



In this new series from PBS North Carolina, Ava and friends explore the world of science through hands-on experiments. In the episode “In a Pickle,” Ava and Carter discover how cucumbers become pickles and experiment with an acid-base reaction.

To learn more, visit pbsnc.org/MiniFab.

Glove Balloon Experiment

Materials

- Vinegar
- Baking soda
- A glass
- A surgical glove

Instructions

1. Pour three tablespoons of vinegar into the glass.
2. Spoon two teaspoons of baking soda into the glove. Hold the glove by the wrist, and shake the baking soda down into the fingers.
3. Holding the fingers of the glove shut, stretch the wrist of the glove over the mouth of the glass.
4. Pull the glove up straight to let the baking soda fall into the vinegar and observe what happens.



Activity courtesy of National Geographic Kids



NC DEPARTMENT OF
HEALTH AND
HUMAN SERVICES
Division of Child Development
and Early Education

Mini Fab Science Lab is made possible with support from the
North Carolina Department of Health and Human Services (NC DHHS) Division of Child Development and Early Education.

Learning Goals

NC Foundations for Early Learning & Development (Pre-K)

Cognitive Development (CD)

- **CD-1:** Children use scientific inquiry and problem-solving skills.
They ask questions, make predictions and observe changes.
- **CD-2:** Children demonstrate knowledge of physical science.
They explore chemical reactions, gases and pressure in a hands-on way.

Approaches to Learning (APL)

- **APL-2:** Children actively seek to understand the world.
Kids are naturally curious about the bubbling and inflation; this taps into joyful learning.
- **APL-4:** Children demonstrate creativity and problem-solving.
They test, observe and adapt during the experiment.

Language Development (LD)

- **LD-4:** Children communicate effectively.
Describing the sequence of events builds vocabulary and expressive skills.

Emotional & Social Development (ESD)

- **ESD-6:** Children develop relationships and social skills.
Children collaborate, share ideas and engage in a shared sense of discovery.

NC Standard Course of Study: K-3 Alignment—Science

Kindergarten: Physical Science

- **K.P.2.1:** Compare observable physical properties of different kinds of materials.
Children compare baking soda and vinegar and observe the reaction.
- **K.P.2.2:** Classify objects and reactions by observable changes.
Foam, fizz and gas formation are classified as changes.

Grade 1: Properties of Matter

- **1.P.2.1:** Understand solids and liquids and how they change.
Children observe liquids reacting to solids to form gas (glove inflation).

Grade 2: Properties & Changes in Matter

- **2.P.2.1:** Understand that liquids and solids have properties that can change when combined.
This experiment shows how chemical change results in a new substance (carbon dioxide).

Grade 3: Chemistry & Environmental Science

- **3.P.2.1:** Recognize how different substances can change in physical and chemical ways.
Children distinguish a chemical reaction (gas production) from physical change.
- **3.L.2.3:** Explain how environmental factors (like soil pH) affect plant growth.



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