthing, smelling, and gazing at objects
- Show curiosity and start predicting familiar outcomes, such as expecting to see a caregiver's face when playing peek-a-boo or demonstrating excitement to feed when an adult approaches with a bottle
- Discover cause and effect by repeating actions to see what happens, like shaking a rattle, splashing their hands in water, or pushing blocks and noticing them fall

Toddler

- Observe the world with all of their senses and begin describing objects and phenomena with words and gestures
- Point to objects and phenomena and ask simple questions ("What's that?") to gather information
- Make basic predictions based on past experiences, like expecting a loud noise when dropping a cup
- Explore objects and phenomena through trial and error, testing how things work by doing
- Solve problems by trying different actions until they find a solution, like figuring out how to reach a toy
- Sort and group objects by properties like size or color as a way to organize and make sense of information

Preschool

- Frequently ask questions to understand the world around them
- Make simple predictions and test them to compare what they thought would happen with what actually happens
- Engage in active experiments to intentionally test ideas, such as mixing colors to create new colors or building ramps to change the speed of a ball
- Solve problems with intention—using past experiences and novel approaches
- Sort, classify, and compare objects to organize their observations, notice patterns, and develop explanations and meaning
- Document and communicate about observations or findings—with adult support—in different ways, including representations, simple graphs or tables, drawings, models, movement, and role-play

Elementary

- Observe objects and phenomena intentionally and describe their features accurately using a variety of words, comparisons, and gestures
- Use observation and measurement tools to extend observations
- Ask focused and testable questions to explore science ideas
- Plan and carry out investigations, using organized steps and tools to test predictions
- Solve problems with intention—using past experiences, knowledge of science concepts and phenomena, and novel approaches
- Collect and document information systematically using representational drawings, charts, tables, or simple graphs
- Analyze data to find patterns, draw conclusions, and develop meaning from their investigations
- Communicate evidence-based explanations with others through models, drawings, writing, or numbers

