**Student or Group Name:**  **Date:**

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|  | **Activity 4-****Breathing Easy?**  |   |

**Background Information:**

Asthma is a disease that affects the lungs. In asthma, the airways and lungs become inflamed and narrower. With less space in the airways, it is harder to breathe. Asthma is one of the most common long-term diseases of children, but adults can have asthma, too. Asthma causes wheezing, breathlessness, chest tightness, and coughing at night or early in the morning. If you have asthma, you have it all the time, but you will have asthma attacks only when something bothers your lungs.

We don’t know all the things that can cause asthma, but we do know that genetic, environmental, and workplace factors have been linked to developing asthma.

**Objective:**

In this activity, you will:

* Simulate the feeling of asthmatic breathing
* Compare and contrast normal breathing to asthmatic breathing

**Safety Note: If you have asthma or a respiratory infection, do not do this activity. You can observe or be the timer for this activity. This activity could trigger an asthma attack.**

**Materials:**

Regular drinking straws (one straw per participant)

Timer/watch

**Procedure:**

1. For the first trial, decide who will do the activity and who will time.

2. Breathe normally for 1 minute and think about what your breathing feels like.

3. Next, clamp both nostrils shut with thumb and forefinger, and breathe through the straw for 30 seconds. Do not open your mouth, but make all air move through the straw. Think about what it feels like. At the end of the 30 seconds, remove the straw and breathe normally. **Safety First! If at any time you are feeling light-headed or dizzy, stop breathing through the straw, and sit down until your breathing returns to normal.**

4. Now, clamp both nostrils shut again, and breathe through the straw. Run in place for thirty seconds while breathing through the straw. At the end of the thirty seconds, remove the straw and breathe normally. **Safety First!**

**If at any time you are feeling light-headed or dizzy, stop breathing through the straw, and sit down until your breathing returns to normal.** Think about how it felt to breathe through the straw while running.

5. Now, change roles and repeat the activity with the other person.

**Discussion:**

1. This activity simulates how it feels to breathe if you have asthma. Breathing through the straw is like breathing with asthma because you have to breathe through a very narrow tube. Remember, with asthma, the airways become inflamed and become narrower. Using the Venn Diagram below, compare normal breathing to breathing through the straw. On the left side, write about breathing normally. On the right side, write about breathing through the straw. In the middle write things that both have in common.



2. This activity also is used to simulate how it feels to breathe if you have the disease called cystic fibrosis. In cystic fibrosis, the body cells that produce mucus are affected. They produce thick mucus that plugs up tubes and passageways, especially in the lungs and pancreas. Explain why this activity is a good simulation of how it would feel to breathe with cystic fibrosis.