

## NGSS Correlations

### No-Pop Bubbles BUB-700/710

#### Elementary

##### 2-PS1-2

Students can analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.

##### 3-PS2-3

Students can use the No-Pop Bubbles in an investigation to ask questions to determine cause and effect relationships of electric interactions between two objects not in contact with each other.

##### 5-PS1-3

Students can use the No-Pop Bubbles to make observations and measurements to identify materials based on their properties.

#### Suggested Science Idea(s)

##### 2-PS1-2

Students can conduct simple tests using the No-Pop Bubbles and regular bubbles to understand polymers. Information gathered can be used as evidence to support or refute student ideas about evidence of chemical reactions.

##### 3-PS2-3

Use the No-Pop Bubbles in an investigation between the hardened bubbles and an electrically charged balloon or rod to observe movements of those bubbles without initial contact of those objects.

#### Middle School

##### MS-PS1-2

Students can analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.

##### MS-PS2-5

Students can use the No-Pop Bubbles to conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.

##### MS-ESS2-5

Students can use the No-Pop bubbles in an investigation to collect data to provide evidence for how the motions and complex interactions of air masses.

#### High School

##### HS-PS2-6

Students will observe and communicate scientific information about why the molecular-level structure is important in the functioning of a material.

##### HS-PS3-5

The No-Pop Bubbles can be used to develop and model how two objects interacting through magnetic fields, illustrates the forces between objects and the changes in energy of the objects due to the interaction.

**MS-PS1-2**

Students can analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. Using regular bubbles and the No-Pop bubbles allow students to compare and contrast in their investigation.

**MS-PS2-5**

The No-Pop Bubbles is a wonderful tool to show the interaction of statically charged objects, without contact of those objects.

**MS-ESS2-5**

Students can use the No-Pop bubbles to discover various air currents on campus. Since the bubbles will not pop like ordinary bubbles, students can collect data for a longer period of time. Experiment around the campus to see how buildings, warm black top surfaces or topography affect the bubble flight to provide evidence for how the motions and complex interactions of air masses.

**HS-PS2-6**

Students will observe and communicate scientific information about why the substance is able harden and not pop like ordinary bubbles. Further study of the structure of polymers will help students to understand that the molecular-level structure is important in the functioning of a material.

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