

Logbook:

Meelin Jemal - 2025/2026

Tuesday, Dec 2, 2025:

Today, I researched a topic to do for my science fair project and ended up choosing, **The Energy Hidden in Waste** which is basically how we can make energy from food waste. I wrote a brief explanation of what I plan to do and how I will be collecting my data/research.

Tuesday, Dec 16, 2025:

Today, my teacher told me that I was chosen to represent ALCA. After, I did some research on my topic and watched a few videos to learn more about it. This helped me better understand what I will be doing for my project.

Wednesday, Dec 17, 2025:

Today, I researched more about my topic and started to gather more information for my hypothesis and my research. I learned that if you gather 50% of America's food waste that is wasted each year, it would be enough to power 2.5 million houses for a year.

Saturday, Dec 20, 2025:

Today, I finished researching my research and hypothesis. I wrote everything down on my slides. Something new I learned while researching is that food waste can be turned into energy through processes like anaerobic digestion, where bacteria break down food scraps and produce biogas that can be used for heat or electricity.

Monday, Dec 22, 2025:

Today, I went through my slides and what I researched so far and edited some of it. I then continued to research more about how I will be doing an experiment on energy from food waste.

Tuesday, Dec 23, 2025:

Today, I learned more about how I can take energy from food waste. I looked up ideas for my experiment and wrote down what I will do next. This helped me understand my project better.

Wednesday, Dec 24, 2025:

Today, I was getting ready to start my experiment. I finished my variables (Independent, dependent, and controlled variables.) Now I am writing down what I need for my experiment so I can start soon.

Wednesday, Dec 31, 2025:

Today I started my experiment by getting three air tight containers to resemble anaerobic digestion. I then started by putting bread, banana peel, and spinach in different containers. I put all three containers in the same place with the same temperature where it's not too hot or too cold.

Thursday, January 1, 2026:

Today I revised and went through all my slides and fixed up any mistakes. Then, I finished my procedure slides of how I will be doing my experiment.

Friday, January 2, 2026:

Today, I checked and observed my experiment and there is no change so far, they all look the same as before but the banana peel looks a little bit dry.

Sunday, January 4, 2026:

Today, I checked my experiment and so far the bread still hasn't changed, but the spinach container is a little bit foggy and the banana peels are black. I filled in my research with my data.

Wednesday, January 7, 2026:

Today, I checked on my experiment and the banana peel is completely dry and black on the outside and the spinach has liquid in the container. The bread still looks the same. I filled in my information with my data.

Monday, January 12, 2026:

Today, I checked my experiment and the spinach has lots of brown liquid, and the banana peel has white small spots on it and the bread still looks the same.

Saturday, January 17, 2026:

Today, I checked and observed my experiment again, and there has been lots of change. Firstly, the banana peel is completely black and has white mold all over it. Next, the spinach has lots of brown liquid and the leaves are getting really thin. And lastly, the bread which still looks the same.

Sunday, January 18, 2026:

Today I got accepted into the CYSF platform. On the platform I filled out some parts like research, and wrote a bit describing my project.

Tuesday, January 20, 2026:

Today, I checked on my experiment and the leaves are slowly dissolving and turning into liquid and the bread is still the same and surprisingly still soft, the banana peel is all black and has white frosty mold all over it.

Saturday, January 24, 2026:

Today, I checked on my experiment again and the banana peel is completely black with white mold growing on it. The container also has lots of fog inside. The spinach has very thin leaves and lots of brown liquid. The bread still has not changed. I also worked on my Introduction.

Wednesday, January 28, 2026:

Today, I checked on my experiment and the banana peel is still moldy but it has a little brown liquid. The spinach has lots of liquid and very little thin leaves left. And the bread still hasn't changed.

Sunday, February 1, 2026:

Today, I checked my experiment again and the bread surprisingly still has not changed. The banana is now moving more instead of staying in one place, and has some brown liquid. The spinach's leaves are slowly dissolving and turning into liquid, so now there are few leaves left. I also finished my problem and method on the CYSF platform.

Monday, February 9, 2026:

Today, I checked again on my experiment and the bread is still the same but it has become dry now and the spinach is close to fully turning into liquid and the banana peel is slowly decomposing into liquid.

Friday, February 13, 2026:

Today, I checked on my experiment and the spinach still has a little bit of leaves left but it's almost liquid, the bread is dry but looks the same, and the peel is soggy and has liquid everywhere. Today is the last day of my experiment.

Sunday, February 15, 2026:

Today, I worked on my Problem and Solution slides. I made changes to improve my explanations and make them clearer.

Sunday February 22, 2026:

Today, I went through all the slides I did and I reread them and fixed all my mistakes and changed a few things.

Tuesday, February 24, 2026:

Today, I went on the platform and finished up stuff I didn't complete, I finished my attachments and acknowledgements.