

Linking Science with Engineering



How Science Links with Engineering

Early Science with *Nico & Nor*[®] also explores connections between science and engineering. Engineering is a process through which people design solutions to meaningful problems, needs, or wants of an individual, group, or community. Engineering challenges can be meaningful introductions to science activities and promote engagement. Engineering activities can also be great opportunities for children to apply the science understanding they have developed over time. The following page shows examples of how these connections come up in the activities.



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Get Ready to Teach Science!



Engineering Connection: Explore

Investigating Plant Growth: Children explore a **problem**: the tomatoes are heavy and the plant's stem could break. They **identify materials** to use in building a support structure to help the tomato plant stand upright. See an example activity:

BUILD A FLOPPY TOMATO PLANT SUPPORT STRUCTURE



Engineering Connection: Create

Investigating Light and Shadow: Children **brainstorm ideas** to **design** and **construct** a shadow theater space to explore shadows/ perform shadow plays. See an example activity:

DESIGN A SHADOW THEATER SPACE



Engineering Connection: Improve

Investigating Force and Motion: Children design pathways with different surface textures to help a coconut reach the desired destination. They **test and revise** their **designs** to achieve success! See an example activity:

COCONUT CANYON



Engineering Practices Addressed in Early Science with Nico & Nor

Explore

Exploring problems involves understanding the need or want and identifying available resources to construct a design solution.

Share

Communicating involves explaining how a solution works, how it was achieved, and/or why it is good. This provides an opportunity for reflection and synthesis.

Create

Creating solutions includes both brainstorming and constructing artifacts (using tangible materials and/or technology).

Improve

Solution improvement is an iterative process. It involves testing, observing outcomes, and revising the design based on these outcomes. Exploring problems involves understanding the need or want and identifying available resources to construct a design solution.