

Additional activity

What do you know about the process of sugar production?

You are going to watch a film describing this process. First, read the text below and try to correct the factual errors with a partner. Look up any new vocabulary in a dictionary or ask your teacher. Then listen to the recording and check your answers.

A common assumption is that all white sugar is derived from sugar cane. But 25% comes from the sugar beet.

Sugar beet grows only in tropical climates, while sugar cane is hardier and can be cultivated in cooler regions with poorer soil.

The by-products of sugar production, molasses and beet pulp, are used for animal feed.

White sugar is made from the highest grades of sugar.

Mechanical harvesters rip the beet plants out of the ground, chop off the bulbous root, leaving just the leaves and crown.

A beetroot typically weighs around 900 grams; 70–80 percent of that is sucrose, which is sugar.

The loader's sieve removes around 1/3 of the soil.

(...) Listen to the process description

Inside the factory, slicing machines cut the beets into cossettes, strips about the shape of French fries, but smaller.

The cossettes travel through a pipeline into a large tank of hot water, where they soak for a few minutes.

The cossettes are pumped to the bottom of a 20m high extraction tower.

A rotating shaft inside the tower transports them slowly downward against the upward flow of hot water. This draws out the sucrose, producing a sugary water called raw juice.

The next step is to purify this raw juice. In a giant kiln they burn limestone with coke, to produce the chemical compound hydrogen hydroxide, also called lime milk.

Meanwhile, they press the sucrose-stripped cossettes into pulp, to sell as animal feed.

(...) Listen to the process description

The two highest grades of sugar go into driers, on the way passing through a screening machine, which separates any crystals which are too small. The factory dissolves these crystals, then puts the sugary liquid through the crystallization process again.

So in the end there are two grades of beet sugar, which go into silos, where they are stored until it is time to package them as refined sugar and white sugar.

