



Character Education Science FCAT Warm-Up



Curriculum Resources

Citizenship

Elementary School - November, 2007

Citizenship is knowing, understanding, and displaying a high regard for rules, laws, government, heritage, and for those who have served and sacrificed for community and country. This month, students can learn to be good citizens by caring about our nation's health and taking the initiative to help our environment.



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One important aspect of citizenship is the development of an awareness of the different roles and responsibilities that are shared by all of the citizens. There are many individual roles and responsibilities that each of us have, such as keeping a clean room and doing our homework. All of us as a group have responsibilities to take care of. One of those is the environment. Each member of the community must do their share of the work to help keep our environment clean and healthy.

Air quality is just one aspect of the environment. However, air pollution is a serious public health issue. If we breathe large quantities of polluted air, it could make us ill in the same way that drinking polluted water can make us ill. Breathing dirty air might make you feel like it is harder to breathe; it may cause coughing, or it might cause your chest to feel tight.

Most of the time our air looks clear, but sometimes the air looks a little dirty, smoky or hazy. When the air looks like this, it can be a sign that there is pollution in the air. The pollution can come from things like dust, chemicals, or "soot" that is given off when things are burned. Some of the sources of these types of pollution include cars, trucks, factories, power plants, or forest fires. Pollution can also come from ordinary products such as house paint or cleaners. Sometimes you can see air pollution, but other times the pollution can not be seen by looking at the air.

One of the first steps to protecting our air and protecting yourself is to check the Air Quality Index on a regular basis. The Air Quality Index (or AQI) is a chart that uses different colors to tell you how clean or dirty the air is on any given day. For example, green means the air is clean and red means the air is unhealthy. Checking the AQI is like checking the weather report for the day.

You can always find the AQI on the internet at AirNow. The web site is www.airnow.gov or by calling 954-519-1280.



When the air is polluted, you may hear about it on TV during the weather forecast or during the news. Some newspapers also display the AQI on the weather page. Usually exercise and playing outside is good for you. But when the air is dirty, you should take some simple steps to protect your health. If you play outside when you know the air is dirty, you should take it easier.

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Some examples of ways to take it easy while outdoors include: walking instead of running, taking frequent breaks, or planning to play outside another day or time when the air is cleaner. Why does this make sense? You breathe more often and heavier when you are active and you breathe much easier and lighter when you are taking it easy.

Now that you know how to find out about the air quality and protect yourself on days when the air is dirty, take a look at things you can do to help protect the air quality and prevent dirty air quality days from happening in the future. Planting trees helps the air because trees can remove some of the air pollutants. Another way to help prevent air pollution is to save energy by turning off lights and electronics when they are not being used. Since most of our electricity comes from burning fuel, the less electricity we use, the less fuel is burned and that means less air pollution. Recycling aluminum cans and glass or plastic bottles is another great way to help the air quality. When our garbage goes to the landfill it decomposes and gives off gases that can pollute our air. Also, some of our garbage gets burned to eliminate it. The less garbage we generate, the less we have to burn or place in the landfill.

Another great way to help reduce air pollution is to walk or bike instead of using a car to get from place to place. These types of transportation do not require the burning of fuel. If you do need to travel by automobile, it is best to travel in the fewest number of vehicles possible. The fewer the vehicles, the less amount of fuel that is burned.

Source: EPA AQI Toolkit for Weatherforecasters
Sunshine State Standards: SC.H.3.2.2

Science FCAT Warm-up Questions:

1. What is the best way to find out what the Air Quality Index is for the day:
A. Call the principal's office B. Check the newspaper C. Look outside your window
D. Ask your friends E. Call (954) 519-1280 or go to www.airnow.gov
2. If the Air Quality Index indicates that the air will be dirty today, you should:
A. Stay in bed all day B. Play extra hard during recess C. Go for a long bike ride
D. Take it easy when you play outside E. Drink more water
(Note: *people with asthma or other lung conditions should take extra caution!!*)
3. If you have a hard time breathing when the air is dirty you should:
A. Not worry about it B. Drink lots of water C. Slow down and tell an adult
D. Get something to eat E. Fan yourself
4. Since most of the electricity that we use in our area comes from burning this type of energy, we can reduce air emissions and help the air quality by reducing the amount of electricity we use. What is this type of energy?
A. Chlorophyll B. Fossil fuels (oil and natural gas) C. The sun's energy
D. Nuclear fuel E. Wood and lumber
5. Which of the following types of transportation causes the highest amount of air pollution?
A. Cars and trucks B. Bicycles C. Skateboards
D. Scooters E. Walking

Answer Key: 1(E); 2(D); 3(C); 4(B); 5(A)

The "Environmental Resources for Teachers" CD is now available at no charge!
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