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Is sugar dissolving a chemical change

No, it is a chemical change. A physical change would be for instance a wooden plank, if yoiu took that wooden plank and broke it in half it would still be a wooden plank with the same properties, the only things that changed is its shape. Your sugar in water could not be seperated back out because it has dissolved into the water and now has different properties. Yes, as well as a chemical change. It clearly changes (white, granulated sugar and liquid to burned brown sugar and liquid to a sticky [and delicious] substance). It changes from a solution to a syrup! Burning wood is an example of an action that involves a chemical change. During the burning process, the wood undergoes a chemical reaction with oxygen in the air, resulting in the production of heat, light, and new substances such as carbon dioxide and ash. Mixing mud, sugar, and water is a physical change because there is no new substance formed. The individual components retain their chemical properties even after mixing. increases the contact between the sugar particles and the liquid in the iced tea, which helps to speed up the dissolving process. Stirring also helps to distribute the sugar more evenly throughout the tea, resulting in a faster dissolution. Yes, mixing hydrogen peroxide with sugar can result in a chemical reaction. The hydrogen peroxide can oxidize the sugar, breaking it down into water and carbon dioxide, releasing energy in the process. This reaction can be exothermic and produce heat. Stirring sugar into a cup of tea is a chemical change because when you evaporate the tea you can not get the sugar back, instead you get a mixture of glucose and fructose. It is also a chemical change. Sugar dissolving would be an example of a physical change. This is because it does not change chemically, so it is still sugar. Mixing coffee with hot water is a physical change because the individual substances (coffee and water) retain their chemical identities and only the physical state of the coffee changes, dissolving in the water. No new substances are formed. Unless you overdo it and carmelize it, it is a physical change. A typical process is to dissolve a large amount of sugar into hot water (physical change - the sugar is still sugar and the water is still water; they do not react. If the sugar-water is not syrupy enough, you can boil off some of the water (still a physical change). If you overdo it though, you will begin to caramelize the sugar. If the sugar is sucrose, it breaks down into fructose and sucrose along with a host of other side reactions that condense, isomerize, dehydrate, fragment, polymerize, and otherwise chemically change the original sugar. Caramelization is definitely a chemical change, but it is not necessary to make syrup.