

THE SUN AND MY SKIN

A Lesson in Hygiene

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Skill Level

- Beginner (4th-5th graders),
- Intermediate (6th-8th graders)

Learner Outcomes

- The learner will be able to:
- Understand the parts of the skin.
- Explain that the skin is the body's largest organ.
- Identify ways to protect the skin.
- Identify the effects the sun has on the skin.

Time Needed - 30-60 minutes

Materials Needed

- Student worksheet (one for each student)
- Answer key
- Projector/screen
- PowerPoint Lesson: The Sun and Your Skin

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Introduction to Content

This is the final lesson in a six-part series to teach youth about hygiene. This lesson will teach youth about the skin, ways to protect the skin and the sun's effect on the skin.

Terms and Concepts

Personal Hygiene – keeping your body smelling and feeling clean and healthy.

Epidermis – the outer layer of the skin.

Dermis – the second layer of the skin, where the nerves live.

Hypodermis – the bottom layer of the skin. This is where fat is stored to keep us warm in the winter months and cool in the summer months.

Skin cancer – a disease in which cells in the body grow abnormally and out of control, in this instance in or below the skin's surface area.

Introduction to Methodology

Students will participate in an activity revealing their risks for skin cancer. They will learn the parts of the skin and complete a worksheet.

Opening Questions/Setting the Stage

Say, "Last time we were together, we talked about hygiene. Can anyone tell me what you learned?" Let students answer.

Say, "Today we are going to talk about something else related to hygiene. Can anyone tell me what the largest organ in the body is?" Let students answer.
Answer: The skin

Say, "When we think of the skin covering our bodies, we don't think of it as an organ. But it is. It has parts and a purpose. What do you think is the purpose of the skin?" Answer: To protect the internal organs and keep any foreign objects out of the body

Say, "Did you know that we are constantly shedding skin cells? For the average adult, we have 1.6 trillion skin cells which equals 16 percent of body weight. We shed 30,000-40,000 skin cells per hour or eight pounds per year. $35,000 \text{ skin cells} \times 7 \text{ hours of sleep} = 245,000$ per night that we are shedding!"

Experience

Say, "I'm handing out a worksheet for you to write your answers on. We will begin by identifying the parts of the skin." Follow along with the PPT Lesson: The Sun and Your Skin. **SLIDE 2**

Say, "There are three parts to the skin. The epidermis, the dermis and the hypodermis. Each of these parts has its own job.

- The epidermis is the outer layer that stops foreign objects from getting inside the body."
- Say, "Rub your hand across your skin. You are touching the epidermis."
- Say, "The dermis is the second layer of the skin. This is where the nerves in our body are mostly found, even though they go as far down as the third level. If you have ever gotten a sunburn that has peeled, you've peeled off your top layer of skin and your dermis is now exposed."
- Say, "The hypodermis is the third layer of the skin. This is where most hair originates and where we find the fatty cells that live in our skin."

Strategies to Increase Student Engagement

Teacher Notes

Say, “Now that you know a little more about your skin and its parts, let’s talk about protecting it.”

FLIP TO SLIDE 3.

Say, “Some little-known facts about the skin are:

- Most skin cancers are caused by sun exposure.
- Skin cancer is not a disease that affects only older people.
- People who experience severe sunburns as children typically have a higher chance of developing skin cancer at some time in their lives.
- All people are susceptible to sun damage, regardless of the color of their skin. However, some people have a greater risk of damaging their skin.
- Long-term overexposure to the sun can cause premature aging.
- Exposure to the sun can result in other health problems, including cataracts (a hazy film over the lens of the eye) and damage to the body’s immune system.”

Say, “Now that we know more about the skin and skin cancer, let’s take a quick quiz to learn your risk of having skin cancer at some point in your life. Once we know that, we will talk about how to protect our skin.” **SLIDE 4**

Lead the group through the quiz on the backside of the Student Worksheet. Ask them to tally their total and show them the risk on **SLIDE 5**.

FLIP TO SLIDE 6

Say, “So how do we take care of our skin?”

- Seek shade. In the hottest parts of the day, from 10:00 a.m. – 4:00 p.m., the sun’s ultra-violet rays are most harmful.

Say, “What are ultraviolet rays?” Let students answer. Say, “UV rays are the radiation that is emitted by the sun and artificial sources like tanning beds. It is important to avoid sun overexposure or sunburn. Wear protective coverings, including hats, long sleeves and sunglasses.”

Say, “The sun can cause cataracts in your eyes, as well as leathery looking skin. Has anyone ever seen an animal or person with a hazy white fog in their eye? That’s what a cataract is and it can occur from you staring into the sun for prolonged periods of time. Protecting the eyes, ears, shoulders, arms and legs is important. If you are going to be outdoors for a long time, think about wearing a moisture-wicking (Dry Fit) shirt that covers your upper body and arms.”

- Don’t use tanning beds.

Say, “Tanning beds emit too much harmful radiation at one time. Radiation is energy that comes from a source and travels at the speed of light. Staying away from tanning beds is a good idea for all types of skin.”

- Be sure you are using sunscreen if you are out in the sun for more than 10 minutes at a time.

Say, “Sunscreen is the best way to make sure your skin is covered when you are in the sun. Be sure that you are wearing at least 30 SPF (sun protection factor) and reapply when you have been in the water or sweating.”

Experience (Continued)

Optional Hands-On Activity 1

Purchase solar beads. <https://www.teachersource.com/product/ultraviolet-detecting-beads> These are also available at Walmart or Amazon. Buying in bulk will keep them affordable.

Give each student one or two beads and some rawhide. <https://www.teachersource.com/product/rawhide/light-color> This can also be purchased from Walmart or Amazon.

Let them make a bracelet. Take them outside and let them watch how the UV rays change the color of the beads.

Optional Hands-On Activity 2

Using the solar beads, spread different brands of different SPF (15, 30, 50, 75, 100SPF) and set them on a paper plate or paper towel in the sun to absorb the UV rays.

After 20 minutes, see if there is a difference in the darkness of the colors that the beads have changed. Compare them to the original beads without sunscreen on them. Discuss which SPF works best, but do not endorse any specific brand of sunscreen.

Share

Say, "Share with the person next to the most interesting thing you learned today."

Process

Ask, "Explain to the person next to you what you know about the skin and how the sun affects it."

Generalize

Ask, "What are some ways you can protect your skin when you are outside for more than 20 minutes?"

Apply

Ask, "What does this experiment teach us about taking care of our skin? Like our teeth, we only get one skin so it is essential that we take care of it."

Supplemental Information

Educational Standards Met

CCSS.ELA-Literacy.RI.4.1

Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

CCSS.ELA-Literacy.RI.4.3

Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

CCSS.ELA-Literacy.SL.4.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics and texts, building on others' ideas and expressing their own clearly.

Safety-Sun Safety 4.S.3

Describe ways to reduce sun exposure in your life and the lives of family and friends.

Safety-Sun Safety 5.S.3

Understand the relationship between sun exposure, tanning beds, and family history to the development of disease and illness.

References

Skin Cancer. <https://www.cdc.gov/cancer/skin>. Accessed September 2022.

Ultraviolet Rays. <https://www.cdc.gov/ncch/uv>. Accessed September 2022.

TIPPS Life Skills

- Gather relevant information for decision-making. (HANDS)
- Follow instructions.
- When reading, consider ideas, thoughts, information, or messages that have been written. (HEART)
- Involve oneself in helping others, demonstrate concern. (HEART)

Student Worksheet

Name: _____ Date: _____

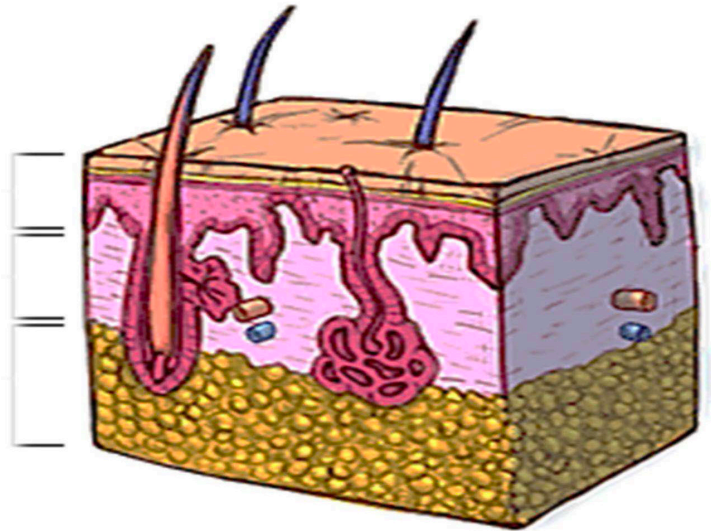
Using the words below, answer the questions. Write in the parts of the skin on each blank.

DERMIS

EPIDERMIS

HYPODERMIS

1. _____
2. _____
3. _____



The _____ is the main barrier of the skin. It stops foreign objects from getting into the body.

The _____ is where most of the nerves can be found.

The _____ is where the fat cells are found. These keep us warm during the cold months and cool during the hot months.

Circle the number that most resembles you in each statement.

- | | | | |
|--|--------------------------|--------------------------|---------------------|
| 1. Your natural hair color is... | Blonde/Red
4 | Brown
3 | Black
1 |
| 2. Your eyes are... | Blue/Green
4 | Hazel
3 | Brown
2 |
| 3. Your freckles... | Many
4 | Some
3 | None
1 |
| 4. You spend most of your time... | Outdoors
4 | Mixed
3 | Indoors
2 |
| 5. After sitting in the sunshine with no sunscreen or protection on, you.... | Burn/Blister
4 | Burn/Tan
3 | Tan
1 |
| 6. You live in this part of the U.S. | South
4 | Midwest
3 | North
2 |
| 7. Do you have any family members who have had skin cancer? | Yes
5 | I Don't Know
3 | No
1 |

Now, take the number you circled from above and add it up for the total score.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

= _____ **YOUR TOTAL SCORE**

Ways to keep your skin safe:

- Seek shade. In the hottest parts of the day, from 10:00 a.m. – 4:00 p.m., the sun's ultraviolet rays can do the most damage.
- Wear protective coverings, including hats, long sleeves and sunglasses
- Don't use tanning beds
- Be sure you are using sunscreen if you are out in the sun for more than 10 minutes at a time.

ANSWER KEY

Student Worksheet

Name: _____ Date: _____

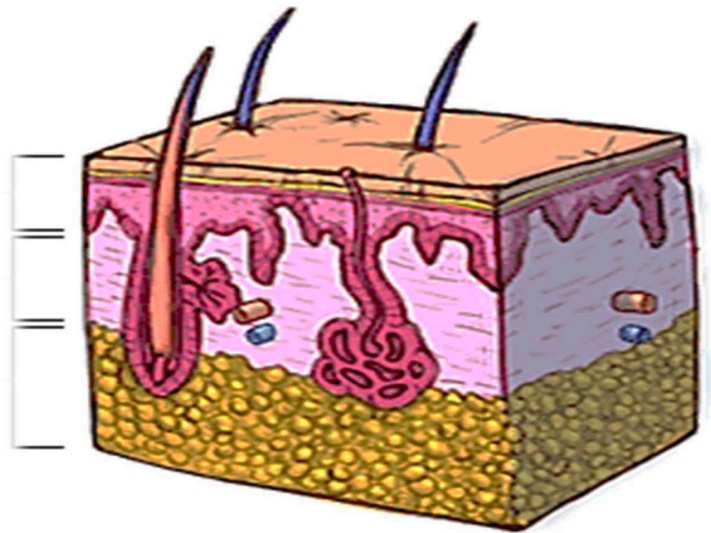
Using the words below, answer the questions. Write in the parts of the skin on each blank.

DERMIS

EPIDERMIS

HYPODERMIS

1. Epidermis
2. Dermis
3. Hypodermis



The epidermis is the main barrier of the skin. It stops foreign objects from getting into the body.

The dermis is where most of the nerves can be found.

The hypodermis is where the fat cells are found. These keep us warm during the cold months and cool during the hot months.



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