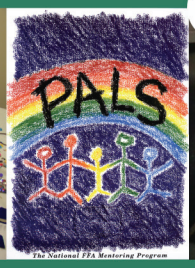
Grow Your PALS Program Guide



The National FFA Mentoring Program

Sponsored by Campbell's

Lesson 3.26

Keeping It Clean

Unit: Miscellaneous

Precepts

E. Awareness.
E1. Address issues important to the community
G. Physical Growth
G2. Respect one's body

Lesson Type:
Large Group

National Standards

NS.K-4.3 – Life Science
NL-ENG.K-12.12 – Applying Language Skills

Student Learning Objectives

As a result of this lesson, the student will …

- Cite examples of effective hand-washing strategies.
- Define the word ***microorganism.***
- Show ***microorganism*** growth to an available food supply.

Time

Instruction time for this lesson: **50 minutes.**

Resources

Hand Washing Experiment. (n.d.). Center for Disease Control & Prevention. Retrieved April 16, 2010, from www.bam.gov/teachers/activities/epi_4_hand_wash.pdf

Microorganism. (n.d.). Merriam-Webster. Retrieved April 16, 2010, from www.merriam-webster.com/dictionary/microorganism

Schneider, J. (n.d.). TO MOLD OR NOT TO MOLD - Science Experiment, Science Project, Lesson Plan, Activity, Worksheet, or Teaching Idea. The Lesson Plans Page- Over 4,000 FREE Lesson Plans!. Retrieved April 16, 2010, from http://www.lessonplanspage.com/ScienceExHowGrowMoldOnBreadFastestMO68.htm

Wash Your Hands...Stay Healthy. (n.d.). Harris County Public Health & Environmental Services. Retrieved April 15, 2010, from www.hcphes.org/PROJ/Handwashing%20Curriculum/Handwashing%20lesson%20plan-%206th%20grade.pdf

National FFA Organization. (2003). LifeKnowledge Precepts and Signs of Success.

Tools, Equipment and Supplies

- **Spray bottle with water -** one
- **Apron or old clothes for all students**
- **Timer -** one
- **Sink -** one
- **Blindfold -** one
- **Tube of washable paint per group -** one
- **Towels -** Enough for each group
- **Soap to wash hands with**
- **Bread -** two pieces per group
- **Tortillas -** two per group
- **Marker -** one per group
- **Bottle of water -** one per group
- **Plastic bags -** three per group
- **Paper -** one piece per group

Key Terms

The following term is presented in this lesson and appears in ***bold italics***:

Microorganism

Content Outline

Objective 1. | Cite examples of effective hand-washing strategies

I. Wash hands for 20 seconds

II. Wash your hands after you use the restroom; after coughing, sneezing, or blowing your nose; after touching or feeding animals; after handling money; before preparing, eating or touching food or drink; and before and after taking care of someone who is sick.

Objective 2. | Define the word *microorganism*

I. An organism (as a bacterium or protozoan) of microscopic or ultramicroscopic size

Objective 3. | Show *microorganism* growth to an available food supply

I. Mold can grow easiest in wet, warm environments

Interest Approach

Several days before the lesson, create bags and allow time for mold to begin growing. It is important to plan ahead well enough in advance to make sure mold is growing how it is expected. Place the bread and tortillas into three plastic bags. Please mark each bag A, B and C. Add a little water into bag A. Place bag A into a dark place. Bag B place in the refrigerator. Bag C will be placed away from light. Make sure your bags are closed tightly.

Have a spray bottle filled with water to spray on students' hands. You may want to have certain items placed around the room that students will be certain to pick up. This can really show students the importance of clean hands because of the spread of germs.

In a moment everyone's hands will be sprayed with water. After this has been done, feel free to touch different things around the room.

Allow students time to walk around the room and touch different things with wet hands.

What did you notice when doing this activity?

Correct responses would be that wherever they touched there was a watermark left.

Exactly! Wherever you touched there was water left behind. This is the same for germs on your hands. If your hands are not clean, germs can be left wherever you touch something. Just think of how many places you touched and left your mark. Now think if someone were to touch that same spot right after you. They would be touching and perhaps picking up the same germs you just left.

Simply by us touching different items in the room we see exactly where germs have been and how easily they are spread. Let's look at the correct forms of washing hands. It is important to pay close attention to this lesson because washing your hands properly can result in fewer germs, which means fewer times we end up sick.

Summary of Content and Teaching Strategies

Objective 1. | Cite examples of effective hand-washing strategies.

I. Wash hands for 20 seconds
II. Wash your hands after you use the restroom; after coughing, sneezing, or blowing your nose; after touching or feeding animals; after handling money; before preparing, eating or touching food or drink; and before and after taking care of someone who is sick.

Before the lesson begins, have all materials listed placed out on table. It may be necessary to have materials hidden from students. This will ensure that they are paying attention to you and not looking at the materials in front of them.

Now that we have experienced and learned how germs are everywhere, let's begin learning to properly wash our hands.

Today we will look at the importance of proper hand washing. It is important to wash your hands for at least 20 seconds each time you wash them. It is a good time to wash your hands after you use the restroom; after coughing, sneezing or blowing your nose; after touching or feeding animals; after handling money; before preparing, eating or touching food or drink; and before and after taking care of someone who is sick. To show how important it is to wash our hands properly, we will do an activity to show what our hands might look like if we did not wash them properly and what they might look like if we do.

First we will need a partner. I will go around the room and number you off.

Number each student off according to however many students there are, making sure each student has a partner. The easiest way to do this is to think about the number of students and divide it by two. This will be the number you will count to, then start over counting again.

Now get with the person that has the same number as you.

The purpose of this activity is to see what germs might still be on our hands when we do not wash our hands long enough. We will be washing our hands, blindfolded, in different intervals to show what is left on our hands when not washed long enough. In just a moment paint will be placed on our hands. First, wash your hands for one second blindfolded. After one second look at your hands and note how much paint is still on your hands. Next, we will be blindfolded again and wash our hands at intervals of five, 10, 15 and 20 seconds. What questions do you have about this?

Allow students to ask questions if confused about assignment.

Great! Let's begin. One team will member put the paint on your hands, covering your whole hands. When you have this task complete the other member will put the blindfold on you, making sure you cannot see. We will begin by washing our hands for one second. Please get ready and when I say GO begin washing your hands. Please stop washing your hands when time is up. Ready?

GO!

After one second, call time.

OK. Stop. Partners, please take the blindfold off of your partner. How much paint is left on your hands? What if the paint was germs and you had only washed your hands for a second? OK, now let's try for five seconds. Apply more paint to your hands, covering hands. Now, partners, put the blindfolds back on. Ready?.

GO!

After five seconds call time.

Now take a look at your hands. How much more paint was taken off than before but there is still paint left over? Now, let's go to 10 seconds.

Have students complete this same task until they have washed their hands for 20 seconds.

How much paint was taken off from 20 seconds of washing? Why is it important to wash your hands for this amount of time?

Discuss with students the importance of washing hands properly.

Now that one partner has tried this, let's allow the other partner to try it.

Have the other partner complete the same task the other partner just completed, asking the same type questions after each washing.

Now that we have learned the importance of washing our hands and the proper techniques to do so, let's begin thinking about germs and what germs are made of.

OBJECTIVE 2. | Define the word *microorganism.*

I. An organism (as a bacterium or protozoan) of microscopic or ultramicroscopic size

What does the word ***microorganism*** mean to you?

Allow students to answer and guess what they believe is the definition of ***microorganism****.*

We know that organisms are basically living beings, but a ***microorganism*** is something much smaller. We know that micro means small, so that is exactly what a ***microorganism*** is. Now that we know what a ***microorganism*** is, let's look at what a ***microorganism*** is and what they do.

OBJECTIVE 3. | Show *microorganism* growth to an available food supply.

I. Mold can grow easiest in wet, warm environments

Several days before the lesson, create bags and allow time for mold to begin growing. It is important to plan ahead well enough in advance to make sure mold is growing how it is expected.

We are about to conduct an experiment on ***microorganisms*** and how they grow. We will use the materials you see before you to conduct the experiment. Please place the bread and tortillas into three plastic bags. Please mark each bag A, B and C. Add a little water into bag A. We will place bag A into a dark place. Bag B we will place in the refrigerator. Bag C will be placed away from light. Please make sure your bags are closed tightly.

Please take out a sheet of paper and write your prediction of which bag you believe will grow the most mold. Will it be bag A with water in a dark area, in bag B in the cold refrigerator, or in bag C, in an area where there is no light?

For time sake, have bags already completed and allowed to set for several days.

Now, let's pretend that we have allowed the bags to set for several days. I have previously conducted the experiment for time purposes. Take a look at your guess of what would happen in the bags. Now let's look at each bag.

Bring bags out so that students can see each one. Discuss with students what each bag looks like and how much mold is on each bag.

As you can see, the mold grows better when it is in a warm and moist area. Which in our case was bag "A" right? Think about all the growth that has occurred in these bags. Mold and germs can be and grow everywhere. Imagine if that was on your hands or you touched something like that. This is why washing your hands is so important.

Review/Summary

Let's review. How many seconds should we wash our hands each day?

Allow students to answer.

When are some good times to wash our hands?

Allow students to answer.

Let's think back to the mold growth. When did the mold grow the most?

Allow students to answer.

OK. Who will give me an example in real life when a lot of mold would grow somewhere?

Allow students to answer.

Today we have learned about germs and mold and the importance of keeping our hands clean. Not only have we learned the importance of clean hands, but we have also learned how to make sure our hands are clean when we wash them. By practicing good hand washing, this can help to reduce your risk of becoming sick.

Application

One-on-One Idea

Students can practice washing hands for 20 seconds to make sure they are properly washing hands.

Small Group Idea

Students can draw areas where mold might grow the most.

PALS3.26.LG.ASSESS.A | Evaluation Answer Key

1. d
2. False
3. False
4. d
5. True

PALS3.26.LG.ASSESS.A

Name: _____

Directions: Please circle the correct answer or circle "A" for True or "B" for False

1. A proper amount of time to wash hands is approximately ____ seconds
   a. 5
   b. 1
   c. 10
   d. 20

A - B 2. Mold grows quicker in dry, lighted areas.

A - B 3. The word "micro" means large.

4. It is a good time to wash your hands after
   a. You leave the restroom
   b. You have been sick
   c. You have sneezed or coughed
   d. All of the above

A - B 5. Washing your hands properly for 20 seconds can help kill and get rid of germs.