

Alexandria Sterling

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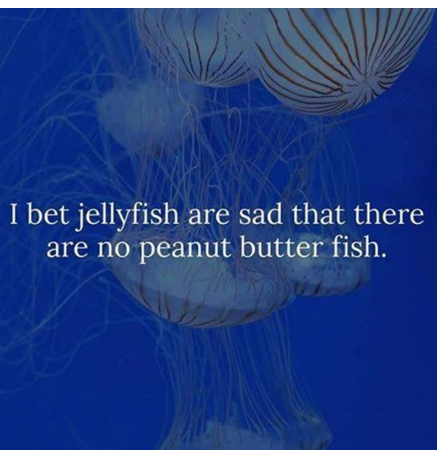
Meal Plan
#098
 60 mins

Starters 5-10 mins

Snack, Cackle & Pop..... 2 mins

Snack: we ♥ food, grab a snack before beginning!

Cackle:



Pinterest

Pop: Stemillions playlist on Spotify:
bit.ly/stemillionsplaylist

Meet Her..... 5 mins

I'm Alex and I'm a chemistry Ph.D. student (working towards being called Dr. Sterling). The focus of my research is bioluminescence, which is a chemical reaction that causes some creatures to glow. I'm trying to understand the foundation of bioluminescence, how it happens, and how we can control it by using lasers, computer models, and chemistry experiments.

Discuss:

- ★ Why do you think some animals glow?
- ★ If you could glow any colour what colour would it be?

Desserts 5 min

Share with us 1 min

Upload photos on [Twitter](https://twitter.com) or [Instagram](https://www.instagram.com) and tag @Stemettes and #Stemillions.

Ask Them..... 2 mins

Got a question? Ask Away! bit.ly/Ask-Away

Digest..... 2 mins

Digest this Meal Plan - fill out the feedback form.

Mains 20 mins - choose ONE only

MAKE..... 20 mins

Ingredients: Red cabbage, a blender, water, vinegar, laundry detergent, (adult supervision).

Alexandria works with chemical reactions, Chemicals can either be acidic or alkali. In this experiment, we will look at what chemicals are acids and alkalis around the home.

1. Peel off 3-4 big cabbage leaves and put them in a blender filled with 200 ml of water. Blend the mixture on high until you have purple cabbage juice.
2. Pour the liquid through a strainer to filter out all of the big chunks. Save the liquid for the experiment.
3. Fill 3 glasses three quarters full with juice.
4. Add a little vinegar to the first glass. Stir with a spoon and notice what happens.
5. In the second glass, add a teaspoon of laundry detergent. Notice what happens?

In the first glass, the colour changes to red, which indicates that vinegar is an acid. In the second glass, the liquid turns green, indicating this is a alkali. Why does this happen? Red cabbage contains a pigment called anthocyanin that changes colour when mixed with an acid or alkali.

EXPLORE..... 20 mins

Ingredients: Pens and paper or computer/laptop.

Alexandria studies bioluminescence in animals, this is a chemical reaction that allows animals to glow. What animals can you find that glow? Do some research and create a poster or presentation to explain a bit about these animals, try to include where they can be found, what do they eat and some images of the animal glowing.