Name: _____ Date: _____

Three Tiny Bones Behind Your Eardrum

Circle group

Deep in each ear are three of the smallest bones in your body. Their names come from their shapes. They are the hammer, the anvil and the stirrup. They work as a chain that carries sound.

Sound comes to you as shaking in the air. The shaking goes down your ear canal and hits the eardrum. The eardrum is a thin skin, stretched like the top of a drum. It shakes back and forth.

The hammer touches the eardrum, so it shakes too. The hammer bumps the anvil. The anvil moves the stirrup. The stirrup pushes on the inner ear. The inner ear is full of fluid.

Why three bones? It is hard to shake fluid. The bones make the shaking stronger so it can move the fluid. Tiny cells turn the motion into signals. The signals go along a nerve to your brain. Your brain tells you what you heard.

It all happens in a flash, each time you hear a bird or a friend call your name.

Questions

1. What are the names of the three bones?

_____

_____

2. What is the eardrum like?

_____

_____

3. Which bone touches the eardrum?

_____

_____

4. What fills the inner ear?

_____

_____

5. Why does sound need three bones?

_____

_____

6. What carries signals to your brain?

_____

_____

Words to know

eardrum: a thin skin inside the ear that shakes when sound hits it
canal: a narrow tunnel or path
fluid: a liquid that can flow
nerve: a bundle of fibers that carries messages to the brain
signals: messages sent from one place to another

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: _____

Three Tiny Bones Behind Your Eardrum

Triangle group

Deep inside each of your ears are three of the smallest bones in your body. They have funny names from their shapes: the hammer, the anvil and the stirrup. Together they make a chain that carries sound.

Sound reaches you as shaking in the air. The shaking moves down your ear canal and hits the eardrum, a thin piece of skin stretched like the top of a drum. The eardrum shakes back and forth.

The hammer touches the eardrum, so it shakes too. The hammer bumps the anvil, and the anvil moves the stirrup. The stirrup then pushes on the inner ear, which is filled with fluid.

Why does the sound need three bones? Shaking fluid is harder than shaking air. The little bones make the shaking stronger, so it can move the fluid. Inside, thousands of tiny cells turn that motion into signals. The signals travel along a nerve to your brain, and your brain tells you what you heard.

All of this happens in a flash, every time you hear a bird, a bell or a friend calling your name.

Questions

1. What are the names of the three tiny bones?

_____

_____

2. What is the eardrum like?

_____

_____

3. Which bone touches the eardrum?

_____

_____

4. What is the inner ear filled with?

_____

_____

5. Why does the sound need three bones?

_____

_____

6. What carries the signals from the inner ear to the brain?

_____

_____

Words to know

eardrum: a thin skin inside the ear that shakes when sound hits it
canal: a narrow tunnel or path
fluid: a liquid that can flow
nerve: a bundle of fibers that carries messages to the brain
signals: messages sent from one place to another

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: _____

Three Tiny Bones Behind Your Eardrum

Square group

Deep inside each of your ears are three of the smallest bones in your entire body. They have curious names that come from their shapes: the hammer, the anvil and the stirrup. Together they form a chain that carries sound onward.

Sound reaches you as vibrations in the air. Those vibrations travel down your ear canal and strike the eardrum, a thin piece of skin that is stretched tightly like the top of a drum. The eardrum shakes back and forth.

The hammer rests against the eardrum, so it shakes as well. The hammer bumps the anvil, and the anvil moves the stirrup. The stirrup then pushes against the inner ear, which is filled with fluid.

Why does sound need three bones to get there? Shaking fluid is much harder than shaking air. The little bones strengthen the vibrations so that they can move the fluid. Inside, thousands of tiny cells convert that motion into signals. Those signals travel along a nerve to your brain, and your brain tells you what you heard.

All of this takes place in a flash, every time you hear a bird, a bell or a friend calling your name.

Questions

1. What are the names of the three tiny bones in the ear?

_____

_____

2. How does the passage describe the eardrum?

_____

_____

3. Which bone rests against the eardrum?

_____

_____

4. What fills the inner ear?

_____

_____

5. Why does sound need three bones to reach the inner ear?

_____

_____

6. What carries the signals from the inner ear to the brain?

_____

_____

Words to know

eardrum: a thin skin inside the ear that shakes when sound hits it
canal: a narrow tunnel or path
fluid: a liquid that can flow
nerve: a bundle of fibers that carries messages to the brain
signals: messages sent from one place to another

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: Three Tiny Bones Behind Your Eardrum

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

Circle: Three Tiny Bones Behind Your Eardrum

Easier · 169 words · Flesch-Kincaid grade 1.7

1. The hammer, the anvil and the stirrup.
2. A thin skin stretched like the top of a drum.
3. The hammer.
4. Fluid.
5. They make the shaking stronger so it can move the fluid.
6. A nerve.

Triangle: Three Tiny Bones Behind Your Eardrum

This passage · 182 words · Flesch-Kincaid grade 3.9

1. The hammer, the anvil and the stirrup.
2. A thin piece of skin stretched like the top of a drum.
3. The hammer.
4. Fluid.
5. They make the shaking stronger so it can move the fluid.
6. A nerve.

Square: Three Tiny Bones Behind Your Eardrum

Harder · 195 words · Flesch-Kincaid grade 4.5

1. The hammer, the anvil and the stirrup.
2. A thin piece of skin stretched tightly like the top of a drum.
3. The hammer.
4. Fluid.
5. They strengthen the vibrations so that they can move the fluid.
6. A nerve.