

The Sweet Science of Candymaking

Anticipation Guides

Anticipation guides help engage students by activating prior knowledge and stimulating student interest before reading. If class time permits, discuss students' responses to each statement before reading each article. As they read, students should look for evidence supporting or refuting their initial responses.

Directions: *Before reading*, in the first column, write "A" or "D" indicating your agreement or disagreement with each statement. As you read, compare your opinions with information from the article. In the space under each statement, cite information from the article that supports or refutes your original ideas.

Me	Text	Statement
		1. Different types of candies use different kinds of sugars to make the crystal size different.
		2. Sugars are carbohydrates.
		3. If you add more sugar to a saturated sugar solution, it will dissolve.
		4. Once a sugar molecule is dissolved, it remains as long as the conditions (temperature, amount of water, stirring, etc.) remain constant.
		5. Heating a sugar solution causes more sugar molecules to dissolve.
		6. When chemical bonds break, energy is released.
		7. Crystals may start to grow on a group of molecules, a speck of dust, or even a gas bubble.
		8. Glass candy is cooled very slowly so no crystals form.
		9. Marshmallows and gummy candy contain the same ingredients, but marshmallows have air whipped in.

		10. Cotton candy is made with sugar and water.
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Directions: As you read, complete the graphic organizer below to analyze the important chemistry concepts and processes involved in making candy.

Chemistry Concept or Process	Example from the article	Drawing illustrating concept or process
Dissolving		
Seed crystal		
Amorphous structure		

There are LOTS of videos on YouTube showing the gummy bear reaction, but almost all of them have serious safety flaws. Listed below are a couple of videos. Watch one of them and point out the safety problems.

Watch this video first:

https://www.youtube.com/watch?v=mIr4dLGwaVs&feature=player_embedded

This video is a very good video with safety precautions in place.

The following two have several safety violations. Choose 1.

<http://www.youtube.com/watch?v=pTYI5adcv58> or <http://www.youtube.com/watch?v=5vsy50lZSiY>