

Pre/Post-Activity Assessment PowerPoint **Answers**

1. What is clean cooking? Is clean cooking important? Why or why not?
Clean cooking is cooking that does not create indoor air pollution. It is important because indoor air pollution harms women's health and kills 4.3 million people each year. Clean cooking also is safer for children because the fires are contained. Also, clean cooking requires less fuel and less time so families save money and can spend time on their businesses and with each other.

2. What does the family structure look like in the US?
 - Guiding Questions: On average, how many kids are in a home? Do homes have 1 or 2 parents present or others who act as parents such as grandparents? Describe. If there are parents in a home, do grandparents typically live in the home? Explain. If grandparents do not live in the home, do they live in the same neighborhood, same city, somewhere else, etc. Does your family, your friends' families, families you know, etc. eat most meals together during the week? On the weekend? Does your family, your friends' families, families you know, etc. do most activities together during the week? On the weekend? What is a typical day like for a kid your age? Are chores, schoolwork, etc. different for boys than for girls? Does that seem fair to you?/How does that make you feel? (How would you like to see things change? What is one thing we could do today to make that situation better?)

3. What does cooking at home look like in the US?
 - Guiding Questions: What are some of their favorite foods that their parents, grandparents, etc. make? In the US, if there are two parents in a home, does only one parent do most of the cooking or is it equally shared? If so, which parent/which gender? How does that affect each parent's day? (The parent who cooks may have more on their schedule.) Is most of the food highly processed or natural foods cooked from scratch? What do we use for cooking in the US? Do you help cook at home? If so, what might children do? What is one of your favorite things to cook? Do we ever have health concerns when cooking? If so, what do they look like? Do health concerns related to cooking affect one gender more than another? Why?/Why not?

4. What does the family structure look like in Kenya?
 - Guiding Questions: On average, how many kids are in a home? Do homes have 1 or 2 parents present or others who act as parents such as grandparents? Describe. If there are parents in a home, do grandparents typically live in the home? Explain. If grandparents do not live in the home, do they live in the same neighborhood, same city, somewhere else, etc. Does your family, your friends' families, families you know, etc. eat most meals together during the week? On the weekend? Does your family, your friends' families, families you know, etc. do most activities together during the week? On the weekend? What is a typical

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day like for a kid your age? Do most go to school? Do they have chores? Is life different for girls than for boys? Does that seem fair to you?/How does that make you feel? How does this compare to your typical day? (What is one thing we could do to make things better?) Note: Improving the cookstove is one thing!

It seems like a lot of families have fathers in the homes. There are fewer single parent homes. Being with family—including extended family—is important. Extended family lives with the family or nearby. Women do all/most of the cooking. In some communities, there is a great need for clean cookstoves. The families eat meals together. We do not have info on the other questions. Perhaps your students can find that.

5. What does cooking at home look like in Kenya?

- Guiding Questions: In Kenya, if there are two parents in a home, does only one parent do most of the cooking or is it equally shared? **One parent tends to do the cooking in rural Kenya.** If so, which parent/which gender? **Women.** How does that affect each parent's day? **Much of their day is tied up gathering wood and cooking. They could use that time to work on their business, walk their children to school, or spend time with their family.** Is most of the food highly processed or natural foods cooked from scratch? **It is mostly natural foods but hamburgers and fries can be purchased.** Describe foods and things used for cooking in Kenya. **Some cooking is done indoors in kitchens like in the US. Some cooking is done with open fires/open air settings/outdoor areas. Stones are sometimes used. Fresh plants, vegetables, grains, stone/ceramic bowls, baskets, flour, millet, sorghum, maize, sweet potatoes, busa, fish, onions, oil, ugali, and rice.** Do children help cook at home? **Sometimes girls help.** Are there health concerns when cooking? **Yes.** If so, what do they look like? **They get smoke in their eyes and their lungs. Children might get hurt due to the presence of an open fire** Do the health concerns related to cooking affect one gender more than another? **Yes, women.** Why?/Why not? **Women do most of the cooking in rural Kenya.** How does this make you feel? **Sad. It is unfair.** What is one thing we could do to make things better? **Improving the cookstove is one thing!**

6. Is knowledge of culture important to scientific innovation (design)? If so, how? Provide an example.

Yes. Kenyans have a problem related to cooking over open fires. Thus, we must design something to contain the fires which is safer and easy to cook on. If their culture were centered around something else, the engineers would do something else to help them. If you do not study the culture, listen to the people, and work with the people, you can provide something that is helpful to the citizens. Engineers who do not listen to people are wasting their time when they build things.

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- Guiding Question: What would happen if we were focused on designing microwaves for Kenyans? **That would be ridiculous because they do not have lots of electricity running to their homes as we do.**

7. What are engineers doing at Burn Design Lab? **They are building clean cookstoves as well as other things.**

8. What US Sustainable Development Goals are met by you and the Burn Design Lab working on clean cookstoves? How do they make the world a better place? **Goal #3 is Good Health and Well Being, Goal #5 is Gender Equality, Goal #7 is Affordable and Clean Energy are being met by this work. Students could also say that Goal 10 (Reduced Inequalities), Goal 11 (Sustainable Cities and Communities), and Goal #17 (Partnerships for the Goals) are also being worked on through this project. We help people when we work on these goals.**