

## NGSS Correlations

### Growing Spheres GB-702/710/730

#### Elementary

##### 1-PS4-1

Students can use Water Gel Spheres to plan and conduct investigations to provide evidence that vibrating materials make sound and that sound can make materials vibrate.

##### 1-PS4-3

Students can use Water Gel Spheres to plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.

##### 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.

##### 5-PS1-3

Students can use Water Gel Spheres to make observations and measurements to identify materials based on their properties.

#### Middle School

##### MS-PS1-1

Students can use Water Gel Spheres in an investigation to develop a model to describe composition of simple and extended structures.

##### 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-PS4-2

Students can use Water Gel Spheres in an investigation to develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.

##### DCI-MS/ETS1.B:

##### Developing Possible Solutions.

A solution needs to be tested, and then modified based on the test results in order to improve it.

#### High School

##### HS-PS1-2

Students can use Water Gel Spheres in an investigation to construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the Periodic Table, and knowledge of the patterns of chemical properties.

##### HS-PS2-6

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

### **Suggested Science Idea(s)**

**2-PS1-2**

**5-PS1-3**

**MS-PS1-1**

**MS-PS1-2**

**DCI-MS/ETS1.B**

**HS-PS1-2**

**HS-PS2-6**

Students can conduct simple tests using Water Gel Spheres to understand the rate at which the polymers absorb or evaporate water. Information gathered can be used as evidence to support or refute student ideas about hydrophilic (water loving) materials.

**1-PS4-1**

**1-PS4-3**

**MS-PS4-2**

Students can conduct simple tests using Water Gel Spheres as magnifying lenses. Students can also experiment with sound waves and their effects on the hydrophilic polymer.

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