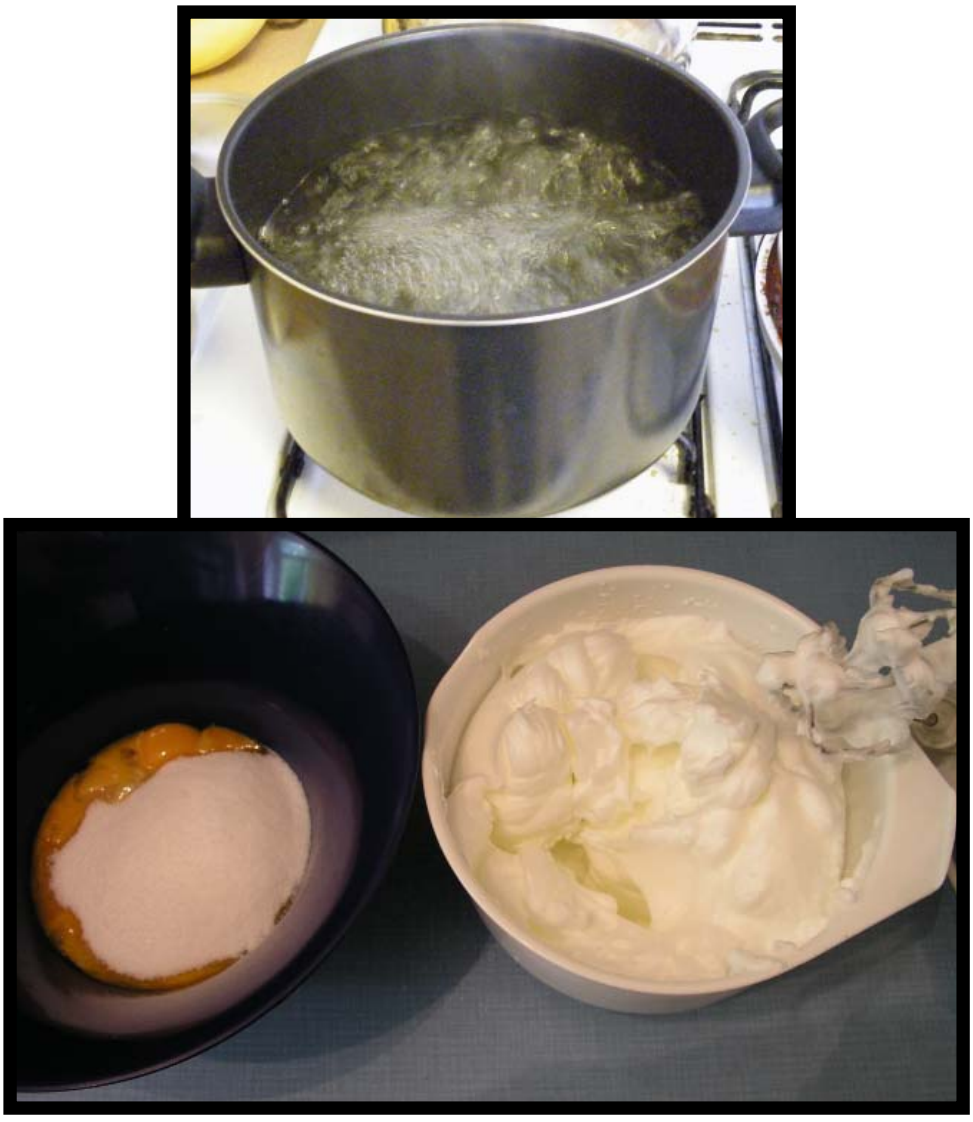
Physical and Chemical Changes

Level H/I



by Kathy Staugler

Illustrated by Travis Schaeffer

Bind This End

What did you eat for lunch today? Many changes happened to your food before you ate it. Food changes when we mix it, cook it or put it in the refrigerator. Let's take a look at Simon's lunch.

Simon had macaroni and cheese for lunch. How did a macaroni noodle start? When we open a box of macaroni, the noodles are hard.

When Simon ate his macaroni and cheese, the noodles were soft. The noodles became soft when they were put in boiling water and cooked. The noodles changed! This was a **physical change**. It was still a macaroni noodle. But it changed from a hard noodle to a soft noodle.

Simon had a salad for lunch. How did the salad start? The salad started as a head of lettuce. When Simon ate his salad, the lettuce was in small bites. The cooks in the cafeteria chopped the lettuce with a knife. The lettuce changed! This was a **physical change**. The lettuce changed but it was still lettuce. A physical change is a change but it is still the same object. Chopping the lettuce changed the way it looked. But it was still lettuce.

Simon had Jell-O® for lunch. How did the Jell-O® start? The Jell-O® started as a powder. Water was added to the powder and it dissolved in the water. The cooks in the cafeteria put the Jell-O® in the refrigerator. The Jell-O® changed. It was a liquid. Then the Jell-O® became a solid. This was a **physical change**. The cold in the refrigerator made the Jell-O® change. But it was still Jell-O®.

In Simon's life skill class, he helped bake a cake. The cake started out as a powder from the box. The class added water, eggs and oil. They stirred the ingredients. You cannot see the powder, the water, the eggs or the oil. It was a new mixture. This new mixture was runny. This was a **chemical change**. It could never go back to what it was before it was mixed. It could not be changed back to the powder, water, egg or oil. When the ingredients are mixed, it became cake batter.

Simon’s class had one more change. They put the cake batter in a pan. They put the cake batter in the oven. They watched the cake change with the heat in the oven. When the cake was done, the cake was different. The cake would never be a runny cake batter again. It was a solid cake and yummy to eat.

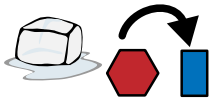
yes

Physical and Chemical Changes

no

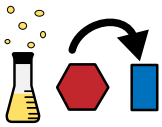
mix	cook	hard	lunch	food	refrigerator	macaroni and cheese
boil	physical change	soft	noodle	water	salad	lettcue
chop	dissolve	cold	knife	Jell-O	liquid	solid
bake	chemical change		cake	ingredients	oven	

Glossary



physical change - a change from one state to another. It can go back to the original state.

- Take a piece of paper: cut it into little pieces. You could tape it back together and it will still be paper.



chemical change - changing substances into other substances. It cannot go back to its original state.

- Take a piece of paper and throw it into a burning fire. It will change and can never be a piece of paper again.

Index for Photographs

The images found in this lesson fall under a Creative Commons license. Please note the citation listed for each individual image below. For information on use or redistribution of any of these images, please visit: http://creativecommons.org/about/licenses/

Title Page - http://upload.wikimedia.org/wikipedia/commons/1/14/Boiling_water.jpg

Title Page - http://upload.wikimedia.org/wikipedia/commons/6/6a/Beating_egg_whites_before_yolk.jpg

Page 1 - http://upload.wikimedia.org/wikipedia/commons/4/42/20111025-FNS-RBN-2061_-_Flickr_-_USDAgov.jpg

Page 2 - http://www.flickr.com/photos/heygabe/2427912248/sizes/o/in/photostream/

Page 3 - http://upload.wikimedia.org/wikipedia/commons/6/66/Lettuce_in_salad_spinner.jpg

Page 4 - http://upload.wikimedia.org/wikipedia/commons/2/23/Day_18_-_Still_Eating_The_Green_Jello_%28gifrancis%29.jpg

Page 5 - http://upload.wikimedia.org/wikipedia/commons/a/a3/Wacky_Cake.jpg

Page 6 - http://upload.wikimedia.org/wikipedia/commons/2/26/Honey_Cake.jpg