

GIS For Schools

Chocolates Bitter Taste

Lesson Map: http://esriaustralia.com.au/education/SpatialActivity22

Engage

What is chocolate?

- We all *know* what chocolate is, but what is it really made up of? Chocolate is made from the Theobroma Cacao tree. This is known in other words as a cacao or a cocoa tree. When we think of cocoa, we probably think of the powder we put in a hot chocolate on a cold night. This is the from the Theobroma tree: its beans are broken down into cocoa and other chocolate masses.
- The T. Cacao produces a pod of beans which are picked from the tree. These beans ferment for at least 5 days and turn from its original purple colour to brown. Then, the beans are dried and shipped overseas to the importing country. Here, they can be ground, roasted or pressed into solids or liquids. If the fat is separated it is called cacao and is considered a 'superfood'. If the fat is ground with the beans, it is called cocoa and is a much sweeter taste.

Explore

Where is T. Cacao farmed?

- → Click on the Lesson Map URL above to open the map. In the 'details' pane, under 'content', tick the first checkbox to turn on the layer 'Cacao Theobroma Area Harvested 2016'. Turn off all other layers.
- ? What 3 countries had the highest area of cacao harvested? [Cote d'Ivoire, Indonesia and Ghana]
- ? Where is the spatial distribution of T. Cacao? What does this tell you about the conditions needed to grow the tree? [They are located mostly around the equator. T. Cacao is suited for tropical climates and thrive in hotter temperatures]

Explain

Chocolates secret ingredient: child labour.

→ Chocolate production is very labour heavy. Unfortunately, to keep up with growing world demands, children as young as 6 are forced to work on the farms. They work in severe conditions: carrying huge weights and inhaling harmful chemicals.

Download student worksheet here.

Time 15 minutes

Activity

Investigate the secret truth behind the chocolate industry.

Learning Outcome

Students will be able to:

- Explain the production process of chocolate
- Explain the spatial distribution of cacao farms
- Identify the relationship between child labour and chocolate
- Explore chocolate production in West Africa

ACARA Curriculum Link

Year 9 Geography: Geographies of interconnection

ACHGK067 | ACHGK068

Teacher Feedback:

To share your feedback on this, or any Spatial Activity, please contact education@esriaustralia.com.au



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- ? Tick the checkbox to turn on the layer 'Percentage Child Labour as a choropleth 2016.' What relationship can you see between the percentage of T. Cacao farmed and child labour? [The areas with high production also have a high level of child labour, specifically West Africa]
- → It should be noted that the farmers in these places have little income: they have no bargaining power and have to accept the conditions they are given. If a chocolate bar is sold for \$2.50, only 5c goes to the farmer. The rest of the money is distributed by: importer (40c), chocolate company (75c), shops (75c) and government (50c). This only increases the need for child labour.

Extend

West Africa Chocolate Trade.

- The West Africa coast is one of the biggest produces of chocolate worldwide and the highest rates of child labour in the world.
- ? Click the table icon for 'Percentage child labour as a choropleth 2016'. Sort the value 'Percentage' into descending. What country in the world has the highest rate of child labour? What is this rate? [Mali: 55.8%]
- ? Mali is not a major producer of cacao beans, however almost half of their children are enslaved in labour. Look at where Mali is on the map. What do you notice? [Mali and Cote d'Ivoire share a border]
- ? Where do you think Cote d'Ivoire source some of the child workers from? [Mali, they are either smuggled across or tricked into promises of a better life]
- ? What could we do as the consumers to stop child labour on cacao farms? [Student's own answer]

Next Steps:

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Spatial Activity Classroom GIS Initiative 2