

**Mission:** Do some ingredients plus different builds equal different results?

**Age:** 8+  
**Materials:** \$8

**Time:** 30 min  
(Set-up: 5 min | Activity: 20 min | Clean-up: 5 min)

## NGSS Alignment of Grilled Cheese Stackers Activity

The information below may not include every area that this activity can be linked to NGSS concepts

### Disciplinary Core Ideas

#### PS1.A: Structure and Properties of Matter

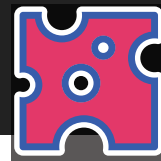
- Middle School
  - Substances are made from different types of atoms, which combine with one another in various ways. Atoms form molecules that range in size from two to thousands of atoms.
  - Solids may be formed from molecules, or they may be extended structures with repeating subunits (e.g., crystals)

#### PS1.B: Chemical Reactions

- 5th Grade
  - When two or more different substances are mixed, a new substance with different properties may be formed.

### Performance Expectations

- 5-PS1-4: Conduct an investigation to determine whether the mixing of two or more substances results in new substances.
- MS-PS1-1: Develop models to describe the atomic composition of simple molecules and extended structures.



## Crosscutting Concepts

### Cause and Effect

- **Grade 3-5**
  - Cause and effect relationships are routinely identified, tested, and used to explain change.
- **Middle School**
  - Cause and effect relationships may be used to predict phenomena in natural or designed systems

## Engineering and Science Practices

### Developing and Using Models

- **Grade 3-5**
  - Develop and/or use models to describe and/or predict phenomena.
  - Develop a model using an analogy, example, or abstract representation to describe a scientific principle or design solution.
- **Middle School**
  - Use and/or develop a model of simple systems with uncertain and less predictable factors.
  - Develop and/or use a model to predict and/or describe phenomena.
  - Develop a model to describe unobservable mechanisms.

### Planning and Carrying Out Investigations

- **Grade 3-5**
  - Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered.
- **Middle School**
  - Conduct an investigation and/or evaluate and/or revise the experimental design to produce data to serve as the basis for evidence that meet the goals of the investigation.