Name: _____ Date: _____

Why Your Nose Stops Noticing the Smell

Circle group

Walk into a bakery and the smell of warm bread hits you. Stay ten minutes, and the smell seems to fade. But the ovens are still on. A person who just came in from the street still smells it right away. Your nose is not broken. It is doing something smart.

High inside your nose is a small patch of tissue with smell receptors. A receptor is a tiny part that reacts to certain chemicals in the air. You breathe in. The chemicals land on the patch. The receptors react. Nerves send a message to the brain. The brain finds out what the smell is.

If the same chemicals keep coming, the messages change. The receptors react less. The brain treats the smell like background. It is like when you stop hearing a fridge hum. Scientists call this adaptation. It frees your mind for new things, like a new smell, a voice, or a sudden move.

This is why people often cannot smell their own home or soap. Visitors notice it fast. The people who live there stopped noticing long ago. A short break in fresh air helps the sense recover. Then the smell seems strong again.

There is a limit. A strong smell that shows up suddenly, such as smoke, is a warning. Tell a grown-up right away.

Questions

1. Why does the smell of bread seem to fade after ten minutes?

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_____

2. What is a smell receptor?

_____

_____

3. Where are the smell receptors?

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_____

4. What do scientists call getting used to a smell?

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5. Why does a person who just came in still smell the bread?

_____

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6. Why is adaptation useful?

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_____

7. Why should you tell a grown-up about a sudden strong smell like smoke?

_____

_____

Words to know

receptors: tiny parts that react to certain things around us
chemicals: the basic substances that everything is made of
adaptation: a change that makes something less noticed after a while
tissue: the soft material that body parts are made of
background: things around you that you stop paying attention to

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Why Your Nose Stops Noticing the Smell

Triangle group

Walk into a bakery and the smell of warm bread hits you at once. Stay for ten minutes, and the smell seems to fade, even though the ovens are still running. Someone who has just stepped in from the street will still notice it right away. Your nose has not broken. It has done something sensible.

High inside your nose is a small patch of tissue lined with smell receptors. A receptor is a tiny part that reacts to certain chemicals floating in the air. When you breathe in, the chemicals land on the patch, the receptors react, and nerves carry a message to the brain, which works out what the smell is.

If the same chemicals keep arriving, the messages change. The receptors respond less strongly, and the brain starts to treat the smell as background, much as you stop hearing a refrigerator humming. Scientists call this adaptation. It frees your attention for things that are new, such as a new smell, a voice, or a sudden movement.

Adaptation is also the reason that people often cannot smell their own home or their own soap. Others notice these smells at once, while the people who live with them have long since tuned them out. A short break in fresh air lets the sense recover, so the smell seems strong again when you return.

This tuning out has limits. A strong smell that appears suddenly, such as smoke, is a warning, and a person who notices one should tell a grown-up right away.

Questions

1. Why does the smell of bread seem to fade after ten minutes in a bakery?

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2. What is a smell receptor?

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3. Where are the smell receptors found?

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4. What do scientists call the process of getting used to a smell?

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5. Why does a person who just walked in from the street still notice the bread smell?

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_____

6. Why is adaptation useful?

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_____

7. Why is a sudden strong smell, such as smoke, something to report?

_____

_____

Words to know

receptors: tiny parts that react to certain things around us
chemicals: the basic substances that everything is made of
adaptation: a change that makes something less noticed after a while
tissue: the soft material that body parts are made of
background: things around you that you stop paying attention to

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Why Your Nose Stops Noticing the Smell

Square group

Step into a bakery and the aroma of warm bread strikes you immediately. Remain there for ten minutes, however, and the scent seems to fade, even though the ovens continue to run. Someone who has only just arrived from the street will still detect it at once. Your nose has not malfunctioned. It has done something perfectly sensible.

High inside your nose lies a small patch of tissue lined with smell receptors. A receptor is a minuscule structure that reacts to particular chemicals drifting through the air. When you inhale, the chemicals settle on the patch, the receptors respond, and nerves carry a message to the brain, which then works out what the smell is.

If the same chemicals keep arriving, the messages gradually change. The receptors respond less strongly, and the brain begins to treat the smell as background, in much the same way that you stop noticing a refrigerator humming. Scientists call this process adaptation. It frees your attention for things that are new, such as an unfamiliar smell, a voice, or a sudden movement.

Adaptation is also the reason that people frequently cannot smell their own home or their own soap. Visitors detect these odors instantly, while the people who live with them tuned them out long ago. A brief break in fresh air allows the sense to recover, so the smell seems strong again upon your return.

This tuning out has its limits. A powerful smell that appears suddenly, such as smoke, is a warning, and anyone who notices one should tell a grown-up right away.

Questions

1. Why does the aroma of bread seem to fade after ten minutes in a bakery?

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2. What is a smell receptor?

_____

_____

3. Where are the smell receptors located?

_____

_____

4. What do scientists call the process of growing used to a smell?

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5. Why does someone who has just arrived from the street still detect the bread at once?

_____

_____

6. Why is adaptation useful?

_____

_____

7. Why is a sudden powerful smell, such as smoke, something to report?

_____

_____

Words to know

receptors: tiny parts that react to certain things around us
chemicals: the basic substances that everything is made of
adaptation: a change that makes something less noticed after a while
tissue: the soft material that body parts are made of
background: things around you that you stop paying attention to

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Why Your Nose Stops Noticing the Smell

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Why Your Nose Stops Noticing the Smell

Easier · 220 words · Flesch-Kincaid grade 2.5

1. The nose has become used to it.
2. A tiny part that reacts to certain chemicals in the air.
3. In a small patch of tissue high inside the nose.
4. Adaptation.
5. Their receptors have not adapted yet.
6. It frees your mind for new things.
7. It can be a warning, and the nose has not tuned it out.

Triangle: Why Your Nose Stops Noticing the Smell

This passage · 254 words · Flesch-Kincaid grade 6.1

1. The nose has become used to the smell.
2. A tiny part that reacts to certain chemicals floating in the air.
3. In a small patch of tissue high inside the nose.
4. Adaptation.
5. Their receptors have not adapted to it yet.
6. It frees your attention for things that are new.
7. It can be a warning, and the nose has not tuned it out.

Square: Why Your Nose Stops Noticing the Smell

Harder · 261 words · Flesch-Kincaid grade 8.1

1. The nose has become accustomed to it.
2. A minuscule structure that reacts to particular chemicals drifting through the air.
3. In a small patch of tissue high inside the nose.
4. Adaptation.
5. Their receptors have not adapted to it yet.
6. It frees your attention for things that are new.
7. It can be a warning, and the nose has not tuned it out.