Santa Ana High School Article of the Week #4

Nigerians Are Building Fireproof, Bulletproof, and Eco-Friendly Homes With Plastic Bottles and Mud (1200L)

Instructions: READ and ANNOTATE using CLOSE reading strategies.

Step 1: Skim the article using these symbols as you read:
(+) agree, **(-)** disagree, **(*)** important, **(!)** surprising, **(?)** wondering

Step 2: Number the paragraphs. **Read** the article **carefully** and **make notes in the margin**.
Notes should include:

- Comments that show that you **understand** the article. (A summary or statement of the main idea of important sections may serve this purpose.)
- Questions you have that show what you are **wondering** about as you read.
- Notes that differentiate between **fact** and **opinion**.
- Observations about how the **writer's strategies** (organization, word choice, perspective, support) and choices affect the article.

Step 3: A **reread** noting anything you may have missed during the first read.

Student _____Class Period_____

Nigerians Are Building Fireproof, Bulletproof, and Eco-Friendly Homes With Plastic Bottles and Mud

These colorful homes are bulletproof, fireproof, and can withstand earthquakes. They also maintain a comfortable temperature, produce zero carbon emissions, and are powered by solar and methane gas from recycled waste.

Plastic is everywhere. In fact, the environment is so riddled with it researchers predict that 99% of all birds on this planet will have plastic in their gut by the year 2050.

It is not enough to persuade people to use less, plastic needs to be repurposed and reused to be kept out of landfills. Despite informative infographics, emotional statistics, and recycling programs, many nations – especially the United States – continue to toss plastics into landfills without much care.

Notes on my thoughts, reactions and questions as I read:

Froelich, A. Nigerians are building fireproof, bulletproof, and eco-friendly homes with plastic bottles and mud. Tru-Activist.com. November 10, 2015.

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This unfortunate reality has spurred many to get creative with the discarded byproducts of society. Some have used plastic waste to construct marvelous sculptures and raise awareness about the issue, while others are repurposing it entirely to construct eco-friendly homes.

As phys.org reports, the housing crisis has become so bad in Nigeria, nearly 16 million units are required to address the shortage. Because crafting traditional homes would be far too expensive for most, locals adopted the idea put forth by two non-governmental organizations (NGOs) and are now building plastic bottle homes.

The solution not only cuts costs for building a house, it is beneficial for the environment.

Founded by Kaduna-based NGO Development Association for Renewable Energies (DARE), with help from London-based NGO Africa Community Trust, the project is solving two problems at once by addressing the homelessness issue and helping the environment. Not only will there be less plastic in landfills, the house is designed to produce zero carbon emissions.

In addition, it is completely powered by solar panels and methane gas from recycled human and animal waste.

To create a two-bedroom bottle house, workers fill plastic bottles with sand and then hold them together using mud and cement. This forms a solid wall that is stronger than cinder blocks.

That's not all: These colorful homes are bulletproof, fireproof and can withstand earthquakes. They can also hold a comfortable temperature year round.

The buildings can be built to three stories, but no higher, due to the weight of the sand-filled bottles. And, of course, the magnificent diversity of recycled bottles gives each house a unique and bright look.

A two-bedroom house requires 14,000 bottles to complete. To put this into perspective, Nigeria throws away three million bottles every day. Clearly, there are plenty of bottles which can be repurposed to build every individual in their own abode.

At least Nigeria isn't as wasteful as the United States, which discards 130 million bottles per day. That's 47 billion bottles every year – nearly 80% of which end up in the landfill.

If the United States were to save these bottles and repurpose them into houses like folks in Nigeria are doing, 9,257 houses could be built per day. That is nearly 3.4 million houses a year, reports Off Grid World. With 3.5 million people living on the streets in the U.S., is this the solution needed to remedy the homelessness crisis?

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Comprehension questions – answers may be in phrases.

1. *List three items used to provide power to a bottle-built home.*

2. *What products are used to hold the plastic bottles together?*

3. *Based on inference and prior knowledge, list two possible reasons the US throws away more plastic bottles per day than Nigeria.*

4. *Define* **infographic** *as used in the text.*

Answer each question in one or more complete sentences and by providing complete explanations.

5. *The text states that an estimated 99% of all birds are expected to have plastic in their guts by 2050 (paragraph 2). Explain why this is likely and what possible harm could come to humans as a result.*

6. *Based on the data provided, how many homes could be built in Nigeria each year using only discarded plastic bottles. Show your math. Explain your reasoning.*

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