

Name: _____



10 Minutes with Science

The Nose

We all have an object in the middle of our face, it is our beautiful and useful nose. The two holes we see from the outside called 'nostrils' are almost identical and are separated by a wall called 'nasal septum'. The nasal septum is made of 'cartilage' and very thin pieces of bone.



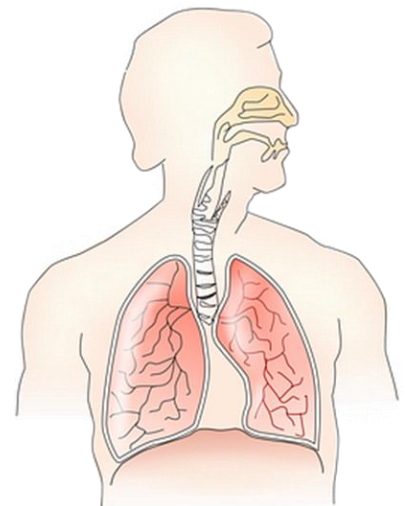
'Cartilage' is a flexible structure, which is why you can move the tip of your nose easily. But what role does the nose play?

In addition to being an entrance for air to our respiratory system, the nose plays the vital role of filtering the air we breathe, warming it, and providing moisture.

How does it do all that? When air enters our nose, it is filtered by protective hairs that trap dust and other particles that can be irritating. If an irritating material gets trapped inside the nose, an explosion occurs known as 'sneezing'. A sneeze is a strong nasal explosion in which a particle can shoot at a hundred miles per hour.

To warm the air and add moisture, the inside of the nose is coated with a mucous membrane that is very moist. This membrane heats the air as it passes and humidifies it to more than 70% humidity.

How do we smell with the nose? Although the nose is part of the olfactory system, the odors are actually perceived behind the nose, in the nasal cavity; where the 'olfactory epithelium' is located. On the surface of the 'olfactory epithelium' are molecules, called 'odorant receptors', that connect with about ten million nerve receptors of the odor. Nerve receptors send electrical impulses that the brain translates into odors. Because of the immense number of receptors, our olfactory system is able to differentiate about 10,000 different odors. Amazing!



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ANSWER THE QUESTIONS

1. What is the nasal septum?
 - a. The two holes through which air enters
 - b. The wall that separates the nostrils
 - c. A rigid bone of the face
 - d. A bone almost exactly the same as the nose
2. What is the function of the nose?
 - a. It's the entrance for air to the respiratory system
 - b. It filters the air we breathe
 - c. It heats the air and gives it moisture
 - d. All of the above answers are correct
3. How does the nose heat up and moisten the air we breathe?
 - a. Protective hairs heat and humidify the air
 - b. Cartilage heats and humidifies the air
 - c. A mucous membrane heats and humidifies air
 - d. The nasal cavity heats and humidifies the air
4. When we sneeze, a particle can shoot at a speed of ten miles per hour.
 - a. True
 - b. False
5. Where are the smells perceived?
 - a. In the nose
 - b. In the nasal septum
 - c. In the mucous membrane
 - d. In the olfactory epithelium

