Science Virtual Learning

6th Grade Science:

Chemical Properties and Changes

May 15, 2020

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Lesson: May 15, 2020

Objectives/Learning Targets:

Students will identify chemical properties and changes.

Warm Up

Begin by watching this video clip.

Answer these questions as you watch:

1. What were the signs that indicated baking a cake is a chemical change?
2. Can you think of another kitchen chemical change?

Warm Up - Answer Key

Begin by watching this video clip.

1. Signs of a chemical change:
   - The batter took in heat & the baked cake gave off heat
   - The color changed from yellow to golden brown
   - A smell was produced while the cake is in the oven
   - Carbon dioxide was released
   - The change is irreversible
2. Answers may vary. Ex: Toasting a slice of bread, scrambling eggs, cooking chicken

Background Information

Chemical Property:

A property of a substance that describes how it reacts to other substances and changes its chemical identity as a result

Examples of chemical properties: toxicity, combustibility, reactivity with water, acidity

Chemical Change:

A change that is irreversible that changes the physical & chemical properties of a substance, creates a new substance

Examples of chemical changes: burning a match, iron rusting, cooking chicken

Signs that a chemical reaction (change) has occurred:

F- FIZZ

- Formation of bubbles or fizz are a sign of a chemical change.

A- AROMA

- After a chemical change, the smell may change.

R- REPLACEMENT OF COLOR OR REACTIVITY

- A color change or reaction *may* indicate a chemical change.

T- TEMPERATURE CHANGE

- <u>Exothermic Reaction:</u> Heat Exits, Gets hot! <u>Endothermic Reaction:</u> Feels cold

S- A NEW SUBSTANCE FORMS

- Molecules rearrange and a new substance is present.

Practice

Determine if the following are examples of chemical properties or changes.

Chemical Change

1. A change in the physical and chemical properties.
2. A new substance is formed.

Chemical Property

1. Indicated how a substance reacts with something else.
2. Matter will be changed into a new substance after the reaction.

Flammability	Iron rusting
Toxicity	Wood rotting
Silver tarnishing	Reacts with acid
Pancakes cooking	Milk souring
Supports combustion	Food digesting
Reacts with air	Reacts with water

Practice - Answer Key

Determine if the following are examples of chemical properties or changes.

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Chemical Property

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Flammability Property	Iron rusting Change
Toxicity Property	Wood rotting Change
Silver tarnishing Change	Reacts with acid Property
Pancakes cooking Change	Milk souring Change
Supports combustion Property	Food Digesting Change
Reacts with air Property	Reacts with water Property

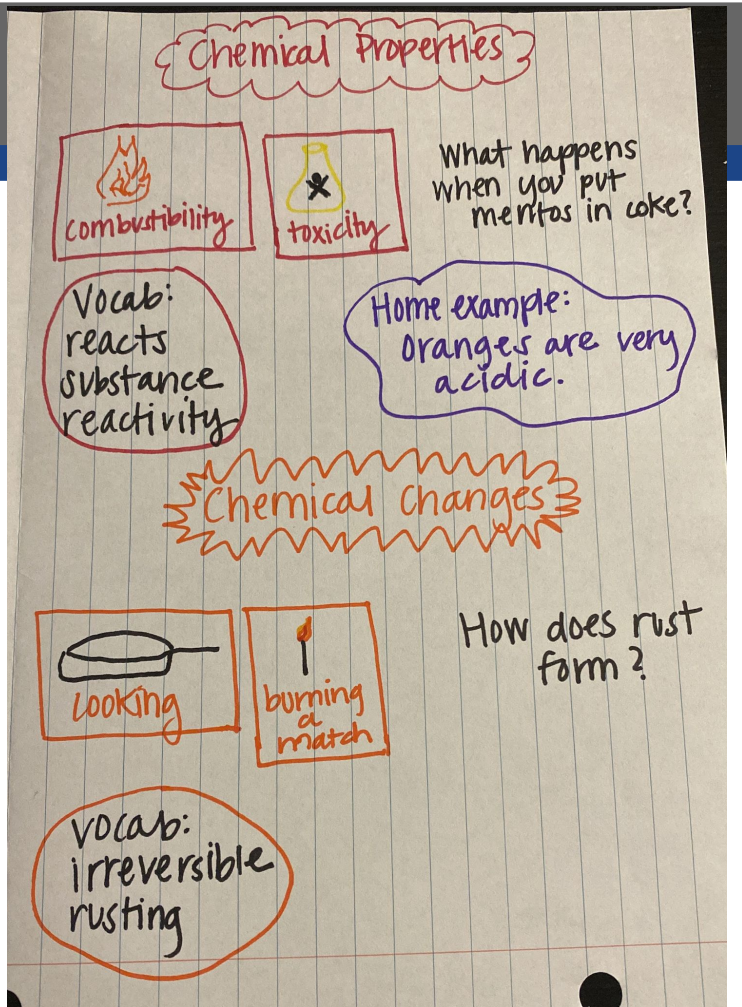
Practice

Grab your folded piece of paper from yesterday's lesson. On the blank side, create a one-pager over chemical properties and changes. Use the directions below to create your one-pager.

1. Make sure your one-pager has a TITLE.
2. Include **four** pictures to represent chemical properties and changes.
3. Include **five** vocabulary words expressing chemical properties and changes.
4. Include **two** questions that you are still wondering about chemical properties and changes.
5. Connect your one-pager to your life by drawing **something in your home that you can describe its chemical properties!**

Practice - Answer Key

Here's an example!



Additional Practice

1. Test your knowledge of physical & chemical changes by completing this chart.
2. IXL - Compare physical and chemical changes. Please complete the five free practice questions. You do not need to log in.
3. Review physical and chemical properties and changes playing this Gimkit.