

# Skin

## **Objective:**

Students will be able to:

- Understand the term “epidermis”
- Learn different functions of the skin & how to take care of it
- Learn the importance of washing skin & how often to wash it
- Learn the importance of daily sun protection & explain ways to protect themselves from the sun

## **Docent Lab Guidelines:**

1. Schedule a date and time with your teacher and other docents to have the students come into the lab. Estimated time for this lab is 45-60 min.
2. Input the day and time into the Science Lab Master schedule Calendar. Please make sure you include set up and clean up time to the class time, add your teachers name, and title of the lab “Sun Safety.”
3. Arrive and set up tables: Station 1-My Skin. Station 2-Daily Habits. Station 3-Sun Protection.

## **Introduction:**

Look at the students and say, “My epidermis is showing!”

Then look at a student and say, “Your epidermis is showing too!”

Pause and look around at all students and say, “All of your epidermis is showing!”

“Can you guess what epidermis is?”----- “Epidermis is just like your heart. Your lungs.

And even your stomach, and eyes. It’s an organ. A part of your body with a specialized task. And you all actually know what epidermis is. It’s a fancy, scientific name for the top layer of your skin.”

“So what is epidermis?” — Students shout out, “skin.”

**\*Pick A or B to explain the skin’s functions\***

## **Skin Function A:**

- Use ELMO to project Skin Functions handout.
- Ask students to look over the images quickly (15 secs).
- Go through each item and asks what the purpose of each of these items are:
  - Umbrella: Keep us dry.
  - Shield: Protect us from harm.
  - Fan: Keep us cool when it’s hot.

- Stoplight: Tell us when to stop, go, and wait.
- Coat: Keep us warm when it's cold.
- Tape: To keep things closed, like boxes.
- Explain that there are three layers to our skin, and they all do different things.
- Explain to students how our skin acts like each item on the sheet:
  - Umbrella: Skin makes oil (sebum) which helps keep our skin waterproof!
  - Shield: It protects germs from getting in our body and from getting banged up (e.g. falling in mud during soccer).
  - Fan: Our skin keeps us cool through sweating. In fact, we have 650 sweat glands on one square inch of skin!
  - Stoplight: Nerve endings in our skin send signals to our brains about how things feel. Our skin lets us know if something is hot or cold/soft or hard.
    - For example, if we feel the heat of a fire, we know not to touch it because our skin will feel pain, "Stop! Like a red light."
    - If we touch a glass and our skin tells us it's not too hot or too cold, we pick it up "Go!"
  - Coat: It helps keep our body warm with the bottom layer of special fat.
  - Tape: Skin holds everything in; from our heart to our lungs and muscles, just like tape holds a box together to keep everything inside.

**OR**

**Skin Function B:**

- Play this video to explain the skin's functions. (6:28)  
<https://www.youtube.com/watch?v=aMGgCxUyXT8&t=152s>

"We are going to be learning all about skin and how we can take care of it."

Break class into three groups. A third of the class is to go to Station 1 and a third to Station 2 and the last third to Station 3. After 10-15 min, have students switch stations. Do this until all students have been to all three Stations.

## **Station 1- My Skin**

This activity will help children examine their own skin for different characteristics (freckles, scars, scratches, etc.) to see the differences in children's skin.

### **Materials:**

- Magnifying glass for each student.

### **Directions:**

- Have the students sit in chairs with a magnifying glass in front of them.
- Ask students to examine & look at the skin that is showing (arms, hands, legs and feet if in sandals).
- Prompt them by asking how many of them have any of the following: scratches, freckles, scars, hair, goosebumps, birthmark or describe a characteristic not previously mentioned.

## Station 2- Daily Habits

This activity will show the importance of showering, face & hand washing.

### Materials:

- Worksheet “My Habits”
- Pencils

### Directions:

#### Discussion:

- Ask how many times students think they should shower by raising their hands.
  - Raise your hands if you think you should shower every day.
  - Raise your hands if you think you should shower every other day.
  - Raise your hands if you think you should shower twice a week.
- Say they are all correct. Explain:
  - Depending on what your parents think and other factors, such as if you have dry or oily skin, or if you play sports or exercise, the number of times you shower will vary.
  - When you become a teenager, you will probably shower almost every day.
- Explain what happens when you don't wash up: Sweat, oil, and dead skin cells can mix with germs and get into your body through cuts and scrapes. That can make you sick.
- **(BODY)** Explain shower technique:
  - You should always bathe after you are sweating or have been in a pool.
  - When you shower should you use really hot water? (No.) Really cold water? (No.) Explain that you should use lukewarm water because it is less drying to the skin.
  - When standing in the shower, it's important not to get shampoo in your eyes—it can sting and hurt your eyes. So make sure you stand with you back towards the water, tilt your head back, and let the water run down your back away from your face. Like this. (Demonstrate positioning).
- **(FACE)** Explain it's also important to wash your face, especially as you get older. This is important because a lot of oil and dirt can clog up your skin. This can cause pimples and other skin problems. You can use a gentle cleanser or face wash. You should wash your face in the morning and at night with warm water.
- **(HANDS)** Ask the students: “What have you touched today?”
  - If students are unresponsive, s/he can ask pointed questions such as, “Raise your hand if you petted your dog? Who ate a bologna sandwich? Who played outside? Who used the restroom?”

- Then say, “Because we do all these things, it is important that we wash our hands—especially before and after eating as well as after using the restroom.”
- When you wash your hands, you should use soap and water and rub for 20 seconds. If counting to 20 is boring, you can sing “Happy Birthday” at a steady pace and add “and many mooore” to the end, and that is about 20 seconds long!

### **Activity:**

- Hand out My Habits worksheet.
- Explain:
  - Each day of the week is split into morning, afternoon, and night.
  - When do you shower? Go ahead and write it down.
  - Do you exercise during the week because you are on a team or in a club?
  - Write down when you should wash your face- Usually in the morning and at night!
  - You can also put, brushing your teeth and other things you do to keep yourself clean and healthy.
- Students may need to adjust when they may need to shower after writing down their activities.

## Station 3- Sun Protection

This activity will help students learn ways to protect themselves from the sun

### Materials:

- Crossword Page
- Pencils

### Directions:

- Ask if the students know the four important ways to protect themselves from the sun.
  - Seek shade: The sun is hottest during the day from 10AM to 2PM. Here's a cool trick: if your shadow is shorter than you, you should hang-out in the shade because the sun is really strong. You can find this under a tree or umbrella.
  - Cover up: Sunglasses and hats are fun to wear and help protect your eyes and face from the sun. Long-sleeved shirts and pants are good too for protecting you from the sun. You can wear light shirts or pants in the summer when it's hot! Hint: You can use these at baseball games or your parents might wear these in the summer when it's sunny out.
  - Sunscreen: Sunscreen comes in different SPFs, which stands for Sun Protection Factor. SPF 15 is the lowest you can have to help prevent skin cancer, but it is recommended to go with SPF 30 or higher. Your parents can help you pick one out. You should wear sunscreen every day! You can put it on after you brush your teeth or after you shower. It doesn't matter if it's sunny or cloudy—the sun's rays are strong and can get through those clouds! Don't forget to put sunscreen on your face too! Hint: this is something we just talked about. We put it all over our bodies.
  - Be careful around water, sand, and snow: Of course you can't ignore the water and sand when you go to the beach or the snow if you go skiing, but you should make sure to put on extra protection. The sun's rays can reflect off the water, sand, and snow and increase your chance of sunburn. So slather on that sunscreen! Hint: When you are at the beach you are around these things.

### Activity:

- Distribute crossword puzzle worksheet
- Explain that there are clues below next to a number. The clues are divided into "Across" and "Down." Let's say you read a clue that is under "Across" and has the number 4 on it. You look for number 4 on the crossword, and know that the

word is going to be written across. Find the word bank in the box on the bottom. The words are the answers to the clues. You have to choose which one you think is the right one for the clue and fill in the boxes on the crossword.

- Go over answers together if all finished.
- If students finish before rotation, they can draw on the back.

### **Closing:**

Bring class back together and ask the following questions:

- What is epidermis? –Skin
- What does the skin do? — Use laminated sheet from Introduction.
- Did anyone find a freckle on their body? What about a scar?
- What are 3 ways we can protect ourselves from the sun? — seek shade, wear protective clothing/cover up, wear sunscreen.