Physical Science (PS1): Matter and Its Interactions

Instructor: Katie Clarke
Location: Teachers21 (campus of William James College)

January 12, 2017
8:30 am – 2:30 pm
$195 (includes breakfast & lunch)
10 PDPs (upon completion of project)

Register Here: Workshop 2452

This workshop has been designed to give K-8 teachers who teach science a deeper understanding of the content in the area of Matter and its Interactions. Participants will explore scientific vocabulary associated with each standard and learn ways to introduce these terms to their students using a variety of resources including technology. The instructor will model effective ways to teach science vocabulary while the participants learn or re-learn the content in these areas. Participants will walk away with a deeper understanding of the science content and critical thinking skills associated with the new 2016 MA STE standards. After completing this workshop, teachers should feel confident about their understanding of the content and better equipped to teach these standards to students.

Topics of exploration include:

- Matter exists as particles that are too small to see, matter is always conserved even if it seems to disappear.
- Measurements of a variety of observable properties can be used to identify particular materials.
- Chemical reactions that occur when some substances are mixed can be identified by the emergence of substances with different properties; the total mass remains the same.
- Matter is composed of atoms and molecules can be used to explain the properties of substances, diversity of materials, how mixtures will interact, states of matter, phase changes, and conservation of matter.
- States of matter can be modeled in terms of spatial arrangement, movement, and strength of interactions between particles.
- Characteristic physical properties unique to each substance can be used to identify the substance.
- Some mixtures of substances can be separated into component substances.
- Reacting substances rearrange to form different molecules with different properties, but the number of atoms is conserved.
- Some reactions release energy and others absorb energy depending on the type and concentration of reactants.

Intended Audience: K-8 Elementary Teachers, Science Teachers, Departments Heads, STE Curriculum Leaders

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