

## Bread and Mold Experiment

Connected Standard: S.K-2.A.2.1.2 Describe outcomes of an investigation.

What You Will Need:

- 4 Pieces of Bread \*
- Permanent Marker
- 4 Ziplock Bags
- Gloves or Tongs

\*highly recommend – use fresh baker's bread for faster results!



Instructions:

1. Label your 4 Ziplock bags with your permanent marker- "Control", "Dirty Hand", "Clean Hand", "Dirty Surface."
2. Using a glove or tongs, carefully place a piece of bread into the "Control" bag and seal it. Be sure not to touch it with anything besides the gloves or tongs. This will be the piece of bread that you can use to compare to the others.
3. Remove a piece of bread and press your unwashed hand into it. Place it into the "Dirty Hand" bag and seal it.
4. Wash your hands with soap and warm water for at least 20 seconds. Make sure to scrub all of the germs away! Repeat the same thing you did for the "Dirty Hand" bag using your clean hand. Place this piece of bread into your "Clean Hand" bag and seal it.
5. Remove another piece of bread. Rub it on a dirty surface of your choice (i.e. floor, bottom of a shoe, doorknob, etc.). Place this bread in the "Dirty Surface" bag and seal.
6. Place all bags in a safe place. Be sure not to open any of the bags. Return to the bags of bread each day and observe how they change (expect to see results after about a week when using baker's bread).

The Science Behind It:

Certain pieces of bread develop mold faster or in larger amounts than others. This is because the dirty hand and the dirty surface were exposed to more germs than the clean hand and control. This is why they developed the most mold the fastest! The clean hand should develop less mold compared to the dirty hand and surface. This is because the clean hand had less germs on it than the dirty hand. This shows just how many germs are around and how important it is to remember to wash your hands often!

Books to Pair with this Experiment:

- *I Don't Want to Wash My Hands* by Tony Ross
- *Wash Your Hands!* By Tony Ross