Can you make
clay from natural
Tucson soil?

Testable Question and Variables

Testable Question - Can you make clay from natural Tucson soil that has the same weight as clay you would buy from the store?

Independent Variable - Using natural Tucson soil instead of store bought clay
Control - The weight of the store bought clay
Dependent variable - Measuring the weight of each clay
Constants - Environment, same brand of clay, and trials

My Hypothesis for this experiment is that when use natural Tucson soil clay, I can maintain the same weight as store bought clay.

I think this because I learned from my research that there are Natives who actually made clay out of natural soil similar to store bought clay or clay you use in pottery. Clay is also an earthy material that is actually in store bought clay. So making clay and buying clay is very similar to each other in both quality and weight.

Materials

1. Crayola Clay
2. Soil
3. Bucket or Bowl
4. Gloves
5. Face Mask
6. Water
7. Weighing Scales
8. Ziploc Bag
9. Paper
10. Pencil or Pen
11. A small shovel

Procedures

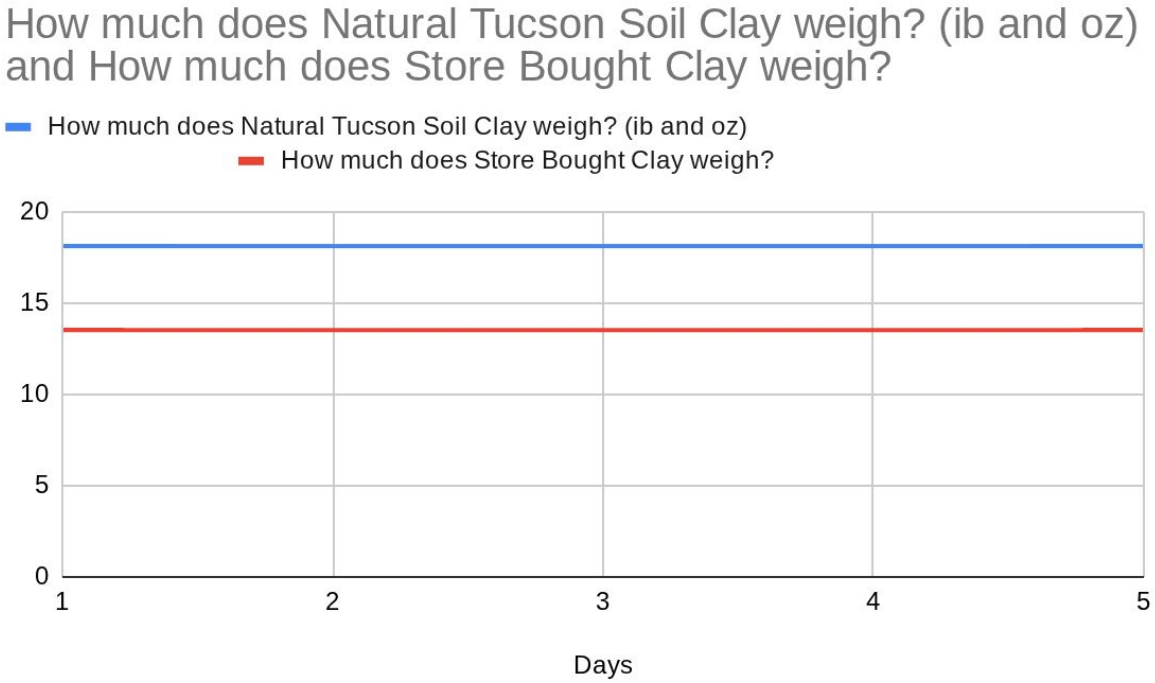
1. Get your stuff ready. You'll need Crayola Clay, natural soil, a shovel, water, bucket or bowl, gloves, a face mask, weighing scales, ziploc bag, paper, and pencil.
2. Go to a place that has soil, like a park or your backyard. Make sure to bring a bucket/bowl, gloves, face mask, and shovel.
3. Then when you arrive, put on your face mask and gloves
4. After that, grab your shovel and start digging in an area with lots of dirt or soil, put the soil or dirt into the bucket/bowl you brought. At least have a normal amount of dirt like shovel up 4 times.
5. If your at the park go back to your home but if your in your backyard stay out there.
6. Your then gonna pour about 1 liter of water if need add two liters of water.
7. Take you hands and start mixing the dirt and water let it dry up if it is too wet at least let it dry for 4 hours then try kneading it (its okay for rocks to be in there just not big ones)
8. You can then put it in a ziploc bag and measure it
9. After measuring the clay you made then write down the weight and start measuring the store bought clay or Crayola Clay and if both the weights are similar.
10. Check on the clay multiple times for five days and compare the weights to see if it stay the same and if the clay you made is similar to the store bought one.

Photos

Data Table

Can you make clay from natural Tucson soil that has the same weight as clay you would buy from the store?		
Days	How much does Natural Tucson Soil Clay weigh? (ib and oz)	How much does Store Bought Clay weigh? (ib and oz)
1	1 ib and 2.1 oz	13.5 oz
2	1 ib and 2.1 oz	13.5 oz
3	1 ib and 2.1 oz	13.5 oz
4	1 ib and 2.1 oz	13.5 oz
5	1 ib and 2.1 oz	13.5 oz

Graph



The data shows that the average weight for the natural Tucson soil clay is 18.1 oz. While the average weight for the crayola clay is 13.5 oz. The difference between these two weights is 4.6 oz. Although the shape of the graph is a straight line, a constant line. Therefore, there are no outliers due to the graph not having a trend or being scattered.

Conclusion

My hypothesis **was not** supported by my data. This is because my data contradicts my hypothesis, one clay weighs more than the other clay despite it looking the same size. There was a 4.6 oz difference between the clay I made and the store bought clay. I feel like I got these results because I didn't add more clay each day. My results also was the opposite of what my research told me. The information said they would have the same weight but they have a difference in weight and aren't too similar. Therefore, another a test I would like to try next time is to find another way to make clay a bit easier and less messier.

Limitations

Some limitations for this experiment were that I was forced to do my experiment inside instead of outside due to a wasp chasing me. I left my stuff outside and couldn't grab them until the next day. There were also too many big rocks in my dirt I took 10 minutes taking out the rocks just for there to be more rocks after I poured some water in. Furthermore, I wish I had knew that mud and dirt apparently attract wasps and be around my experiment even the next day. If I could do this experiment again I would just dig up dirt bring it inside and do my experiment in my home instead of having it delayed multiple times. A resource I would probably use next time it bug spray just incase a bug wants to chase me or attack me.

Thank you for your time!!