Science Planning

**Unit 2: Energy Affects Matter (7-9 weeks)**

**Week 1 Big Idea: Atoms combine to form specific molecules and makes up all matter.**

Week 2 –11/11 -11/15

11/12- YWBAT understand that 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.

Success is: use evidence from today’s lesson to make predictions in writing.

Phenomena: There is more to matter than what is observable to the naked eye.

* Students will observe a system of grass to help them understand the scale, proportion, and quantity of atoms and molecules.
* Students will first draw the system as they see it.
* Then they will begin narrowing it down level by level to a patch of grass, a blade of grass, a blade under a magnifying glass, and a blade under a microscope at different magnifications. At each level, students will draw the system and note patterns they are seeing.
* Students will construct an explanation to predict what would happen if they had a microscope powerful enough to keep zooming in on the blade of grass.
* Students will base their predictions on evidence found in the earlier investigation
* In language arts : [Atoms and Molecules article 6211a](https://docs.google.com/document/d/1Xmmc13PEYlALXQq2BfNGmDk7lsvr0Ci7deOZEWsm92A/edit?usp=sharing)
  + Write an explanation to explain what the matter that we see around us is made of.

11/13 - YWBAT understand that 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.

Success is: developing a model that proves all matter is made up of different combinations of atoms.

Phenomena: There are so many different materials in the world, but there are only about 100 different atoms.

* Vocabulary frontload: atom, molecule, ratio, proportion
* Molecule pattern find and sort
  + Discuss
* Question storm

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* Students will create their own models of different types of atoms and molecules with accurate quantities and proportions.
  + combine several of the same molecule and write ratios/explanations
  + combine molecules of different substances; explain.
* Interactive periodic table exploration: <http://elements.wlonk.com/ElementsTable.htm>
* Paragraph: There are millions of different kinds of things on Earth, but there are only 92 different types of atoms, so how do we get millions of types of things?