

Find Your Way Through Trade

Lesson plan 3: When sugar was just a stick

Age group: 4-11

Time: 45 minutes

Objectives

To show the differences between raw materials produced in the South and the manufactured goods we consume.

To encourage children to make links between their own lives and the lives of other people.

To create a better understanding of the products supply chain.

Materials

Following items: bananas, orange juice, rice, coffee, tea, chocolate, sugar. **Photos of raw materials** (see Power Point) and **Activity sheet: When sugar was just a stick** (below)

Content

You could bring in a piece of sugar cane or sugar beet. Ask the children if they know what food item this is, or what food is made from this. You could state that 'some of you eat this daily.' You can choose to introduce the concept of raw material and manufactured product if you wish.

Introduce the photos of the raw materials and the items you brought in.

Are there any photographs the class are unsure about? What do they think it could be?

Ask the children to choose one photograph. What can they see in the photograph? What questions would they like to ask about the product?

Ask the children to pair the raw material photographs with the items. Suggest to the children that they do the ones they are sure about first. (You don't have to use the words raw materials and manufactured products.)

What are the similarities/differences? Why is this? What happens with the products? How does the raw material change? Does it change shape and colour? Do the children think it is cooked, heated, cooled, refrigerated, mashed, cubed etc. Brainstorm as a class and let your pupils explain their answers.

Explore the sugar supply chain (use the Activity Sheet 'When sugar was just a stick') with the whole group and compare this chain with your pupils' (above) answers and solutions.

Extension

Divide the children into small groups. Each group chooses a product (tea, coffee, cocoa) and tries to find as much information as possible about that product's supply chain. They can share their findings and create a display, painting, or newspaper article.

Divide the children into small groups. Each member of the group could draw a different part of the sugar supply chain.

Key Ideas

Although many raw materials come from developing countries in the South, they are manufactured in Britain or other Northern countries. The original product looks quite different from the manufactured goods we buy in our supermarkets. This expensive packaging results in, amongst others things, high retail prices.

Perhaps it is worth stating that we get most of our sugar from sugar cane (70%) and a smaller proportion (30%) from sugar beet production.

Activity sheet

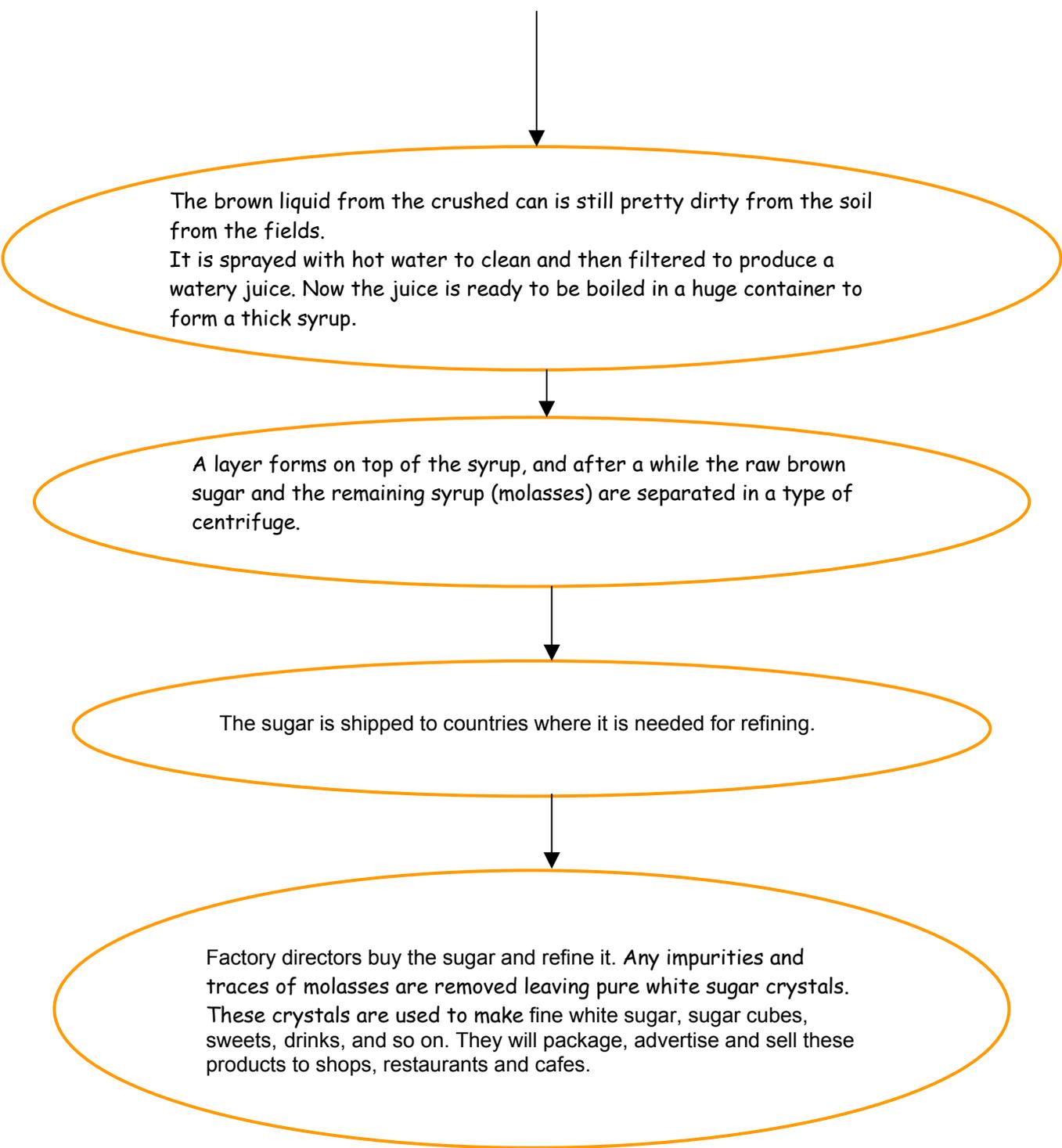
When sugar was just a stick

Growing sugar cane is very hard work. It takes about 11 to 18 months of fertilising and weeding before the cane is ready to be harvested. The cane is then chopped down with large knives at the base. The farmers leave the roots in the ground so that the cane can re-grow in time for the next harvest. Where possible the cane is burned before harvesting to remove dead leaves.

The cane is taken to a local sugar mill or an area where the cane is processed by hand; often by truck or rail but sometimes by cart. This has to be done quickly as the crop soon begins to deteriorate in the warm, damp climate. On average a hectare yields about 50 tonnes of sugar cane, from which seven tonnes of sugar can be extracted.

Sugar cane is similar to bamboo and has a very tough, shiny outer coating which protects the sweet, woody inner fibre. The cane is cut into small pieces and shredded to extract the liquid from the cane. In many factories the cane is crushed between large roller mills: similar to a mangle (wringer) that was used to squeeze the water out of washing 100 years ago.

If there is no sugar mill, workers attach ropes to an ox, which walks round and round to power a machine which in turn presses the raw cane.



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graph TD; A[ ] --> B[The brown liquid from the crushed can is still pretty dirty from the soil from the fields. It is sprayed with hot water to clean and then filtered to produce a watery juice. Now the juice is ready to be boiled in a huge container to form a thick syrup.]; B --> C[A layer forms on top of the syrup, and after a while the raw brown sugar and the remaining syrup (molasses) are separated in a type of centrifuge.]; C --> D[The sugar is shipped to countries where it is needed for refining.]; D --> E[Factory directors buy the sugar and refine it. Any impurities and traces of molasses are removed leaving pure white sugar crystals. These crystals are used to make fine white sugar, sugar cubes, sweets, drinks, and so on. They will package, advertise and sell these products to shops, restaurants and cafes.];
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