



Skin @ School

Lessons for children aged 10-12 years

Name:

Developed by Huid Nederland (Dutch Skin Coalition) in collaboration with dermatologists (NVDV), specialized nurses, skin therapists (NVH), representatives of patient associations, teachers, a school principal, and a didactic specialist.

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LESSON 1

The functioning of the skin

This lesson is about the structure and functioning of the skin.
You will also learn how the skin protects your body.



People have different skin colors.

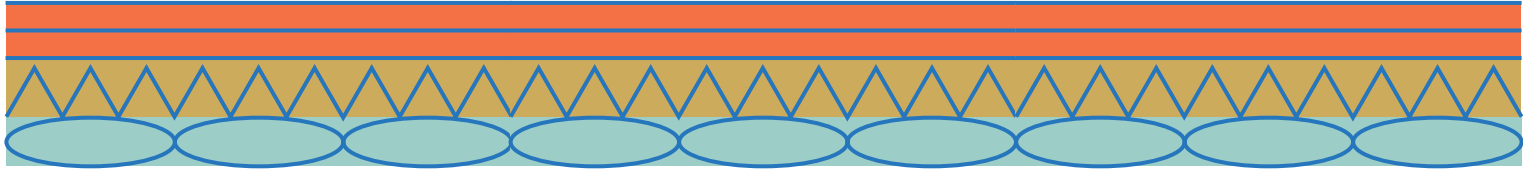


1. What are the characteristics of your skin? Fill in page 2 of your skin passport.

2. Suppose you find a photo of a box of pink crayons on a website. Under the photo (not on the box) it says: 'Color: skin color'.

a Explain what you think about that.

b Think about and explain why the creator of the website wrote this.

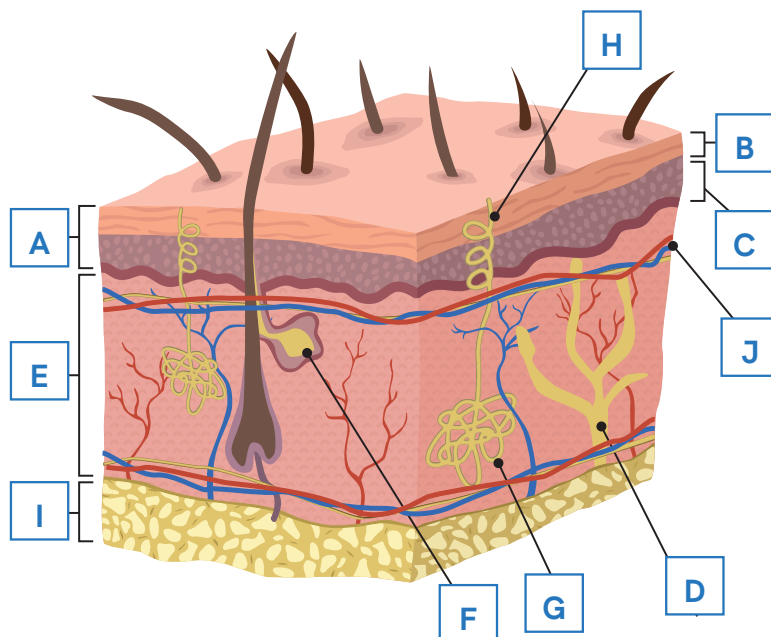


Structure and function

There are different skin colors, but the structure of everyone's skin is the same. The skin is made up of three layers.

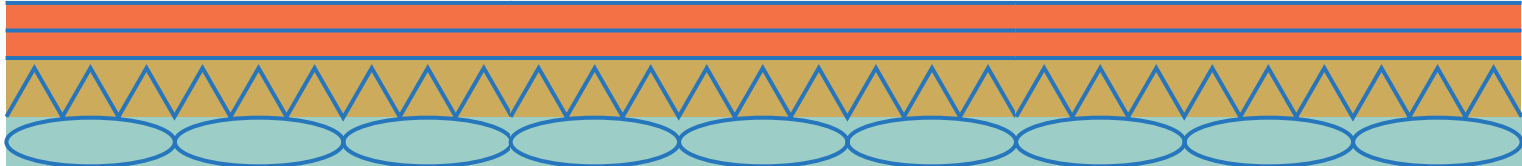
- The **epidermis** is the thin outer layer that also consists of two layers: the stratum corneum with the basal layer underneath. In the basal layer, new skin cells (pieces of skin) are constantly being produced and move up to the stratum corneum. There, the skin cells die and eventually detach from the skin. You don't notice this.
- Under the epidermis is the **dermis**. In this layer, sebaceous glands provide a layer of fat on the epidermis, making it soft and supple. There are also sweat glands that produce moisture that comes to the skin's surface through pores (small openings in the skin). The sweat lowers body temperature. The dermis also contains hair follicles that produce hair that grows out through the epidermis.
- Under the dermis is the **subcutaneous connective tissue**. This layer mainly consists of fat and blood vessels (thin tubes through which blood flows). This layer connects the skin to other body parts. The dermis and subcutaneous connective tissue contain nerves with nerve endings. These are like wires that allow you to feel things like pain, heat, and cold. They are connected to the brain in your head.

3. Write the letters A-J next to the correct words.



	Blood vessel
	Stratum corneum
	Dermis
	Subcutaneous connective tissue
	Epidermis

	Pore
	Basal layer
	Sebaceous gland
	Nerve
	Sweat gland



Protection

Your skin holds your body parts together and protects them, for example, when you bump into something. Your skin also protects your body against bacteria. These are tiny creatures that can only be seen with a microscope.

Bacteria spread easily from one person to another. When you shake someone's hand or touch a doorknob, you pick up bacteria. Some bacteria can make you sick, but there are also good bacteria.

4.

Read the text below.

Sweating has advantages and disadvantages.

Check the two correct advantages.

- ☐ a Sweat can cause irritation on your skin.
- ☐ b Your body cools down because of the moisture on your skin.
- ☐ c Your pores are cleansed by the moisture.
- ☐ d Sweat can start to smell unpleasant.

Sweating

When you're working hard in the gym or on the sports field, you might get sweat droplets on your body. Sweating (perspiring) is actually good. The moisture on your skin cools your body. The moisture also cleanses the pores. But if you don't rinse off the sweat properly, it can cause problems. Sweat that stays on the skin too long can cause irritation from the salt and water in it. Areas can become red and sensitive. Unpleasant odors can develop from bacteria that don't normally live in sweat. And these bacteria can get into your pores.

(Source: marieclaire.nl, 2020)

5.

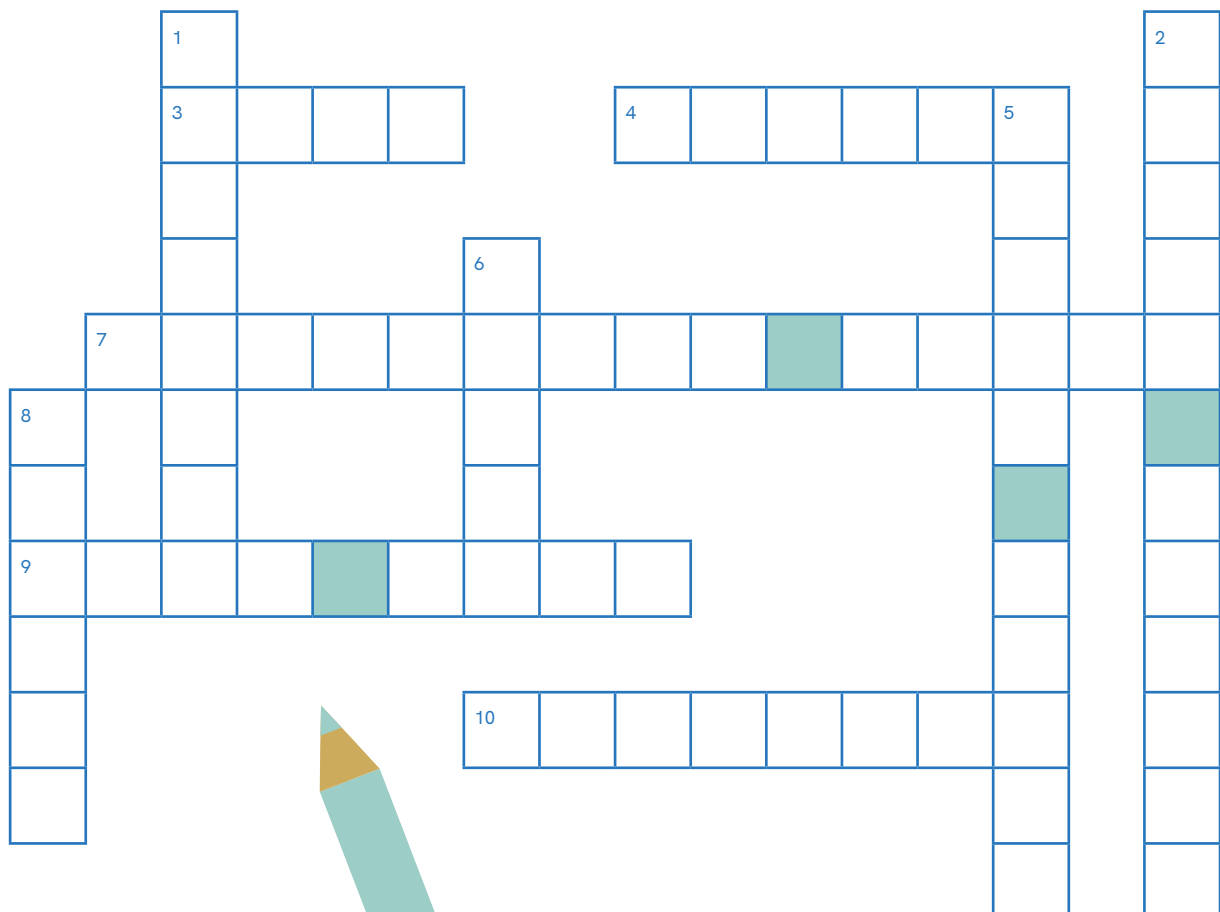
Explain why sweat can start to smell unpleasant.

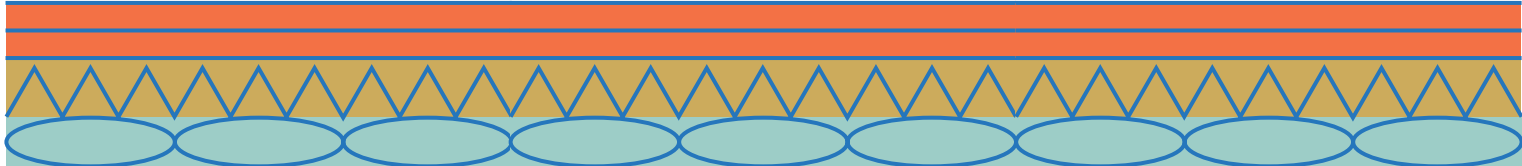


Conclusion

6. Write the words with the following meanings in the puzzle.

1	top layer of skin
2	tube through which blood flows
3	small opening in the skin
4	second layer of the skin
5	part of the body that produces sweat
6	type of wire with which you to feel
7	part of the body that produces fat
8	subcutaneous connective ...: third layer of the skin
9	piece of skin
10	tiny creature that can make you sick





7.

Information assignment

Students watch a Dutch video about why people sweat. Then they answer the following questions



- | | |
|--|---------------------|
| a When it's cool, sweat forms all over your body. | true / false |
| b If you sweat a lot, your body dries out. | true / false |
| c When perspiration reaches your skin, it has a smell. | true / false |
| d When perspiration reaches your skin, it has a color. | true / false |
| e People sweat more than a liter every day. | true / false |
| f Under the armpits, sweat gets a smell from contact with bacteria. | true / false |

LESSON 2

Care for your skin

This lesson is about taking care of your skin. You will learn why it is important to keep your skin clean, soft, and supple.



Playing with mud

1. What is your skin type? Fill out page 3 of your skin passport.

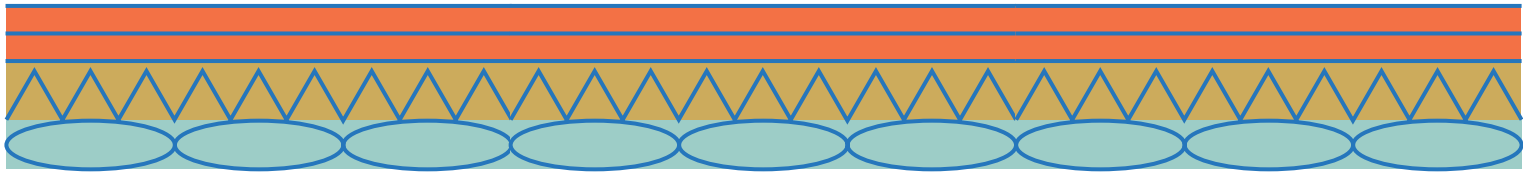
Clean and healthy

Your skin is home to thousands of bacteria that do not cause problems and that you usually do not notice. You can keep bad bacteria away by taking care of your personal hygiene.

This means maintaining your health by keeping clean. Washing your skin, for example, after playing in the mud, will remove bad bacteria from your skin.

2. Check the two correct sentences.

- ☐ a All bacteria are bad.
- ☐ b Bacteria are very small.
- ☐ c More bacteria grow because of hygiene.
- ☐ d Washing your hands is good for your health.



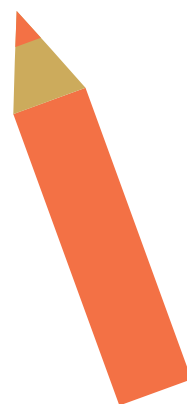
Soft and supple

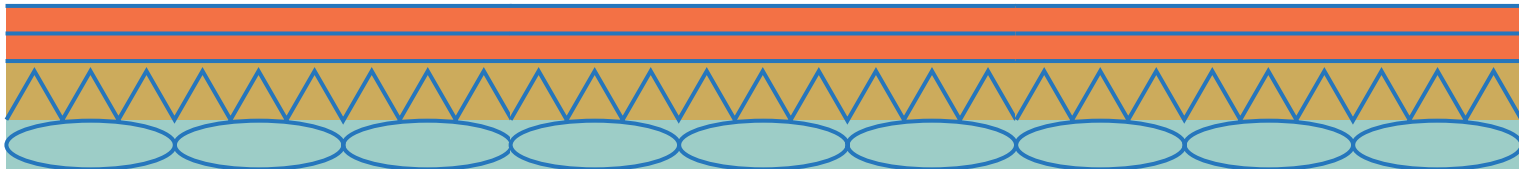
Washing yourself is good for personal hygiene. However, using a lot of soap or bath foam and taking long showers or baths can wash away the oily layer on your skin. Your skin then becomes drier and weaker, and cracks can form, allowing bad bacteria to enter your body. We call this an infection. An infection can cause your skin to become red, thick, and painful.

This is called inflammation. Sometimes people can become very sick from this. Therefore, it is good not to use too much soap and not to shower or bathe for too long in very hot water. Your skin also stays soft and supple if you apply cream (ointment for your skin). You can buy a cream that suits your skin type.

3. Playing with mud

- | | |
|--|--------------|
| a Dry skin can be bad for your health. | true / false |
| b It is good for your health if you do not use any soap in the bath. | true / false |
| c It is good for your health if you apply cream to your skin. | true / false |
| d It is good for your health if you keep your skin clean. | true / false |
| e Long and hot showers are good for your skin. | true / false |
| f Playing in the mud is unhealthy. | true / false |





4.

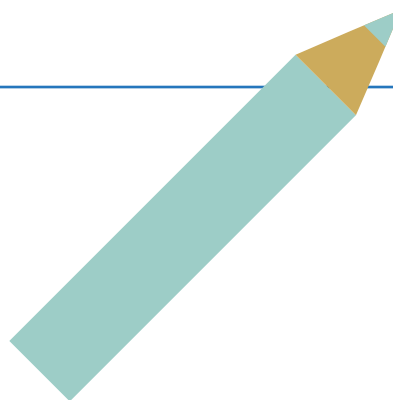
Read the text below

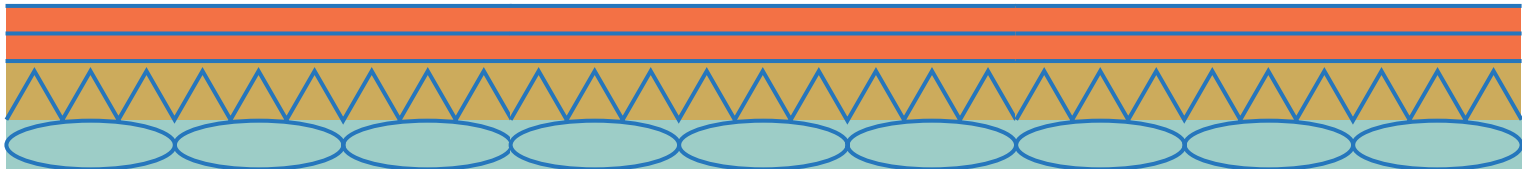
a Explain why it is good to moisturize your hands after washing them.

Washing and moisturizing your hands

During the coronavirus pandemic, people in the Netherlands have been washing their hands frequently. Just like when washing a greasy frying pan, soap removes the oily protective layer from the skin on your hands. "This causes dry hands, irritation, and the risk of infections," says dermatologist Fongers. She emphasizes the importance of that oily layer. To reduce the spread of the coronavirus, the RIVM advises people in the Netherlands to wash their hands more often. For example, before and after visiting the supermarket. The advice is to wash your hands with liquid soap from a pump and then dry them thoroughly with a clean, dry cloth. Fongers advises moisturizing your hands with an ointment or a greasy cream. "This should become a habit. For example, place a tube of hand cream near the sink," says Fongers.

(Source: dvhn.nl, 2020)

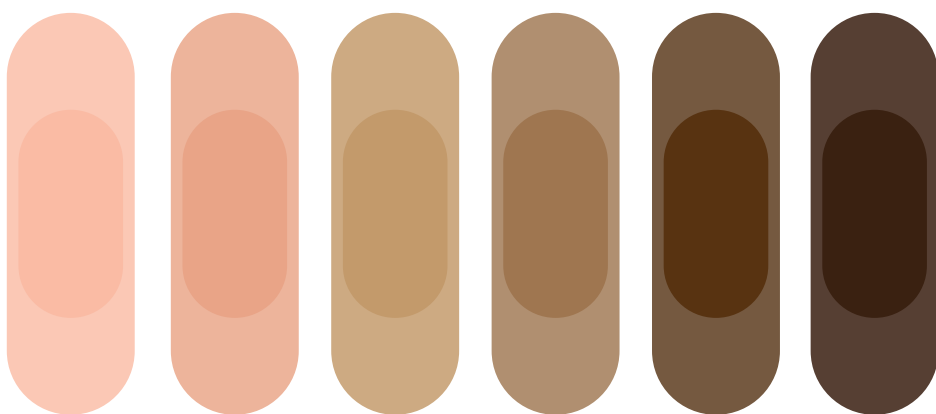




Scrape wound

If you get a scrape wound, the outer layer of the skin is damaged by rubbing against the ground. Some blood may come out of the blood vessels. With proper care, you can try to prevent an infection. Clean a scrape wound with lukewarm water under

the tap or with a clean cloth or washcloth. Do not use soap or disinfectant and let the wound dry in the air. A scab will naturally form. A plaster is needed if clothing rubs against the wound.



Skin-colored band aid

5.

In the past, plasters in the Netherlands were always the same light color. But since 2018, plasters are available in different colors.

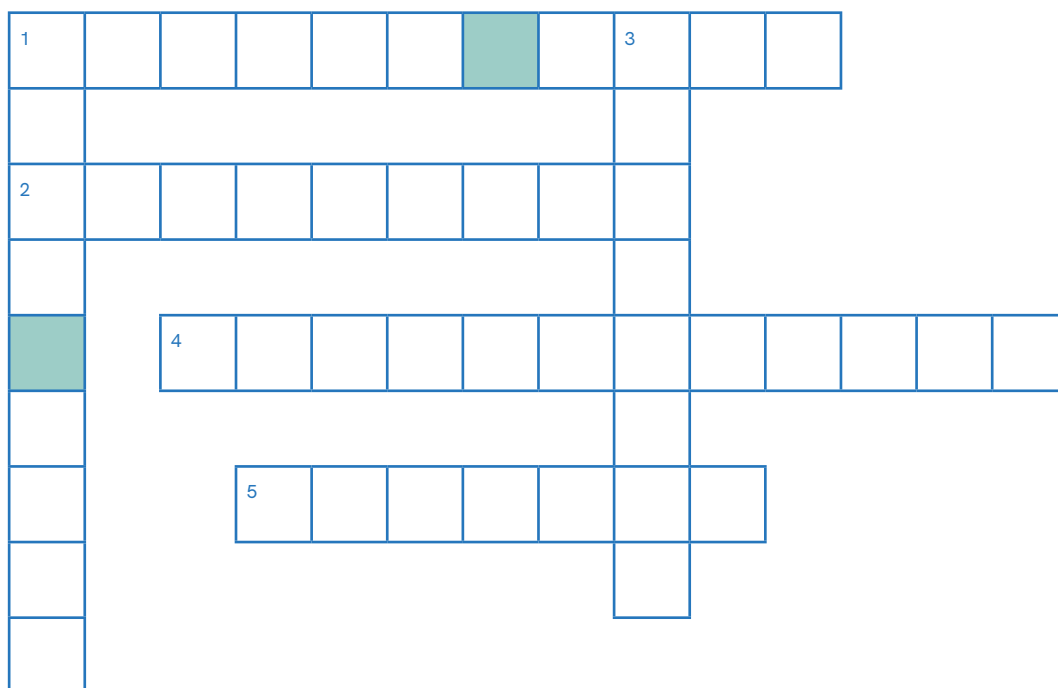
a Think about why these plasters did not exist in the past.

b Think about why these plasters are now being made.

Conclusion

6. Write the words with the following meanings in the puzzle.

1	kind of skin
1	wound caused by rubbing against something rough
2	ointment for your skin
3	when bad bacteria enter your body
4	when your skin becomes red, thick, and painful due to an infection
5	maintaining your health by keeping clean



7. Information assignment

Students watch a Dutch video about what hygiene is developed by the Dutch National Institute for Public Health and the Environment (RIVM) (1.09 min).

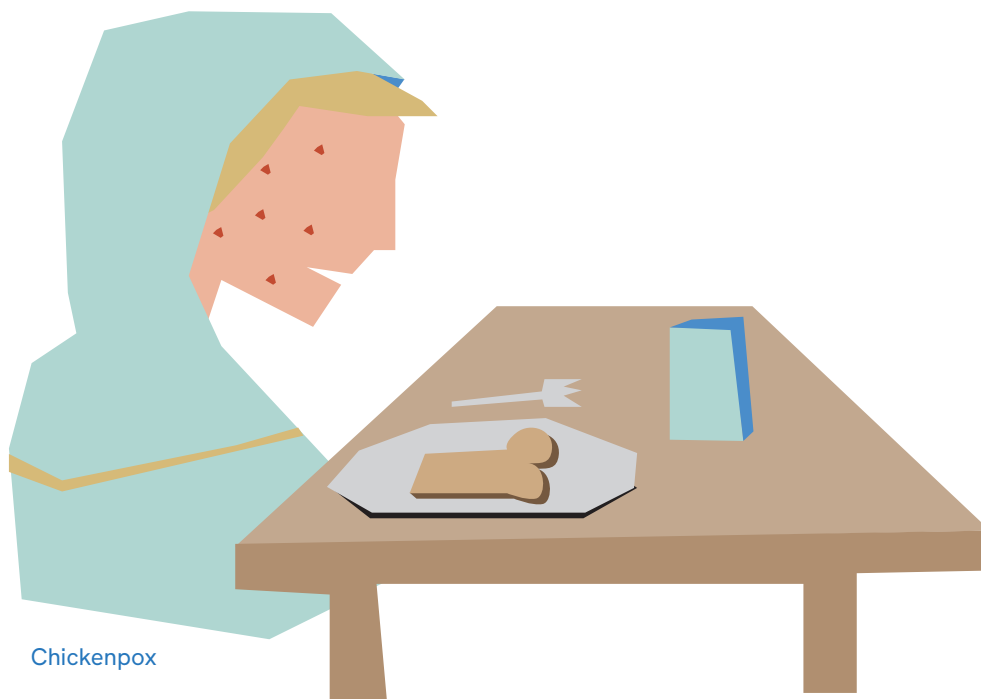
Circle two words and complete the sentence.

I think it is **not so** / **quite** / **very good** that the RIVM has put this information on the internet, because

LESSON 3

Temporary conditions

This lesson is about temporary conditions of your skin.
You will also learn how people can get these conditions.



Chickenpox

Temporary Conditions

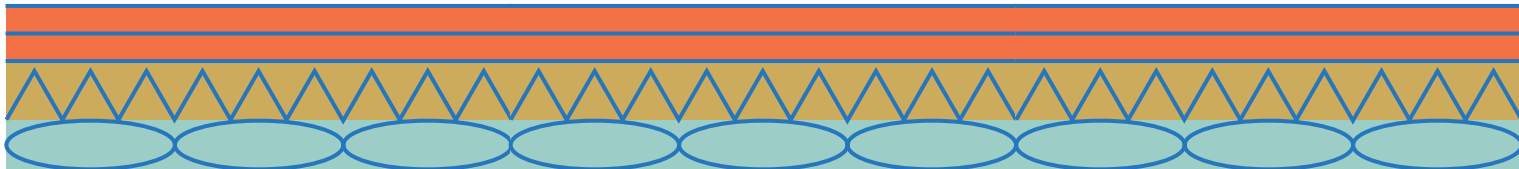
It can happen to anyone: you suddenly feel a bump or a dry spot on your arm. There is something wrong with your skin. When a part of your body is sick, we call that a condition. There are skin conditions that everyone can get.

These are temporary: they go away on their own or after a short treatment. People can catch some temporary conditions from each other. These conditions are called contagious. Other conditions are not contagious.

1. Which temporary conditions have you heard of?
And which conditions have you ever had?

Fill out page 4 of your skin passport.

skin
passport



2. Read the texts about the eight conditions on pages 14 and 15 (1-8)

a Circle the conditions caused by a bacterium. Underline the conditions caused by a virus.

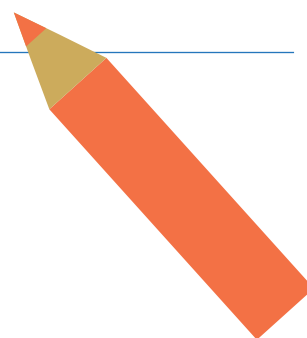
acne / impetigo / mosquito bite / dandruff / boil / athlete's foot / chickenpox / warts

b Which two conditions are not contagious?

3. What is advisable if you have one of these conditions?

Check the two correct answers.

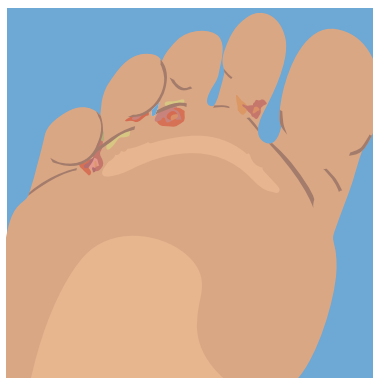
- ☐ **a** You discuss it with your parents/guardians.
- ☐ **b** You pretend that nothing is wrong.
- ☐ **c** You ignore it.
- ☐ **d** You seek advice from a doctor.





1 Chickenpox

Chickenpox are red bumps on your skin that become itchy scabs. You get this condition from a virus. It is a tiny creature that can make you sick, just like a bacterium. The chickenpox virus is in the throat of someone who is sick. Tiny droplets with the virus are released into the air through coughing and sneezing. If other people breathe these in, they become infected: they catch the disease. Sometimes you get infected by the fluid from someone else's chickenpox.



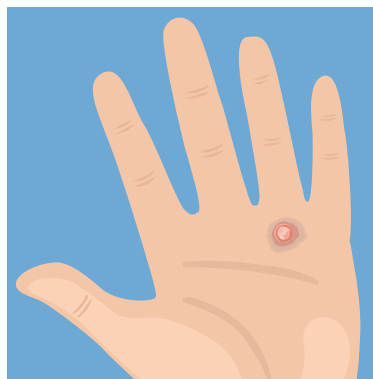
3 Athlete's foot

Athlete's foot is a contagious condition that people can catch from each other through the floor of a shower or swimming pool. Fungi are tiny creatures, just like bacteria and viruses. Some fungi are bad for your health. With athlete's foot, cracks form in the skin between your toes. This skin becomes red and painful and starts to itch.



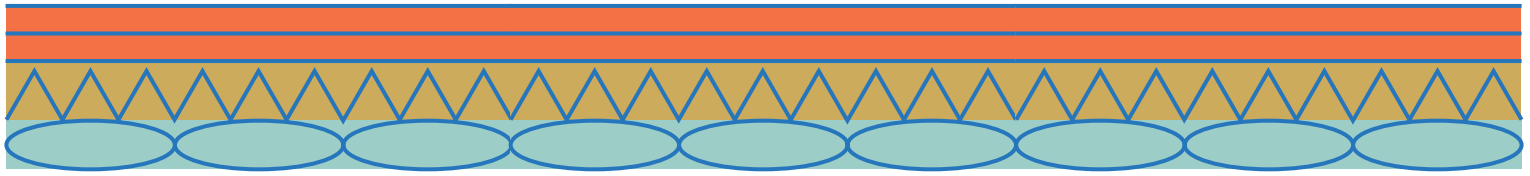
2 Mosquito bite

A mosquito bite is a non-contagious condition that occurs because your skin is very sensitive to the substance that comes into your skin through a mosquito bite. Your skin reacts: it becomes thick and red and starts to itch.



4 Warts

Warts are rough bumps that grow on the skin. This contagious condition is caused by a virus that can enter through wounds, scratches, or cracks in the skin.



5 Impetigo

Impetigo is a contagious condition where sores, red spots, and bumps with yellow crusts form on the skin. This condition is caused by a bacterium that is on the skin or in the nose or throat.



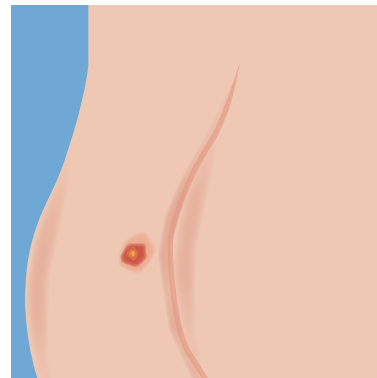
7 Dandruff

Dandruff consists of flakes on your scalp. It is a non-contagious condition that occurs because skin cells renew and detach from the scalp faster than normal.



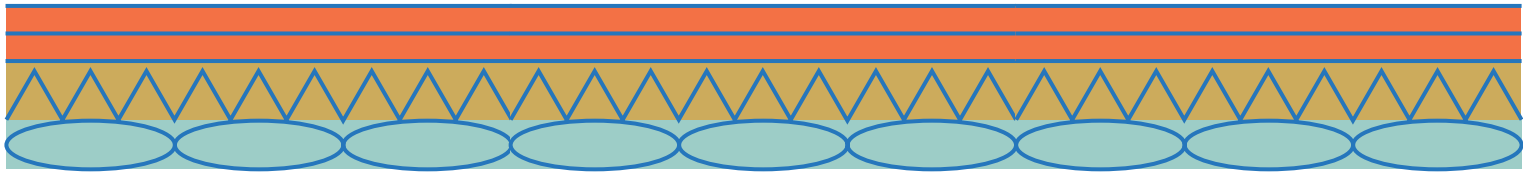
6 Acne

Acne (or pimples) is a non-contagious condition caused by the strong activity of sebaceous glands. If the sebum does not properly exit through the epidermis, pimples can form, which can become inflamed.



8 Boil

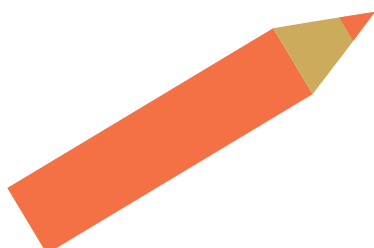
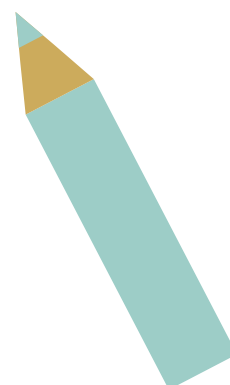
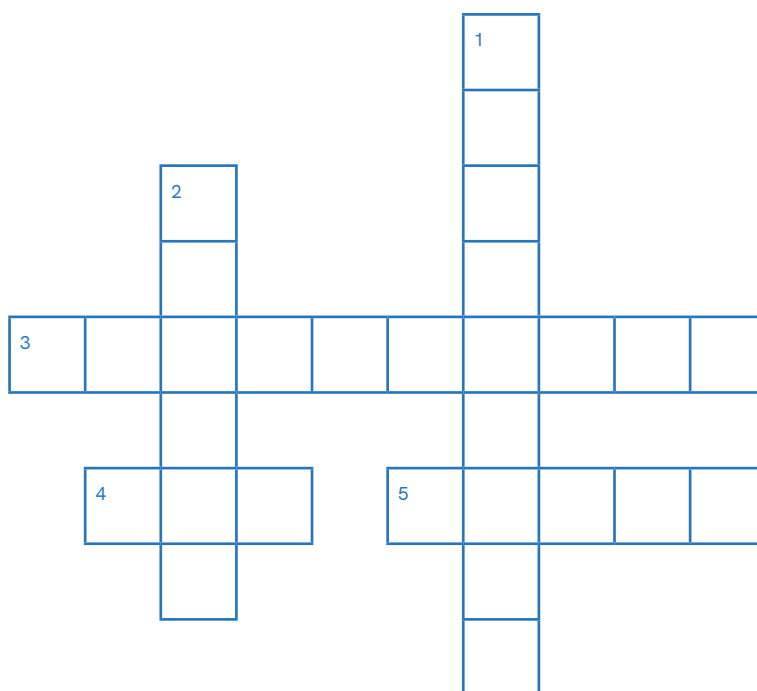
A boil is a red swelling of the skin that occurs when a hair follicle becomes clogged and an infection occurs due to bacteria. A boil can be contagious through the pus (white-yellow fluid) that comes out.

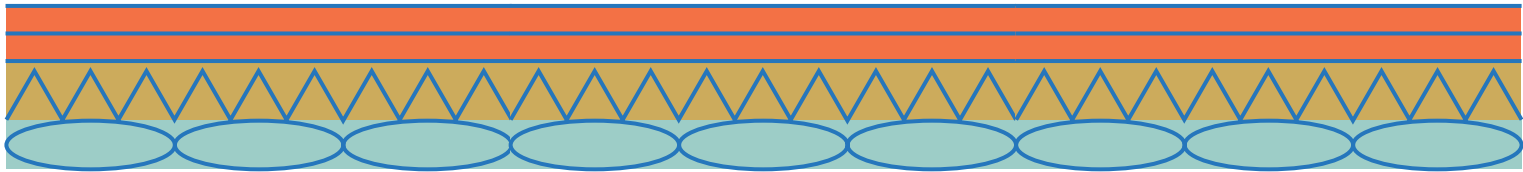


Conclusion

4. Write the words with the following meanings in the puzzle.

1	when a part of your body is sick
2	very tiny creatures that can make the skin sick (like bacteria and viruses)
3	a condition people pass to each other
4	white-yellow fluid
5	very tiny creatures that can make you sick (like bacteria and fungi)





5.

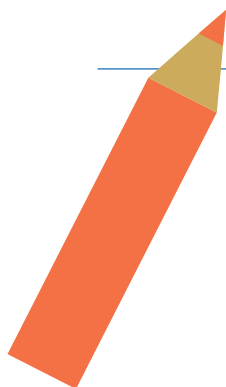
Information assignment

a Students watch a Dutch video about what causes pimples.

List the tips from the video on how to handle pimples wisely.

b Students watch the video “Blister Plasters on Pimples? You’d Better Forget These Beauty Tips”.

What risks are mentioned in the video when you follow beauty tips from the internet?



LESSON 4

Protection of the skin

This lesson is about how your skin can get sunburned and how to protect it. You will also learn why sunlight is good for your health.



Sunscreen

1. What skin type do you have? Fill out page 5 of your skin passport.

Sunburn

Many people feel happy on a sunny day. Sunlight makes everything look better. But you have to be careful with sunlight because the sun's rays contain UV rays that can be harmful to your skin if you get too much of them. Darker skin can handle UV rays better than lighter skin because darker skin has more pigment (coloring). When your skin is exposed to the sun, it starts producing pigment to protect itself.

This makes your skin darker, but that protection is not enough. Your skin can burn and turn red. This happens faster with lighter skin than with darker skin. If you get a lot of sunburns in your youth, your skin can become very damaged and not function as well. You also run the risk of developing a serious skin disease later in life: skin cancer.

Sun protection

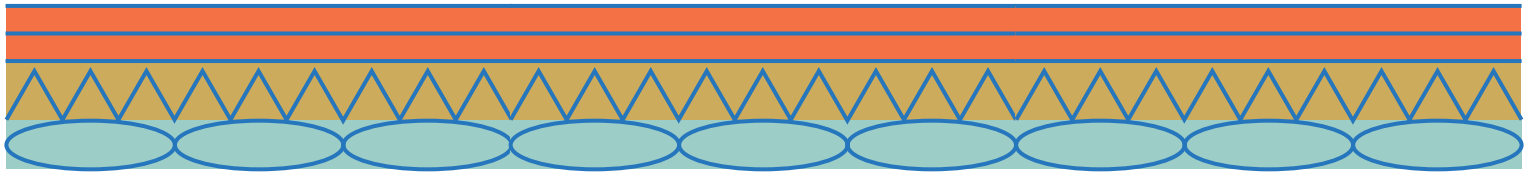
If you walk through bushes with thorns, you can protect your skin with long pants and a long-sleeved shirt. This is how you can also protect your skin from UV rays. In the sun, you can wear a hat and sunglasses. For swimming and playing in the sun, there is special UV swimwear. But your skin can also burn when you bike, skate, or play in the snow. You can even get sunburned under a parasol that does not block UV rays.

That is why there are special parasols that block UV rays. Sunscreen can protect your skin well. But pay attention to which cream you use. There are creams with a high and low protection factor (how much UV radiation is blocked). It is wise for all children to use at least SPF 30. Apply it often and thickly because the cream can come off due to water and sweat.



2. Look at this picture. Circle the correct word.

- a The boy on the **left** / **right** has more pigment than the other boy.
- b The boy on the **left** / **right** burns faster than the other boy.
- c The skin of the boy on the **left** / **right** can handle UV rays better than the skin of the other boy.
- d The boy on the **left** / **right** needs to protect himself better against the sun than the other boy.



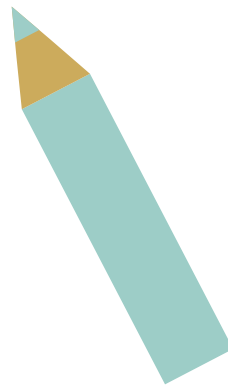
Vitamin D

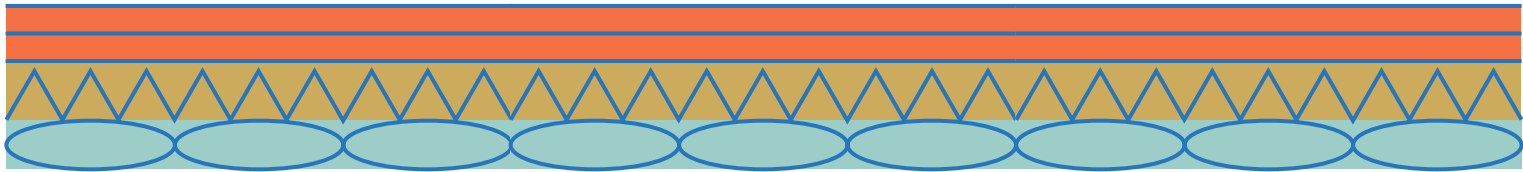
Vitamins are substances needed to stay healthy. There are different kinds that have a letter in their name, such as vitamin D. Vitamin D is made in people's skin with the help of UV rays. If you are in the sun a lot, you make a lot of vitamin D. But if you are not in the sun much, you can become deficient in vitamin D.

People with lighter skin make vitamin D faster than people with darker skin. That is why it is good for people with darker skin in the Dutch winter to eat foods containing vitamin D, such as fatty fish and eggs. They can also take vitamin D tablets.

3. Check the two correct statements.

- ☐ a It is healthy if your skin is exposed to sunlight in the winter.
- ☐ b It is healthy if your skin is never exposed to sunlight in the summer.
- ☐ c People with dark skin can become deficient in vitamin D faster in the winter than people with light skin.
- ☐ d Sunbathing a lot in the summer is necessary to make enough vitamin D.

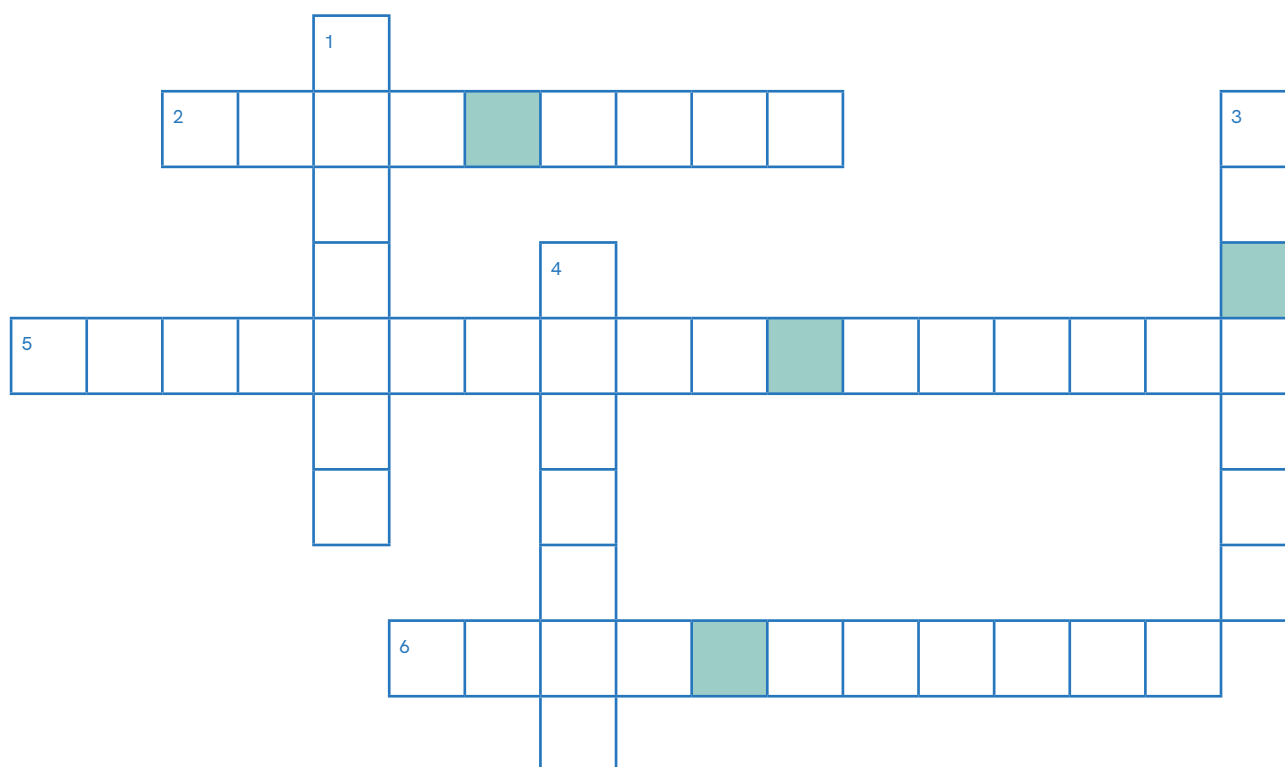
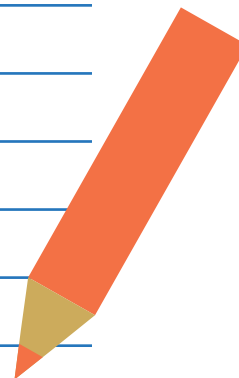




Conclusion

4. Write the words with the following meanings in the puzzle.

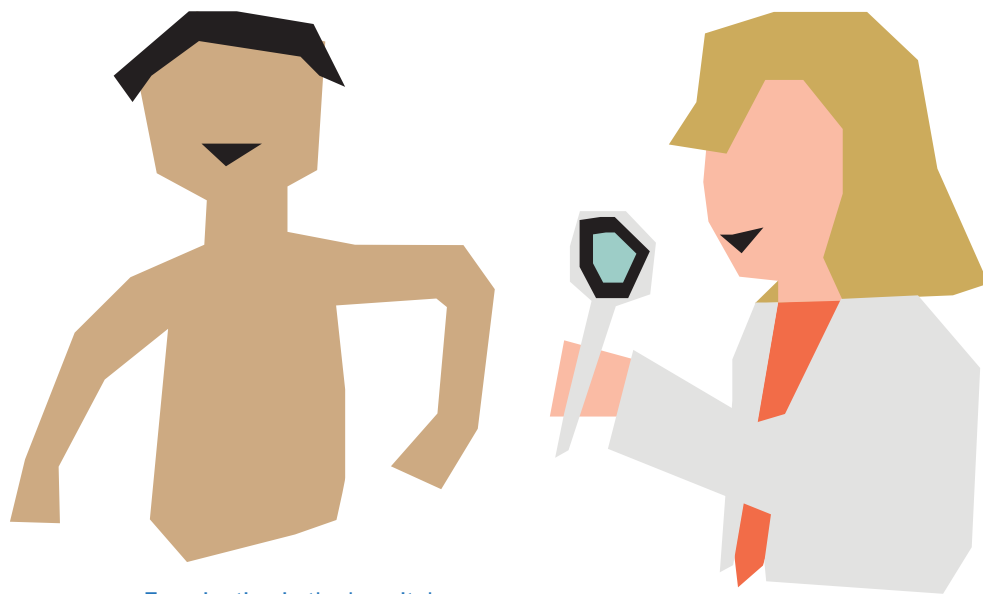
1	colour
2	kind of skin
3	harmful rays in sunlight
4	substance needed to stay healthy
5	how much UV radiation is blocked
6	serious skin disease



LESSON 5

Permanent skin conditions

This lesson is about permanent skin conditions. You will also learn how people cope with such conditions.



Examination in the hospital



1. What permanent skin conditions have you heard of?
And do you know anyone with such a condition?
Fill out page 6 of your skin passport?

Permanent conditions

A mosquito bite is an example of a temporary skin condition that everyone can get. But there are also chronic (permanent) skin conditions that never really go away. With such a condition, something in the skin does not work properly. This can result in extra scales (loose pieces of skin), redness, or inflammation. Having a chronic skin condition can be quite challenging.

For example, itching can cause you to sleep poorly or have trouble paying attention in school. Other people might stare or say unkind things because you have scales or spots on your skin. Someone might have an opinion about something without knowing what it really is. It could be very different from what they think. Such an opinion is called a **prejudice**.

2. Check the two correct sentences.
 - o a Scales develop with all chronic conditions.
 - o b With a chronic skin condition, something in the skin does not work properly.
 - o c Chronic conditions never go away.
 - o d Chronic skin conditions are temporary.

Vitiligo

Vitiligo is a non-contagious chronic condition that causes white spots on the skin. The pigment (coloring) in those spots disappears. It is not known why this happens. For people with light skin, the spots become more visible in the summer as the rest of the skin tans. For people with dark skin, the color differences are always noticeable. Vitiligo can make children feel insecure. Sometimes they hide their spots out of fear of negative reactions from other children or adults. They may not want to go swimming or wear shorts and short-sleeved clothes in the summer.

Eczema

Eczema is a non-contagious chronic condition. It causes dry and red skin with itching, scales, and sores. For many children, this condition disappears after a few years, but for a small group, it remains. You have less trouble with eczema if you moisturize the skin with a special medicated ointment.

Psoriasis

Psoriasis is similar to eczema but is different. It is a non-contagious chronic condition where skin cells form much faster than usual. This can result in scaly red patches that itch and hurt. Psoriasis is not contagious and is often treated with special medicated ointment.

Birthmark

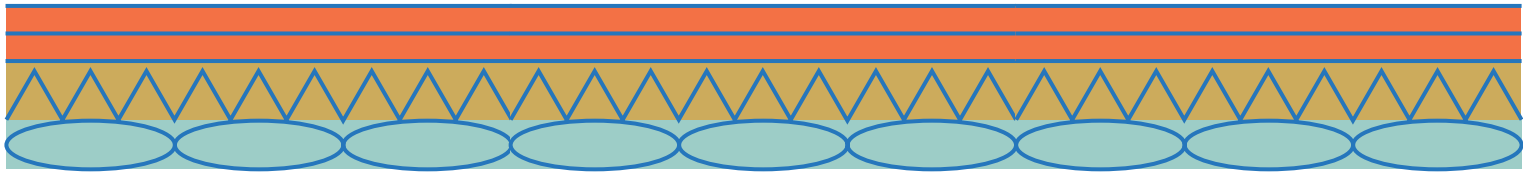
A birthmark is a pink or purple mark on the skin that someone is born with. It is a non-contagious chronic condition where blood vessels in the skin are significantly enlarged. Some people have small and others have larger birthmarks. They are usually on the face or neck. They do not itch or hurt.

Alopecia

Alopecia is a non-contagious chronic condition where someone suddenly loses a lot of scalp hair and can even become completely bald. Eyebrows and eyelashes can also fall out. It is unknown why this condition occurs.

3.

The texts above are about five conditions that are not contagious.
Think about why it is important for people to know that these conditions are not contagious.

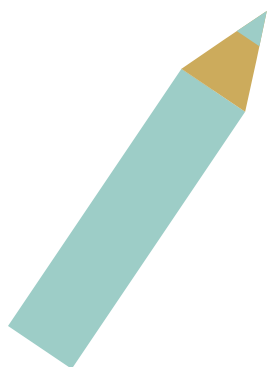


4. Read the text on the next page

a Think about why people act awkwardly because of Anne's baldness.

b What positive change happened to Anne because of the condition?

c Anne shares her experiences on a blog and Instagram. What does she achieve with that?



Anne talks about her hair condition

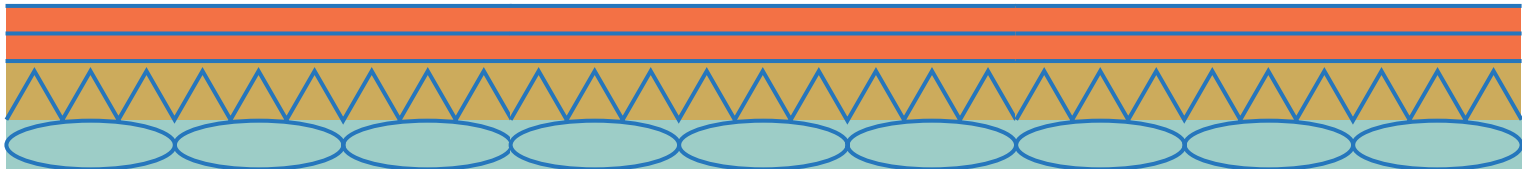
When Anne was sixteen, she developed alopecia. Her scalp hair fell out suddenly. She said, "I had never heard of it and thought I was the only one. Nowadays, being bald is very normal for me, and I am very open about it. People often act awkwardly when they know or see that I am bald. They then ask me, 'Isn't there a treatment for it?'. That is well-intended, but they say it as if alopecia is something bad. For me, it is not. But as a person, I have positively developed because of my hair condition. I used to think I always had to be perfect and wore a lot of makeup. Now I have much more confidence than before!" Initially, it is very difficult to become bald, and it is nice when others treat you kindly. Anne wears a hairpiece (wig), but she also goes out without it. "Especially in the summer, a wig is really warm. Sometimes I have a period when I don't feel comfortable going out without hair. Then it doesn't feel right. But overall, I can't imagine not being able to take off my hairpiece."

Anne shares her experiences on a blog and Instagram with more than four thousand followers. Many of them also have alopecia. "We really form a community from which I draw support. Many have become my friends. A girl wrote to me that she was no longer afraid to wear her hairpiece because of me. She found support in my posts. I am very happy that I can do that with my posts. I love helping. It can be quite difficult to talk about alopecia. With my blog, I want to show that you don't have to be afraid of it. Of course, you can always send me a message if you like!"



Anne

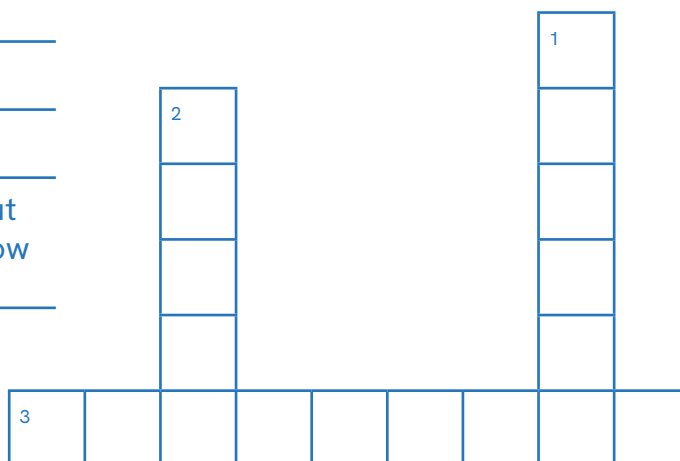
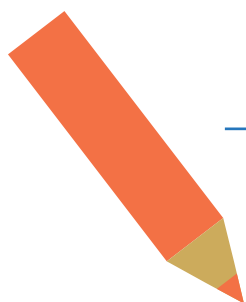
(Source: punt.avans.nl, 2021; Instagram: @alopeciagirlboss)



Conclusion

5. Write the words with the following meanings in the puzzle

1	permanent
2	loose piece of skin
3	opinion of someone about something they don't know well



6. **Information assignment**

Students watch a Dutch video why a child (12 years) stopped gymnastics because of the skin condition psoriasis.

a What prejudice did other gymnasts have about the child's psoriasis?

b Some people treat a child with psoriasis very unkindly.
Name two examples of this.

c Do you think it is good that this video was made? Explain your answer.
