



Produce Safety

Activity 3: Handwashing

Using UV fluorescent powder applied to hands, produce and food contact surfaces, participants will visualize the effects of handwashing

KEY TERMS

Bacteria: single-celled microorganisms that can multiply in environments outside OR Inside a host organism, such as a person, farm animal, or wild animal. Most can multiply very quickly, reaching high numbers in a short period of time if they are in the right environment.

Cross-contamination: cross-contamination means the transfer of harmful microorganisms called pathogens or germs from one person, object or place to another.

Cleaning: the physical removal of visible dirt from a surface; generally involves scrubbing with a detergent and rinsing with clean water

Detergent: a cleaning product that helps to lift dirt, soil or other debris off a surface so that it can be brushed, wiped or rinsed off; an example is hand soap

Microorganisms: organisms including yeasts, molds bacteria, viruses, protozoa and parasites that are so small they can only be viewed through a microscope

Pathogens: commonly called “germs”; microorganisms that are capable of causing disease or illness; examples include bacteria, viruses and parasites

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KEY TERMS (cont.)

Parasites: protozoa (see definition below) or intestinal worms that can only multiply in a host animal (which may be a human); though they cannot reproduce outside of the host, they can survive outside the host of long periods of time; a host can also be affected for a long time without producing any symptoms

Protozoa: single-celled microscopic animals

Sanitizer: a substance that significantly reduces the amount of microorganisms on a surface; for example, hand sanitizer

Viruses: small, living particles that can only multiply in a host animal (which may be a human); though they cannot reproduce outside of the host, they can survive outside the host of long periods of time

SUPPLIES NEEDED

- UV fluorescent powder This is sold under brand names such as “Glo Germ” or “GlitterBug” for the purpose of food safety education. It is also available in gel and lotion forms.
- UV light Dark room or viewing box ([see instructional diagram](#))
- Handwashing sink or portable handwashing station
- Soap
- Hand sanitizer
- Printed or electronic Handwashing Playlist (found on the next page)





How do you do this?

UV fluorescent powder is a commonly used tool in healthcare and food service industries to teach how germs can spread. We will use it in this activity to demonstrate the effectiveness of various handwashing techniques.

1. The facilitator will ask for volunteers to have the powder sprinkled on their hands and then wash their hands, following specific instructions:
 - Rinse hands with water only
 - Use hand sanitizer only
 - Wash hands using soap and water
2. Darken the room and/or retrieve the viewing box
3. Shine UV light on the hands to see the effects of the different techniques on removing the powder “germs.”
4. The facilitator will invite the rest of the group to apply powder to their hands and experiment with a variety of washing techniques such as:
 - Washing for 2 seconds, 5 seconds, 10 seconds, 20 seconds
 - Testing out various scrubbing techniques
5. Darken the room and/or retrieve the viewing box
6. Shine UV light on the hands to see the effects of the different experiments on removing the powder “germs.”
7. Review the recommended handwashing technique for optimum germ removal:
 - Wet hands and apply soap
 - Rub hands together for 20 seconds
 - Rinse hands
 - Turn off the faucet with a paper towel
 - Open door with a paper towel
 - Dispose of paper towel in wastebasket



What does it mean for my farm?

- What are some examples of times when hands should be washed throughout the day on a farm?
- Why do you think it's important to wash your hands before applying hand sanitizer? (Note: using hand sanitizer or any kind of sanitizer is not required for a farm, but IF you choose to use one, it's important to wash hands or other surfaces first)
- Cleaning before sanitizing is important not just for hands, but also for other surfaces. The infographic on the next page provides more information. On cleaning using a detergent and sanitizing with ready to use sanitizers.

RESOURCES FOR ADDITIONAL LEARNING

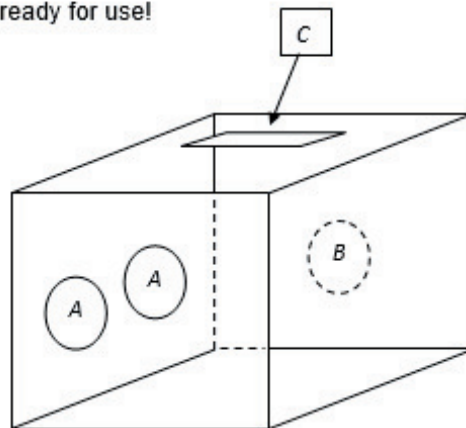
- The Purple Paint Handwashing Video
- Cleaning Vs. Sanitizing Infographic (attached to learner packet)





Instructions for preparing a dark box

1. You will need to have: used cardboard or a medium sized box, craft knife/cutter or scissors, and duct tape.
2. Close and tape all the exposed parts of the cardboard into a box shape, or tape the corners of the box to make it strong.
3. Make two circular holes with diameter of approximately 15cm on one side of the box so that the hands of the participants can go through (positions A).
4. On one end of the box (position B) make a circular hole with diameter of approximately 15cm so that the facilitator can place the UV light inside to illuminate the box.
5. On the top of the box (position C) make a square hole approximately 10 -15cm x 20cm long, so that participants can look inside the box.
6. The dark box is ready for use!



Another example:



Glo-germ Activity Instructions: Hygiene Promotion Box

Source Link: <https://watsanmissionassistant.org/?mdocs-file=10108>



Handwashing Playlist

Hum or sing (aloud or in your head) to any of these hits to time your 20 second handwashing session.

- “Happy Birthday” (twice)
- “Twinkle Twinkle Little Star”
- “The ABCs”- including the “now I know my ABCs” part
- “If You’re Happy and You Know It”
- The chorus of the following tunes:
 - “Thriller” by Michael Jackson
 - “Truth Hurts” by Lizzo
 - “Let it Go” from Disney’s Frozen
 - “Jolene” by Dolly Parton
 - “Hands Clean” by Alanis Morissette
 - “Raspberry Beret” by Prince
 - “Love on Top” by Beyoncé
 - “Africa” by Toto
 - “Landslide” by Fleetwood Mac
 - “Heaven on Earth” by Belinda Carlisle
 - “Bye Bye Bye” by NSYNC
 - “Shake It Off” by Taylor Swift
 - “Sweet Caroline” by Neil Diamond
 - “No Scrubs” by TLC
 - “I Want it That Way” by The Backstreet Boys
 - “Oops...I did It Again” by Britney Spears
 - “Lose Yourself” by Eminem
 - “Karma Chameleon” by Culture Club
 - “Just the Way You Are” by Bruno Mars
 - “Mr. Brightside” by the Killers
 - “Some Nights” by Fun
 - “Can’t Hold Us” by Macklemore





Cleaning vs. Sanitizing Infographic

CLEANING

The physical removal of dirt from surfaces, using a detergent



USING A DETERGENT:

- Needs to be food grade
- Must be approved for use on food surfaces to clean harvest implements
- Any dish soap is a good choice

VS.

You cannot sanitize a dirty surface. Cleaning must always come first.

SANITIZING

Treating a cleaned surface with an antimicrobial product in order to reduce or eliminate microorganisms

READY TO USE SANITIZERS: (Approved for use on food contact surfaces)

- Purell Fragrance Free Food Service Surface sanitizer
- SaniDate Ready to use Hard Surface Sanitizer
- Clorox Anywhere Daily Disinfectant and Sanitizer



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Use of trade names is purely for example and is not an endorsement or condemnation on the part of MSU or any partnering organizations.

Source: Produce Safety Alliance Grower Training Module 6