
Science with Infants and Toddlers

INSTRUCTIONS

This handout was designed for use with the article, “Sharing the Wonder: Science with Infants and Toddlers,” from The National Association for the Education of Young Children, NAEYC. The questions and activities in this handout could be used in a work session (e.g., professional learning community, professional development session), for individual coaching, or for self-reflection.

Goals

- ◆ Discuss what scientific inquiry means for infants and toddlers.
- ◆ Discuss challenges or barriers young children may face while exploring the natural world.
- ◆ Identify practical strategies to support infants’ and toddlers’ inquiry skills.
- ◆ Develop a plan to create an inclusive environment that supports scientific inquiry through exploration and discovery.

Activity

- ◆ Read the article.
- ◆ Use the questions below to guide your reflection and action plan in supporting infants' and toddlers’ inquiry through science.
- ◆ Implement your plan and adjust as needed to support inquiry through exploration.

Scientific inquiry allows children to develop a range of skills across all domains of development.

Emily J. Adams & Rebecca Parlakian

REFLECTION QUESTIONS

- ◆ What caught your attention from the article? What made that fact, excerpt, or example meaningful to you?
- ◆ The article describes scientific inquiry for infants and toddlers as a process of exploration and discovery, best thought of as a “way of thinking and acting.” In your own words, how would you describe scientific inquiry?
 - Engagement during science activities and exploration will look different for each child. Some children will prefer hands-on activities while others may feel more comfortable observing you or their peers participate. How do the children in your care engage in exploration and discovery?
 - What challenges or barriers do children face while exploring and developing their inquiry skills? Do some children encounter more challenges than others? Why do you think that is?
- ◆ Reflect on the children in your care and their unique needs.
 - How can you create an inclusive learning environment that encourages inquiry and exploration?
 - Consider what resources you will need to support young children’s needs. Below are some suggestions:
 - Create a science space with a variety of materials for children to explore I.e. magnifying glasses, pictures of insects/animals, water table, etc.
 - Think of a time of day when you can intentionally engage in science/inquiry skills with children in your care.
 - Provide opportunities for children to engage in inquiry-based learning.
- ◆ Develop a plan to create an inclusive environment that supports scientific inquiry through exploration and discovery.
 - The article mentions several resources that would support an inclusive learning environment for inquiry skills. Which prompt(s) are you willing to try in your practice?
 - Partner with families to support inclusive environments at home that are geared towards children’s inquiry skills.
 - Share your observations with families and be sure to learn about theirs as well.

ADDITIONAL RESOURCES

Learn more about inquiry through nature and science for infants and toddlers:

- ◆ **Source:** Head Start
- ◆ **Article:** News You Can Use: Early Science Learning for Infants and Toddlers
- ◆ **Link:** <https://eclkc.ohs.acf.hhs.gov/school-readiness/article/news-you-can-use-early-science-learning-infants-toddlers>
- ◆ **Description:** As natural scientists, infants and toddlers are curious. This article from NAEYC discusses ways children's caretakers can be more intentional in how they support young children's early science learning and school readiness.

- ◆ **Source:** NAEYC
- ◆ **Article:** Toys as Tools: Everyday Science Experiences
- ◆ **Link:** <https://www.naeyc.org/our-work/families/toys-as-tools-everyday-science>
- ◆ **Description:** Children can explore natural phenomena by engaging in simple toys and tools. NAEYC explains the importance of the natural world and explores human-made materials that make our lives easier and more comfortable.

- ◆ **Source:** NAEYC
- ◆ **Article:** Supporting the Scientific Thinking and Inquiry of Toddlers and Preschoolers through Play
- ◆ **Link:** <https://scienceinprek.si.edu/sites/default/files/NAEYC%20Science%20Article%20%281%29.pdf>
- ◆ **Description:** Children make sense of the natural world through play experiences. This article offers strategies for teachers to guide learning through science-play experiences to further inquiry.