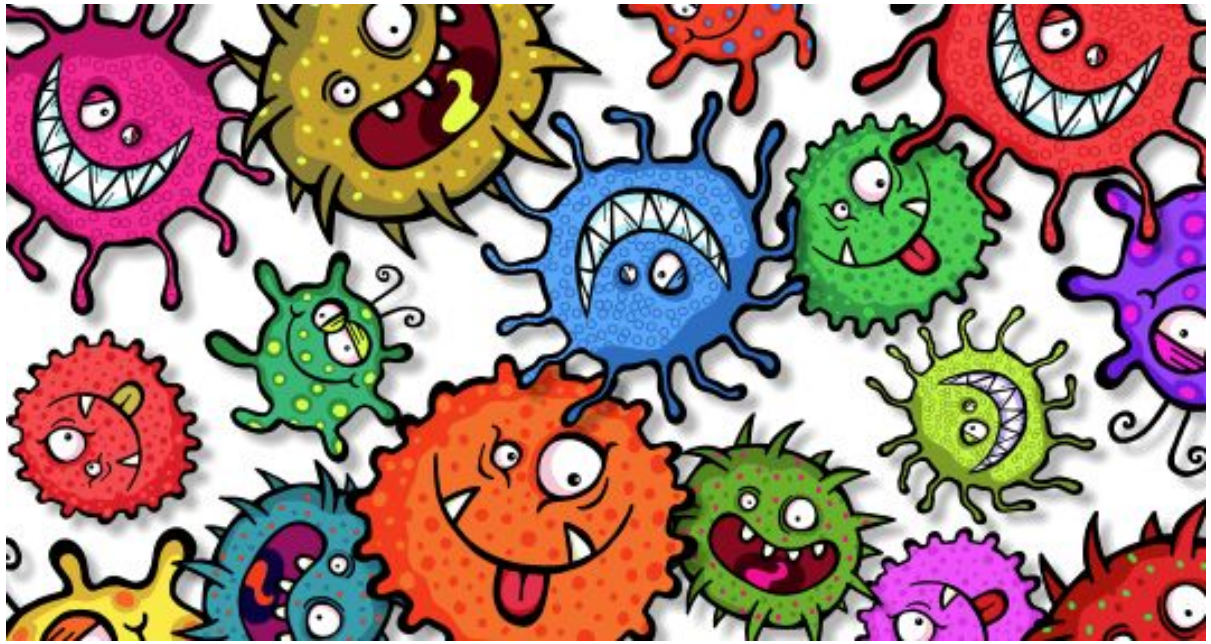
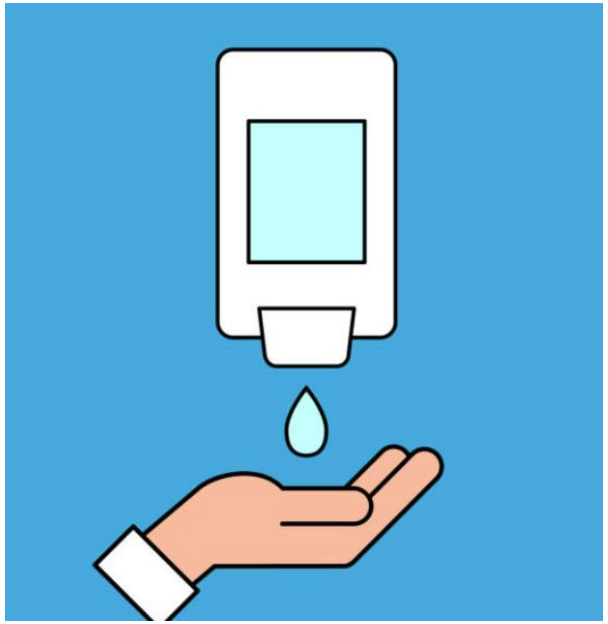
GERM BUSTER AT THE PIZZA ARCADE



INTRODUCTION

My experiment is about how germs can spread and grow bacteria when we don't wash are hands, use hand sanitizer and when you stay with dirty hands.



QUESTION PROBLEM

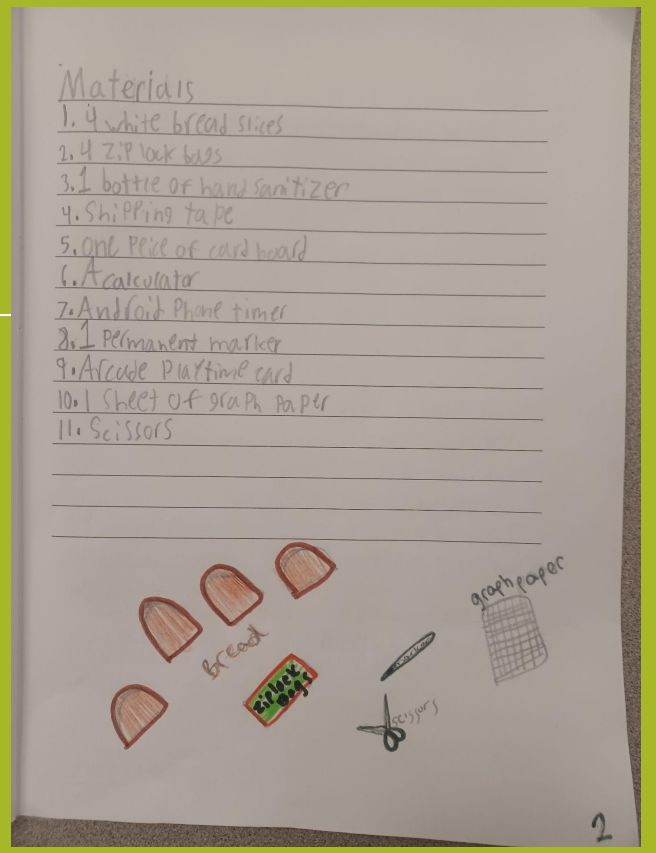
What's the best hand washing method at your local pizza place arcade?

PREDICTIONS

My prediction for this experiment is that the soap and water hand washing method is the safest way to prevent the spread of germs.

MATERIALS

1. 4 White bread slices
2. 4 Ziplock bags
3. 1 Bottle of hand sanitizer
4. Shipping tape
5. One piece of cardboard
6. A calculator
7. Android phone timer
8. 1 permanent marker
9. arcade play time card
10. 1 sheet of graph paper
11. scissors



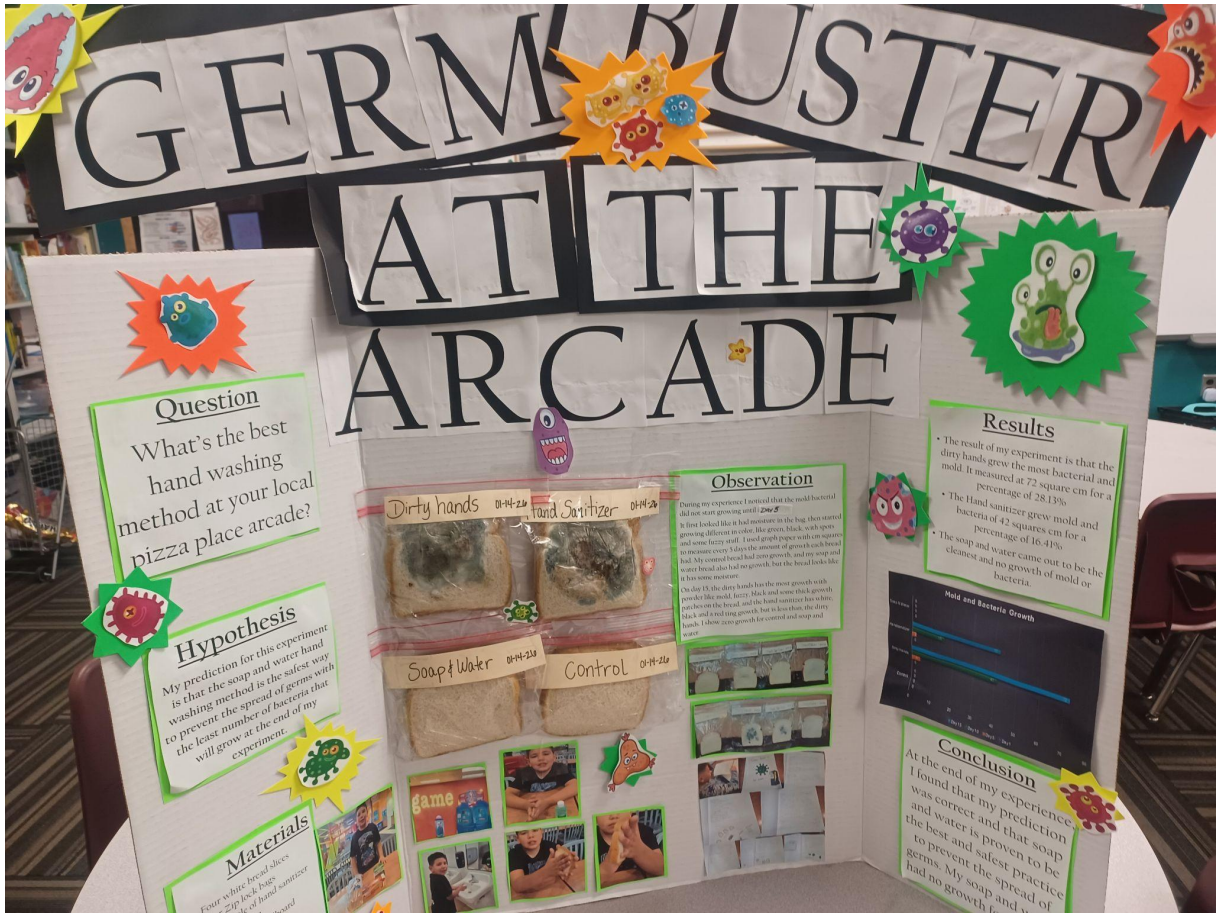
PROCEDURE

1. I collected the supplies, a new loaf of bread (untouched) ziplock bags (4), a permanent marker and placed in a bag.
2. I arrived at my local and pizza arcade taken there by my mom.
3. I washed my hands in the bathroom for 2 minutes with soap and water.
4. I grabbed a slice of bread using the ziplock inside out without touching slice of bread physically with my bare hands and put slice of bread in ziplock bag (repeated x4) for control, dirty hands, hand sanitizer and soap and water.
5. I placed each zip lock bag in a row and labeled each one with a permanent marker, Control, Dirty hands, hand sanitizer and soap and water and with date.
6. I used my moms Android phone timer and set the timer for 45 minutes to play in arcade.
7. The 45 minute time period, I played 12 different games twice, touching different handles, joysticks, ski balls, basketball, player nobs, ride on games, and merry go round ride.
8. The timer alarm alerted that 45 minutes was up.
9. I went to table and where my row of zip lock bread was and opened the labeled "Dirty hands" zip lock bag carefully using one hand to grab slice of bread out and slowly patted slice of bread against my hands on both sides and placed back in zip lock bag and sealed.
10. I then used 5 drops of hand sanitizer measuring a quarter size, running into my hands and waiting 30 seconds until my hands dried.
11. I opened the labeled "Hand Sanitizer" zip lock bag carefully using one hand to grab slice of bread out and slowly patted slice of bread against my hands on both sides and placed back in zip lock bag and sealed.
12. i then went to the public restroom and washed my hands with soap and water for 2 minutes, using an android phone timer and walked back to table assuring my hands did not touch anything.
13. I opened the labeled "Soap and water" zip lock bag carefully using one hand to grab slice of bread out and slowly patted slice of bread against my hands on both sides and placed back in zip lock bag and sealed.
14. I collected each zip lock bag (4) and assured they were tightly sealed and then tapped in a row on a cardboard.
15. I prepared a record sheet using graph/square paper to measure bacterial growth, and bread size.
16. Day 1 (1/14/2026) was recorded
17. Day 5 (1/19/26) , I used graft/square paper and cut to the size of bacterial grown and recorded.
18. recorded
19. Day 10 (1/24/26) , I used graft/square paper and cut to the size of bacterial grown and recorded.
20. recorded
21. Day 15(1/29/26) , I used graft/square paper and cut to the size of bacterial grown and recorded.

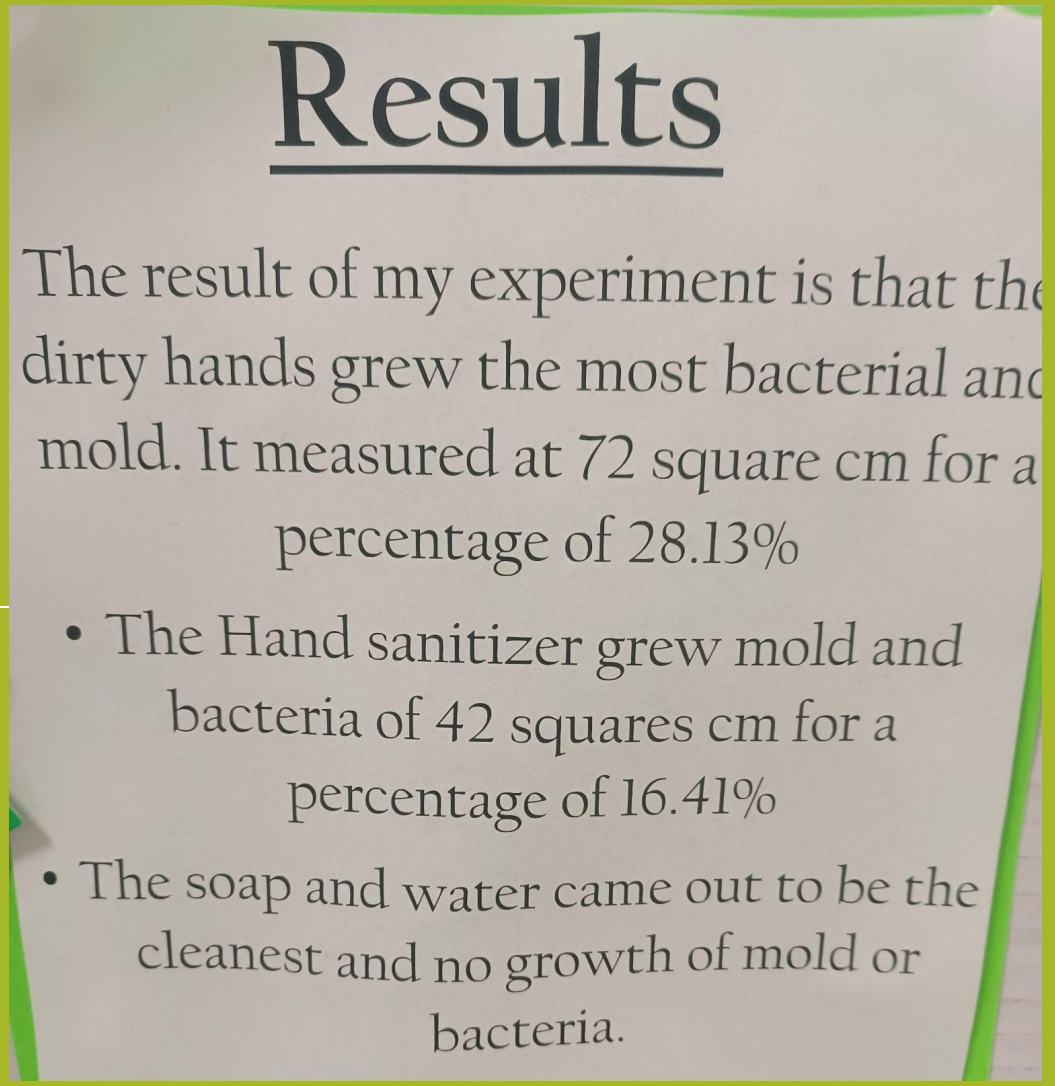
VARIABLES TO BE TESTED

- Hand sanitizer
- Soap and water

Photos of Project



RESULTS AND DATA

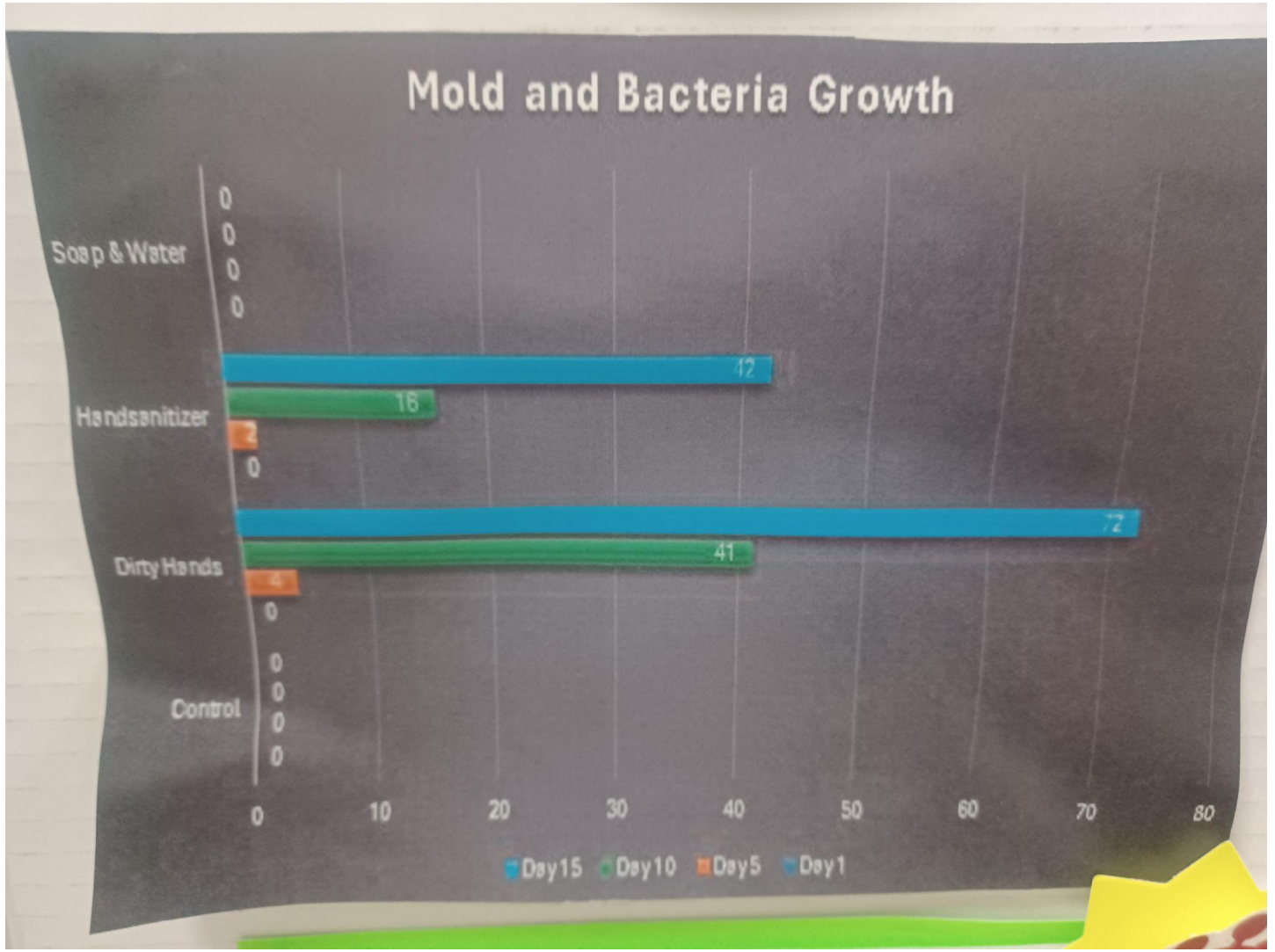


Results

The result of my experiment is that the dirty hands grew the most bacterial and mold. It measured at 72 square cm for a percentage of 28.13%

- The Hand sanitizer grew mold and bacteria of 42 squares cm for a percentage of 16.41%
- The soap and water came out to be the cleanest and no growth of mold or bacteria.

Data Table and Graph

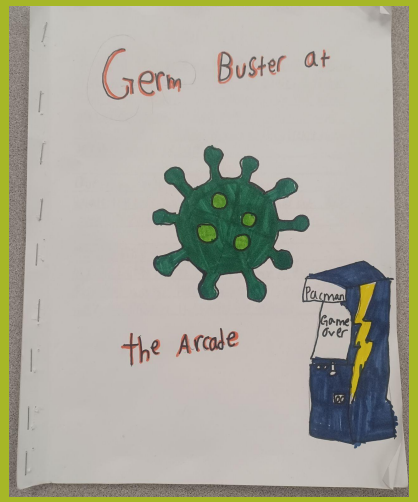


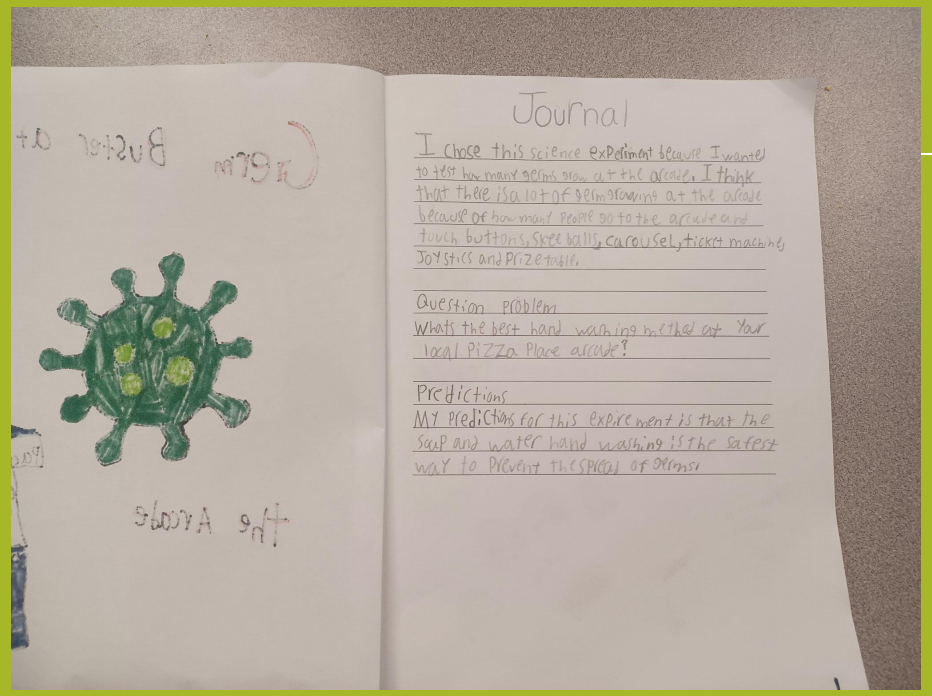
CONCLUSION

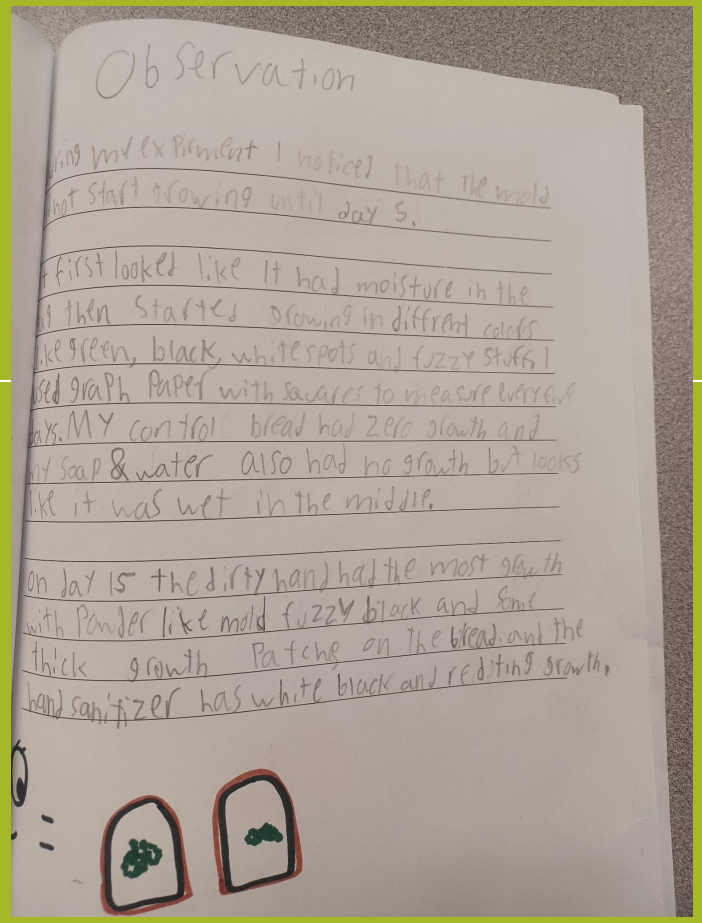
At the end of my experience, I found that my prediction was correct and that soap and water is proven to be the best and safest practice to prevent the spread of germs. My soap and water had no growth for 15 days.

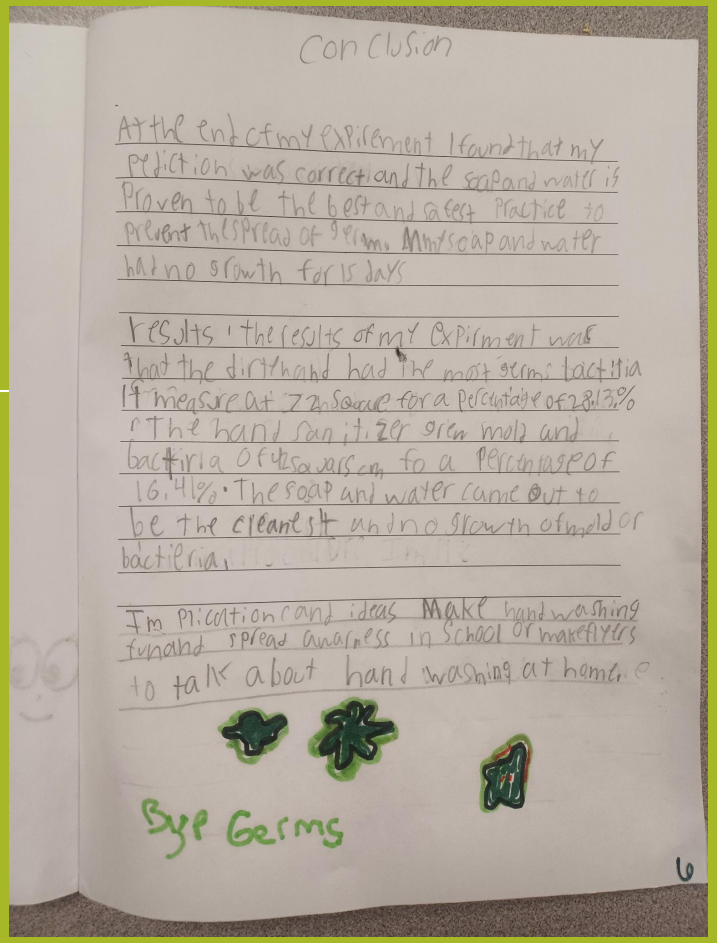
IMPLICATIONS AND IDEAS FOR FUTURE RESEARCH

JOURNAL


Germ Buster at
the Arcade
Pacman
Game over


Journal
I chose this science experiment because I wanted to test how many germs grow at the arcade. I think that there is a lot of germ growing at the arcade because of how many people go to the arcade and touch buttons, skee balls, carousel, tickit machines, joy stics and prize table.
Question problem
Whats the best hand washing method at Your local Pizza Place arcade?
Predictions
MY predictions for this experiment is that the soap and water hand washing is the safest way to prevent the spread of germs.


Observation
ing my experiment I noticed that the mold
not start growing until day 5.
first looked like it had moisture in the
then started growing in diffrent colors
ike green, black, white spots and fuzzy stuff. I
sed graph paper with sugares to measure everyday
ays. MY control bread had zero growth and
ny soap & water also had no growth but looks
ike it was wet in the middle.
on day 15 the dirty hand had the most growth
with Powder like mold fuzzy black and some
thick growth Patche on the bread. and the
hand sanitizer has white black and red ting growth.


Conclusion
At the end of my experiment I found that my
pediction was correct and the soap and water is
Proven to be the best and safest Practice to
prevent the spread of germs. My soap and water
had no growth for 15 days
results: the results of my experiment was
that the dirty hand had the most germs bacteria
it measure at 72 on sauce for a percentage of 28.13%
the hand sanitizer grew mold and
bacteria of 42 sauces on to a percentage of
16.41%. The soap and water came out to
be the cleanest and no growth of mold or
bacteria.
Im pi cation and ideas Make hand washing
fun and spread awareness in school or makeflyers
to talk about hand washing at home.
Bye Germs
6

BIBLIOGRAPHY

CDC U.S Center for Disease Control and Prevention

Handwashing Facts | Clean Hands | CDC