**Building Language Skills with The Seattle Times**

**February 11, 2016**

**Article: "Scientists find brain's sigh center"**

**Tuesday, February 9, 2016** in the e-Edition of The Seattle Times, Main, page A8

**Pre-Reading:**

Read the title of this article. What is a sigh? Why do you think people sigh? What emotions do you think sighing can express? Do you think the ability to sigh is important – why or why not?

**Vocabulary:**

As you read, look for the following vocabulary words that appear in today's article. Write down what you think the words mean based on the "context," or how the words are used in the sentence in which they appear. Next, look up the definitions in a dictionary and see how close your guess was for each word.

*alveoli*

*circuitry*

*collapsing*

*induce*

*inhalation*

*involuntary*

*life-sustaining*

*neural*

*originate*

*pinpoint*

*reflex*

*re-inflate*

*surface area*

*toxin*

*triggered*

*volume*

**Comprehension:**

1. Sighing is an essential life-sustaining reflex that is necessary to keep our lungs from doing what?
2. Most humans heave an involuntary sigh and average of how many times an hour?

3. Involuntary sighs provide an extra gust of air that does what to some of the 500 million tiny alveoli in our lungs?
4. Alveoli are the sites where what enters the bloodstream?
5. According to the article, although each individual alveoli is just 2/10th of a millimeter in diameter, together they have the surface area of what?
6. Involuntary sighs are related to emotion – true or false?
7. Rodents are even more frequent sighers than humans, taking a double inhale up to how many times and hour?
8. What was a toxin found on the skin of South American frogs found to induce when injected into brainstems of rats?
9. This new research could help scientists develop drugs that can do what?


**Post-Reading:**

**Read the two following passages from the article and discuss the following questions in a group:**

*"This week researchers from the University of California, Los Angeles, and Stanford University described the neural circuitry of sighing for the first time as well as pinpoint the exact location in the brain from which our sighs originate."*

*"And we're not the only animals who sigh regularly. Rodent are even more frequent sighers than humans, taking a double inhale up to 40 times an hour."*

Which system of the body is the brain a part of, and how many parts of the brain can you name? What functions of the body can you think of that the brain is responsible for?  How do you think the brain sends "messages" or signals to other parts of the body? How do you think our brains differ from other animals and why? Why do you think rodents sigh more frequently than humans?

**Building Language Skills:**

**Read the following passage, and complete the activity below:**

*"You can test this yourself by lying down in a quiet room and paying close attention to your breathing. About once every five minutes you will notice that your body takes an inhalation, and just before the exhale, adds another inhalation on top of it."*

*"These types of sighs are not related to emotion, Feldman said."*

When you go home tonight find a quiet place to lie down and test this yourself for about 20 – 30 minutes. Then journal about what you observed and how you felt while lying quietly in the room and paying close attention to your breathing. What did you think about? Were you able to notice the extra inhalation? How did you feel immediately after finishing your breathing experiment?

**Comprehension Question Answers:**

1. It is necessary to keep our lungs from collapsing.
2. Most humans heave an involuntary sigh an average of 12 times an hour.
3. Sighs proved an extra gust of air that helps re-inflate the alveoli.
4. Oxygen
5. Together they have the surface area of a tennis court.
6. False – they are not related to emotion.
7. Up to 40 times an hour.
8. It was found to induce rapid sighing.
9. It could help scientists develop drugs that can induce sighing in people who don't sigh enough, or inhibit sighs in people who suffer from anxiety or disorders that can lead to too much sighing.