

ASTHMA TRIGGERS, M.D.

Life Skills

- ◆ Teamwork
- ◆ Critical Thinking



LESSON SIX: ASTHMA TRIGGERS

KEY CONCEPT:

Students learn about asthma symptoms and triggers.

SUBJECT MATTER OUTCOME:

Students learn about the physiology of asthma. Using concept maps, students explore asthma triggers, along with ways to reduce the severity of triggers.

TARGETED AGE: 5th Grade

TIME NEEDED: 60 minutes

MATERIALS NEEDED:

- Drinking straws (thick)
- Flip chart paper (1 per group)
- Markers

ADVANCE PREPARATION:

Review *Project Overview* and *Background Basics*

FLORIDA'S SUNSHINE STATE STANDARDS:



- | | |
|------------|------------|
| HE.A.1.2.2 | LA.B.1.2.1 |
| HE.A.1.2.4 | LA.B.1.2.2 |
| HE.A.1.2.5 | LA.B.1.2.3 |
| HE.A.1.2.6 | LA.B.2.2.3 |
| HE.B.1.2.4 | LA.D.1.2.2 |
| HE.B.3.2.2 | LA.D.2.2.1 |
| HE.C.1.2.1 | |
| HE.C.2.2.1 | |

FAST FACTS
did you know?

1 in 10 children in Florida report having asthma/asthma-related issues within the last 12 months.

Florida has 10 of the top 100 worst cities for air quality.

LET'S BEGIN

Start the lesson with a competition to see how long students can hold their breath. Once the competition is over, ask... **What happens if we cannot get air into our bodies?** Responses may include: our bodies or lungs won't work, we might suffocate and die.

There are people who sometimes have difficulty breathing, so this competition would have been unfair to them. Pass out one un-wrapped straw to each student. Let's see how it might feel to have difficulty breathing. Close your lips around the straw. Slowly and quietly breathe in and out through the straw and not through your nose. Have students put their thumbs up if it is fairly easy to breathe this way and thumbs down if it's difficult. Most of your students should find it easy. Most of the time we breathe in and out easily because our airways are open.

Now close your mouth around the straw. With your finger, pinch the straw mostly closed in the middle. Try breathing in and out again. Have students put their thumbs up if it is still easy to breathe this way and thumbs down if it's more difficult. Most of your students should find it more difficult. When the airway (the straw) is pinched together, it clogs the airway, and causes difficulty breathing.

Introduction to Asthma

One common health issue in children is called asthma. Have students raise their hands if they've heard of asthma. In an asthma attack the body goes through a number of changes which makes it difficult to breathe. The airways are pinched by the muscles around them, making them swell and fill with mucus. It is something like the feeling you get when you have been running very, very hard. You have a hard time breathing in and out and feel like you cannot catch your breath.

Physical changes and feelings that happen because someone has a health condition are called signs and symptoms. So, what might someone having an asthma attack look like or sound like? Responses may include: they are coughing or cannot catch their breath, wheezing or noisy breathing, tightness or pain in the chest, gasping, trouble talking or walking. Guide youth to exploring all symptoms.

So, how do you think people get asthma? Possible responses might include: you have a bad gene, you catch it from someone, your lungs are hurt somehow. Scientist don't know exactly how people get asthma, but they do know that asthma is not something that is passed from one person to another. In other words, asthma is not contagious. You cannot catch it like a cold or infection.

People with asthma have sensitive airways. Their airways can be irritated by ordinary things in the air. Have you ever walked into a room that was being painted? Do you remember the strong smell? How did that feel? Responses may include: made me cough, hurt my eyes, made my chest hurt.

People with asthma may cough and weeze more easily than people who don't have asthma. When they are around these things, their asthma gets worse, and their airways get even more sensitive. We call these triggers.

Asthma Triggers

Break into small groups. Once students are in groups...Many of you probably know someone with asthma. Think about the things that make that person have trouble with his/her asthma. If students don't know anyone with asthma, have them think about what might make them cough, wheeze, or sneeze, since an asthmatic person is more likely to be sensitive to the same things. In each work group, choose a reporter and brainstorm a list of things which can be asthma triggers.

Once students have finished the list...Now I want you to think about how these triggers might exist in your home. Brainstorm "solutions" for problems you would find in your home.

Once students have finished coming up with solutions for asthma triggers in the home...Now you are going to be writing an Editorial. Editorials take a positive or negative side on an issue.

Adapted from the National Heart, Lung, and Blood Institute
<http://www.nhlbi.nih.gov/health/prof/lung/asthma/school/46obj.htm>



EXTRA! EXTRA!

LET'S REFLECT

1. In what ways is the respiratory system (or body) affected during an asthma episode?
2. Why does brainstorming work best in groups of people rather than by yourself?
3. What type of action plan would you create for a family where someone is affected by asthma? Include possible dangers, preventative measures, and symptoms.
4. How can you as students help protect classmates from possible asthma triggers in the classroom?

BACKGROUND NOTE

Anyone, even people without asthma, may experience a temporary shortness of breath after heavy exercise. Point out to students that this shortness of breath is different from the shortness of breath in an asthma episode. Even after heavy exercise a child without asthma recovers easily and has no other symptoms. Usually, the child with asthma will need treatment to recover from symptoms. Be sure that students understand that just because people have difficulty breathing during exercise or experience coughing, this does not necessarily mean that they are having an asthma episode.

THINK ALL ABOUT IT!



QUICK FACTS

Common Asthma Triggers

- **Allergens**

Dust mites (microscopic bugs that live in dust), molds, pollen, animal dander, and cockroaches.

- **Airborne irritants & pollutants**

Chalk dust, cigarette smoke, scented products like perfumes and cosmetics, cleaning solutions, fresh paint, and gasoline.

- **Exercise**

Strenuous physical activity may be dangerous for asthmatics.

- **Weather**

Cold or dry air, as well as extreme heat or humidity.

- **Respiratory tract infections.**

Colds, flu, and other respiratory conditions.

LET'S APPLY

1. Why does it take everybody's effort to help create safe environments for people with health conditions? What about other considerations for people with disabilities and handicaps?
2. Do you have any friends or family members with asthma? How will this information help you create a safer environment for this person?
3. What types of triggers and solutions did other group members think of that you didn't? How do people's different experiences contribute to gathering ideas, opinions, or data?
4. What other health conditions might be reduced by taking steps to reduce asthma triggers?

PROBLEMATIC PETS

Allergies to furry or feathered animals, such as cats, dogs, hamsters, or birds, cause many issues for people with asthma.



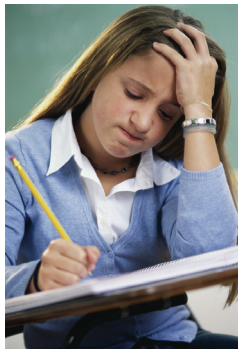
IN TODAY'S EDITION...

FROM THE
EDITOR'S DESK

This assignment is part of a series of newspaper-related pieces that each student will include in his/her own Children's Environmental Health Newspaper. At the conclusion of this unit, students will bring the newspapers home to educate parents and other family members about the possible dangers in their own environments.



Have students create an **EDITORIAL**. Editorials are usually based more on opinion than other columns. Youth should select a "side" and then write persuasively to display their point of view on the matter. Use one of the examples below or have students create their own issue.



- Getting rid of pets in order to decrease the animal dander around a child who is asthmatic. (Counter argument - Creating an action plan for keeping a clean environment so that a child can keep his/her favorite pet.)
- Ripping all of the carpet out of the house to decrease the dust and dust mites that may be causing someone's asthma to become worse.

To aid students in creating the above newspaper pieces, refer them back to the Editor's TIP SHEET on "Creating an Editorial."

Need more ideas? Below are activities that can be integrated into this lesson for a challenge or to provide variety.

- Have a magazine picture hunt for things that make asthma worse. Students can work individually or in teams to identify and share pictures. Then create a collage to include in the Newspaper.



NOTES: