**Just Breathe**

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**Learning Standards:**

explain the negative effects of smoking, lack of sleep, and poor dietary habits on physical performance and on the body.[1.4E]

identify how regular physical activity strengthens the heart, lungs, and muscular system.[2.4A]

describe the negative effects of smoking on the lungs and the ability to exercise.[2.4E]

locate the lungs and explain their purpose.[K.4B]

**Note: For teacher reference information before the lesson go to** <http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?id=2406&np=152&p=335>

**Reference Information:** Remind students lungs are organs (body parts) inside your body that help you breathe. Lungs help us take a gas called oxygen out of the air and into our blood. We need oxygen to live. When we inhale we breathe in fresh air through our nose and mouth. This brings oxygen into the lungs and into your blood. The heart then pumps the blood throughout the rest of our body because all body parts need oxygen. When we exhale, we breathe air out through our nose and mouth. This helps us get rid of things our body doesn’t need like the gas carbon dioxide. Have students inhale and exhale. Have them touch their ribs and feel their ribcage move as they breathe. Point out their lungs are protected by the ribcage and are inside of the ribcage. We do not have to tell our bodies to breathe it just does it on its own. We have to have oxygen to live so that is why we have to take care of our lungs by exercising and not smoking. Exercising makes our lungs strong and healthy so they will work for a long time. Lungs do not like cigarette smoke - it hurts them, and then they can’t help you breathe. Do not smoke and try to stay away from other peoples’ smoke. Remember you need healthy lungs to live a long life and it is up to you to take care of them. Today we are going to play a game called Just Breathe. During the game you are going to get to put oxygen into the lungs and take carbon dioxide out of the lungs just like our bodies do when we breathe.

**Topic**: Lungs

**Student Expectations**: The students will learn about the functions of the lungs and the importance of keeping them healthy. The student will watch a short video on Brainpop Jr. on the lungs and its functions. <http://www.brainpopjr.com/health/bodies/lungs/>

Another short video available is How Do My Lungs Work? Hoopla Kids TV <https://www.youtube.com/watch?v=qMuWpacZmPQ>

**Materials**: 20 laminated red paper circles labeled Oxygen per team (teacher created), 60-100 laminated blue circles marked carbon dioxide (teacher created), 2 Noodles, 1 red basket and 1 blue basket per team

**Warm-up:** Students will enter the gym and perform various exercises to stretch and strengthen major muscle groups. Before and after warm up direct students attention to their lungs and how their bodies respond to breathing in and out before, after, and during warm up.

**Activity:** Designate an area in the gym that will represent a set of lungs. You can make it any size you want but it has to be big enough for students to deliver oxygen (red circles) and take out carbon dioxide (blue circles). Point out to them that this is what happens when we take a breath so they can understand why they are putting circles in and taking circles out. This represents one breath with healthy lungs. Place all of the blue circles inside the lung area. Each student will be seated in a relay line at the other end of the gym. In front of each line there is a red basket filled with 20 red circles in each basket marked oxygen (represents the oxygen we breathe into our lungs). Each red basket must have the same number of red circles for each team. Each line also has an empty blue basket. The blue basket is where the students will place the blue circles that represent the carbon dioxide we breathe out that they are going to take from the lung area. When the game begins the first student will grab a red oxygen circle out of their basket (this represents when we inhale) and run to the designated area in gym that represents the lungs. They will place their red circle (oxygen) in the lungs then grab a blue circle (carbon dioxide) that represents the carbon dioxide we breathe out when we exhale. They will take it back to their line and place it in the blue basket at their line and go to the end of their line. Once the student places the circle in the basket the next person goes and takes a red circle to the lungs and then returns with a blue circle and again places it in the basket. This continues until all of the blue circles have been removed from the lungs or until the teacher blows the whistle. (Hint: If you have a lot of blue circles in the lungs the game will last longer). All students go back to their relay lines with whatever is in their hands and place any remaining circles in the correct basket. The first two students in line count the number of blue circles each team has and the team with the most blue circles is the winner because that means they delivered the most oxygen to the lungs which helps us breathe. Discuss with students that this is how healthy lungs work. Oxygen in and carbon dioxide out.

Next, to represent unhealthy lungs damaged by smoke, you will play the same game again but this time you will have 2 students that represent smoke from cigarettes, etc. These 2 students are in the lung area. Each of these students is given a noodle to tag the students who are trying to put the red circles in the lungs and take out the blue circles. They can move all over the lung area. Their job is to make it harder for the students to place the red circles in the lungs and harder to take the blue circles out of the lungs. When a student is tagged they go back to their line. If they have a red circle in their hand they take it back and put it in the red basket. If they have a blue circle in their hand and they are tagged they must return the blue circle to the lung area because the smoke prevented them from taking a healthy breath. They go back to their line empty handed. They must go to the end of the line and it is the next student’s turn. Because there are now taggers (or smoke damage) in the lungs, make sure the students realize it should be harder to get the red circles in and the blue circles out without getting tagged. The lungs are damaged so it is harder to breathe. Remember, discuss and point out smoking and smoke hurts the lungs. This game with the taggers should help the students understand it is harder to breathe with lungs damaged from smoke or smoking. Again, this continues until all of the blue circles have been removed from the lungs or until the teacher blows the whistle. (Hint: If you have a lot of blue circles in the lungs the game will last longer). The first two students in line count the number of blue circles each team has and the team with the most blue circles is the winner because that means they delivered the most oxygen even to the unhealthy lungs which helps us breathe. Ask them if it was harder with the smoke or easier and be sure to make the connection with them.

**Cool-down:** Students will do deep breathing exercises with their hands on ribcage (lungs) and reflect on their learning, get water and line up to leave.

**Variations:** More/less blue and red circles, substitute colored balls/etc. for circles, any color baskets will do, more/less taggers, more/less playing time between games.

For less of a structured play, the students are not in teams but sitting on a line around the gym before play begins. Place baskets of red circles all over the gym and let students freely take a red circle from any red basket to the lungs and then take a blue circle out of the lungs and place it in any blue basket in the gym. Designate at least 1 or more students whose job is to take the blue circles out the baskets and return them to the lungs so play continues. Play continues until the teacher blows the whistle. For unhealthy smoke damaged lungs play with the 2 or more taggers.

**Integration:**

Science: discuss parts of the body, systems of the body, point out the various posters around the gym they can use for reference

Math: students skip count as they count the circles by 2s, 5s, 10s, etc.

Reading: label the red circles Oxygen or O, label the blue circles carbon dioxide or CO2, label the area of the gym designated as the lungs, label the taggers with the words smoke