




# Testing Water on the Navajo Nation

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# The Purpose of our Project and Why We Chose it

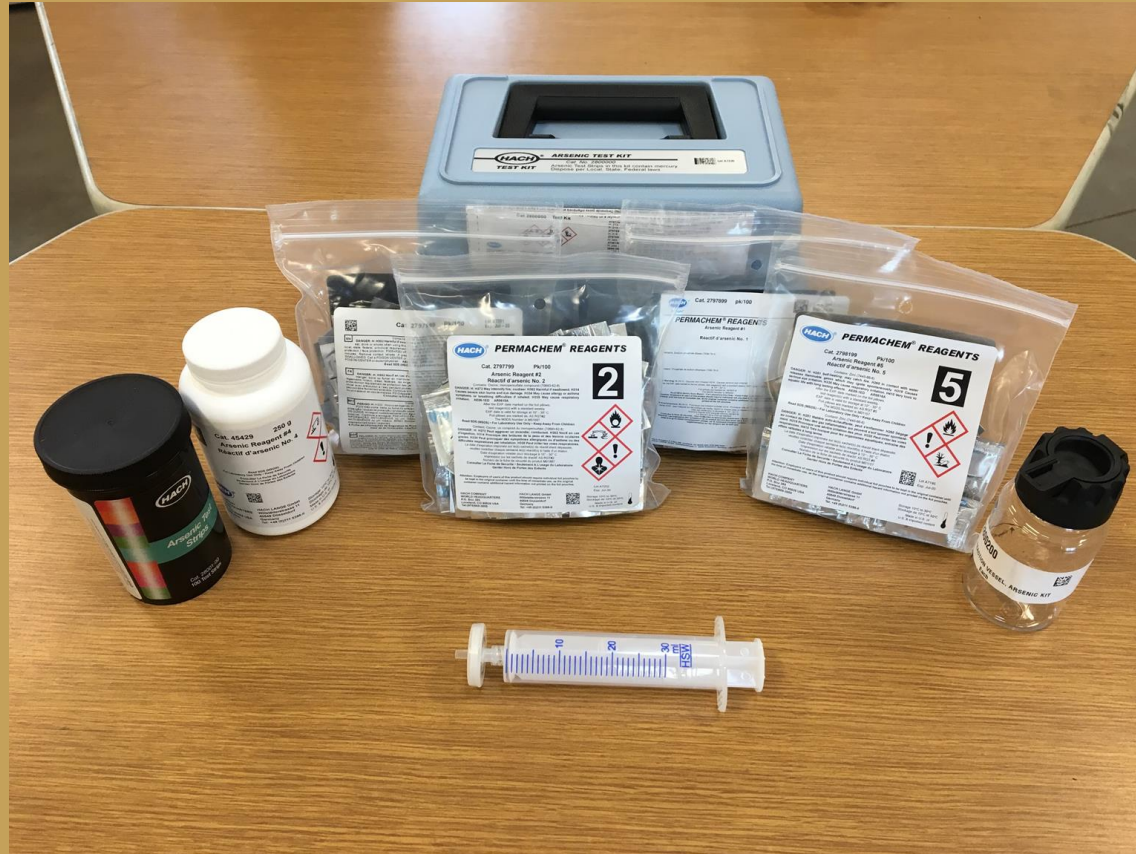
The purpose of this project is that so we can test available water to see if there are any contaminants like Arsenic, Uranium or Lead. We chose this project because the Navajo Nation has historically had contaminants in the water due to different types of mining.

These contaminants can make the water smell bad, taste bad, and potentially cause life threatening health problems.

# Implementation

1. We had a professor, Dr. Jani Ingram, from NAU come in and teach us how to take proper water samples, she also gave us the needed water sampling equipment.
2. We collected water samples from our home water sources and brought them back to school.
3. We had two teachers at school use an Arsenic testing kit to test half of our samples, while we observed.
4. We sent our remaining samples to Dr. Jani Ingram to be tested more thoroughly.

# Tools We Used



# Arsenic Testing Kit in Action



## Where are we now?

After the NAU testing, we found that one of the wells had high amounts of lead. Dr. Jani Ingram and her team offered to retest that one well, so our teachers will be reaching out to the family to see if they would like further testing.

# Our NAU Testing Results

Averages														
52Cr	58Ni	60Ni	75As	95Mo	98Mo	111Cd	114Cd	118Sn	120Sn	121Sb	206Pb	207Pb	208Pb	238U
3.19868344	1.32428093	2.55240996	0.54924715	1.60270309	1.58181229	-0.21930845	-0.16167087	0.86183296	1.24660336	-0.02409854	4.04394433	4.01032235	3.97148646	3.42056720
3.00360136	0.30854498	1.18164084	1.98082401	0.32444889	0.30743102	-0.25793825	-0.20534266	0.31295909	0.67226384	-0.08052596	0.55349497	0.43496978	0.52944194	0.93129922
1.32586914	0.62141913	3.84666884	0.99204516	1.98190554	1.96467861	-0.26035315	-0.20815574	0.72892622	1.11794254	-0.08519560	1.69251905	1.77537873	1.68198535	3.37616519
0.64173165	0.92041411	1.95410436	0.77488979	0.17552424	0.15972590	-0.25564245	-0.21302410	-0.08147838	0.22707348	-0.06208639	0.30670039	0.28428152	0.33696957	0.32383646
1.17896227	2.86204842	5.37434316	1.00980931	2.03106784	2.03635407	-0.23801727	-0.18639321	0.95480209	1.35768654	-0.06094790	<b>15.4706462</b>	<b>16.2857331</b>	<b>15.6821596</b>	3.36266205
3.39973126	0.74010208	4.47291635	0.38983413	1.88376405	1.85953899	-0.25732577	-0.20340657	0.81299581	1.21455853	-0.04245866	3.43953238	3.66474765	3.52846249	3.45774576
3.65282266	2.08732125	3.37481528	1.64440912	0.47255745	0.45679825	-0.24389661	-0.19440795	0.38681457	0.73632404	-0.08113326	2.37861245	2.42623556	2.44083298	0.93157483
1.42748436	0.08976745	0.43360685	0.97646097	0.22976797	0.20865237	-0.26936594	-0.22387681	-0.15375780	0.14030666	-0.07328716	-0.25841015	-0.31694687	-0.27456874	0.20608160
1.40815413	1.03485112	4.36123692	0.98106172	1.99943642	1.98118522	-0.25297155	-0.20395271	0.57284744	0.92718321	-0.08144414	8.64794884	9.14659781	8.89033948	3.23354831

As you can see, the numbers in red are the higher than acceptable levels of lead found in one water source

# The Next Steps

- Our next steps after the water samples will be to test more water on the Navajo Nation to see if any of the water has arsenic or other harmful contaminants in the water that families use to drink everyday, or that families cook with.
- We could have more students from different areas take water samples to send in to NAU.
- We can spread awareness about checking pipes for lead and other contaminants.
- We can also treat the contaminated water sources by filtering the water with our Water Bus system.



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Questions?