

January 22 - 26, 2018

7th Grade Science Atoms and Bonding- Phenomenon "Did this Mineral Grow?"

Standards

MS-PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures.

Objective

Students will be able to demonstrate their knowledge of atomic bonding through first-day phenomenon exploration

Critical Questions

1. What determines an element's chemistry?
2. What is a model of an atom?

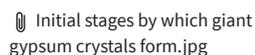
Bellringer

1. Data Interpretation Graph
2. Watch video "Elements of Hockey" as a class

Engage

Students get in new phenomenon groups and discuss picture; answer questions:

1. *How might you define a crystal?*
2. *What determines an element's chemistry?*
3. *How are atoms held together?*
4. *What is the structure of a metal crystal?*
5. *What are properties of metals?*
6. *How do you "see" atoms?*
7. *Can minerals grow?*

 Initial stages by which giant gypsum crystals form.jpg

Assessment

Accommodations & Modifications

Homework

7th Grade Science Atoms, Bonding, and the Periodic Table

Standards

MS-PS1 Matter and Its Interactions
MS-PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures.

Objective

Students will be able to gather and synthesize information to describe the model of an atom and use evidence to describe what determines an element's chemistry

Critical Questions

1. What determines an element's chemistry?
2. What is a model of an atom?

Bellringer

1. Data Interpretation Graph
2. watch video about atomic bonding <https://youtu.be/NgD9yH5SJ29I>; fill in pre-filled notes

Engage

Class participates in popcorn reading for Lesson 1 p.43-48

Assessment

1. Students draw a model of an atom
2. What is a chemical bond?

Homework

Read article "What determines the chemical behavior of an atom?"
<https://sciencing.com/determines-chemical-behavior-atom-7814766.html>

Accommodations & Modifications

7th Grade Science Ionic Bonds Part I

Standards

MS-PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures.

Objective

1. Students will be able to gather and synthesize information to determine describe how ions form
2. students will use mathematical representations to explain how the formulas and names of ionic compounds are written
3. students will gather and synthesize information to identify properties of compounds

Critical Questions

1. Describe how ions are formed.
2. How are formulas and names of ionic compounds written?
3. Describe properties of ionic compounds

Bellringer

1. Data Interpretation Graph
2. Pass the paper activity
3. Watch video on ionic bonding: <https://youtu.be/zpaHPXVR8WU>

Engage

Class participates in popcorn reading for Lesson 1 p.50-53

Assessment

- Assessment on Kahoot:
1. If an atom loses two electrons, what charge will the ion have?
 2. If an atom gains three electrons, what charge will the ion have?

Homework

read article about ionic bonding:
http://www.chem4kids.com/files/atom_ions.html

Accommodations & Modifications

Reflections

7th Grade Science Ionic Bonds Part II

Standards

MS-PS1 Matter and Its Interactions
MS-PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures.

Objective

1. Students will be able to gather and synthesize information to determine describe how ions form
2. students will use mathematical representations to explain how the formulas and names of ionic compounds are written
3. students will gather and synthesize information to identify properties of compounds

Critical Questions

1. Describe how ions are formed.
2. How are formulas and names of ionic compounds written?
3. Describe properties of ionic compounds

Bellringer

1. Quiz
2. Data Interpretation Graph

Engagement

Class participates in popcorn reading for Lesson 1 p.53-55

Assessment

1. The formula for sodium sulfide is Na_2S . Explain what this means?
2. What are properties of ionic compounds?

Accommodations & Modifications

7th Grade Science Covalent Bonds

Standards

MS-PS1 Matter and Its Interactions
MS-PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures.

Objective

1. Students will be able to describe how atoms are held together in a covalent bond
2. Students will identify properties of molecular compounds
3. Students will be able to explain how bonded atoms become partially charged.

Critical Questions

1. How are atoms held together in a covalent bond?
2. What are properties of molecular compounds?
3. How do atoms become partially charged?

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Element math game: Students will complete 10 problems on their chromebook.
<https://education.jlab.org/elementmath/index.html>

Engagement

1. Students watch video on covalent bonding; fill out notes
2. Students get in groups and read slideshow together on covalent bonds <https://www.slideshare.net/allsaintsscience/7th-grade-ch-1-sec-4-covalent-bonds>

Assessment

Accommodations & Modifications

Reflections