

# Charcoal in Uganda

*Note: A marker and white board/chart paper may be needed for this lesson.*

TEACHER: *Describe what you see in this picture.*

STUDENTS: **Something black, rough, burnt, broken, etc.**

*Why do you think it looks the way it does in the photo?*

**Because it has been burned; it was broken into pieces; etc.**

*This is a picture of charcoal. Most charcoal is made from wood. People burn tree trunks and branches to make it. Why would someone want wood charcoal?*

**For cooking or heating**

*People all over the world use wood charcoal everyday for cooking food or heating their homes. Your family might use charcoal when you have a barbeque and cook with a grill outside. People like to cook with wood charcoal, instead of firewood, because it burns hotter and longer. Wood charcoal comes from trees, so it is a "renewable" form of energy. Renewable means that people can make more of it by planting more trees. Wood charcoal is useful in many ways, but it can also cause a lot of problems for people and the environment.*

*When people cook food on a grill, using charcoal, what goes up into the air?*

**Smoke**

*Wood and wood charcoal, both give off a lot of smoke when they are burning. That is why many families only cook with wood or charcoal when they are outside, like in a park or their backyard. What would happen if you cooked with wood charcoal inside?*

**The smoke would stay in your house and make you sick.**

*When wood charcoal is burned indoors, the smoke cannot easily escape the house. It gets trapped in the room, and the person cooking breathes it into their lungs. Breathing in lots of smoke is very unhealthy for your body. Smoke makes it hard to breathe and can hurt your eyes. Every year, millions of people around the world get very sick from breathing in smoke from their cooking fires, especially women and small children.*

*Besides being bad for your health, wood charcoal can also be harmful to the environment. All over East Africa, people are cutting down large spans of native forest to make charcoal. Cutting down many trees is called, "deforestation." What do you think happens to the land when many trees are cut down?*

**The land becomes eroded, dry, less fertile, etc.**

(You may want to make a three column chart on the board listing ways that trees help: the environment, wild animals, and people. \*This will be especially helpful if you plan to do the suggested *write and draw* activity.)

*Deforested land quickly becomes "degraded." Degraded means that the soil is no longer healthy for growing trees and plants. How do trees help the environment?*

**They clean the air; they hold the soil; etc.**

*Trees help the environment in many ways. Their roots help to hold soil in place, so it does not wash away. Trees provide protection from the sun and wind, and promote rainfall, so the land doesn't become too dry. They help provide other plants with the water and nutrients they need to grow. How do trees help wild animals?*

**They provide homes, food, etc.**

*Many wild animals, big and small, depend on the trees for their survival. Trees provide homes (or habitats) for animals, as well as food. How do trees help people?*

**Trees provide oxygen, fresh air, shade, food, protection, etc.**

*People need trees for many reasons. Trees give us oxygen to breathe and help keep the air clean. People also use trees for food and medicine. Trees give people shelter and shade from the sun and wind. Trees are also beautiful to look at! Is it always bad to cut down trees?*

**No/yes (allow time for kids to explain their thinking)**

*Cutting down trees is not always bad. Look around your classroom at all of the things made out of wood and paper. As you know, people use trees to make many important things. The problem is that sometimes people cut down too many trees in one place, and do not plant new ones. In Uganda, the main reason people are cutting trees is to make charcoal. People are cutting the trees so quickly, that in less than ten years most of the forests in Uganda could disappear. What could people use besides charcoal for cooking?*

**An electric/gas stove, microwave, etc.**

*You probably have an electric or gas stove in your home for cooking. Most people in Uganda do not have stoves or microwaves like you, because they do not have electricity to power them. They have to find other ways to cook their food. Instead of making charcoal from trees, some families are trying to make charcoal from crop waste. When farmers are finished picking the vegetables in their fields, there are often dried up plants left behind. These dried plants can be used to make a special kind of charcoal, so people do not have to cut down as many trees. This special charcoal does not make as much smoke when it is burned, so it also helps to keep people healthier. Besides crop waste, some people are also trying to cook their food using paper waste, animal dung, or solar*

power. Scientists all over the world are busy inventing new and better stoves that do not need charcoal or electricity to work. Maybe one day you will invent a new stove that will help millions of people and help save forests too!

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## **Kindergarten Standards:**

### **NYS Common Core Kindergarten Social Studies Standards**

- K.2.b Cultures include traditions, beliefs, and shared values and ideas generally accepted by a particular group of people.
- K.8.a Climate, seasonal weather changes, and the physical features associated with the community and region all affect how people live.
- K.11.a A need is something that you must have for health and survival, while a want is something you would like to have.

### **Kindergarten ELA Power NYSCCLS (ICSD Power Standards in Bold)**

#### *Reading Standards for Informational Text: Kindergarten*

- **Integration and Knowledge of Ideas**
  - 7. With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).**

#### *Writing Standards: Kindergarten*

- **Research to Build and Present Knowledge**
  - 8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.**

#### *Speaking and Listening Standards: Kindergarten*

- **Comprehension and Collaboration**
  - 1. Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.**
    - a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).**
    - b. Continue a conversation through multiple exchanges.**
    - c. Seek to understand and communicate with individuals from different cultural backgrounds.**
  2. Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
  - 3. Ask and answer questions in order to seek help, get information, or clarify something that is not understood.**
- **Presentation of Knowledge and Ideas**
  - 6. Speak audibly and express thoughts, feelings, and ideas clearly.**

#### *Language Standards: Kindergarten*

- **Vocabulary Acquisition and Use**
  - 6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts.**

### **Next Generation Science Standards for Kindergarten**

#### *K-ESS2 Earth's Systems*

- ESS2.E: Biogeology
  1. Plants and animals can change their environment. (K-ESS2-2)
- ESS3.C: Human Impacts on Earth Systems
  1. Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (secondary to K-ESS2-2)

#### *K-ESS3 Earth and Human Activity*

- ESS3.A: Natural Resources

1. Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. (K-ESS3-1)
- ETS1.A: Defining and Delimiting an Engineering Problem
    1. Asking questions, making observations, and gathering information are helpful in thinking about problems. (secondary to K-ESS3-2)