

AMBIENT Content Questions

Indoor Air Pollutant Sensing; LAB Lead-In: A Canary in a Coal Mine

1. The most common symptoms of carbon monoxide poisoning are:
 - a. Agitation, nervousness, and sweating
 - b. Drowsiness and unconsciousness
 - c. Nausea, vomiting, and diarrhea
 - d. Chronic fatigue and general malaise

2. What is a sentinel species?
 - a. One that if removed a whole ecosystem collapses
 - b. One that shows a change in the environment
 - c. One that indicates a change in the species
 - d. A newly introduced species

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Air Module Scenario

1. Which of the following is untrue of asthma?
 - a. Asthma is a common disease
 - b. Asthma is more common now than 20 years ago
 - c. Asthma can be cured with medications
 - d. Low income families in Miami have higher rates of asthma

2. What man-made pollutants affect air quality?
 - a. Perfume
 - b. Cleaners
 - c. Gasoline emissions
 - d. All of the above

3. Why are young people especially vulnerable to the effects of poor air quality?
 - a. They are not at more risk
 - b. Their lungs are developing
 - c. They breathe more deeply
 - d. They are outdoors more

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Carbon Dioxide Lab

1. In general terms, photosynthesis is:
 - a. water plus carbon dioxide producing sugar and oxygen
 - b. hydrogen plus oxygen producing water and air
 - c. water plus carbon monoxide making hydrogen and carbon dioxide
 - d. sugar and oxygen making water and hydrogen gas

2. Where do fish get their oxygen?
 - a. From the water
 - b. Through their gills
 - c. When they surface
 - d. They don't need oxygen

3. What would be the most important result of deforestation for species survival?
 - a. Fewer trees
 - b. Less oxygen
 - c. Decreased habitat diversity
 - a. More carbon dioxide production

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Critical Reading

1. Which of the following factors causes a person to become an asthmatic?
 - a. Mold
 - b. Genetic predisposition
 - c. The cause of asthma is unknown
 - d. Roaches

2. How can you improve the quality of your indoor environment?
 - a. Clean more often
 - b. Vacuum with a filter
 - c. Air conditioner with a filter
 - d. All of the above

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Our Community Asthma Quiz

1. Why does Miami have a higher rate of childhood asthma than the rest of Florida?
 - a. Close to the ocean
 - b. More highways
 - c. More old houses
 - d. High rates of child poverty

2. What effects does the change in weather have on asthma?
 - a. High humidity exacerbates the condition
 - b. Low humidity exacerbates the condition
 - c. High humidity lessens the condition
 - d. Weather does not affect asthma

3. Asthma can be triggered by weather, exercise, and
 - a. Stress
 - b. Time
 - c. Weight
 - d. Exposure to someone with Asthma

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Particulate Observation Lab

1. Indoor dust is most commonly the result of
 - a. Auto exhaust
 - b. Human skin
 - c. Food
 - d. Dust mites

2. How can dust be eliminated in the indoor environment?
 - a. It can't
 - b. Ionic air cleaners
 - c. Air conditioners
 - d. Mattress covers

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Peak Flow Meter Exercise

1. Peak Flow is:
 - a. Your ability to get air into your lungs in cubic inches per second
 - b. The maximum flow of air into lungs in your deepest breath in liters
 - c. Your control of air flow through a straw
 - d. Your ability to get air out of your lungs in liters per minute

2. A peak flow meter is used to determine your
 - a. Health
 - b. Weight, height, and gender
 - c. Lung capacity
 - d. Normal output

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Indoor Air Pollutant Sensing; LAB using Peppermint Diffusion

1. What is diffusion?
 - a. Molecules spread from high to low concentration until equilibrium is reached
 - b. Molecules move in circles to become more agitated
 - c. Molecules become larger, filled with empty space to fill a room
 - d. Molecules move from low to high concentrations until equilibrium is reached

2. Diffusion is best described as:
 - a. A system attempting to reach equilibrium
 - b. A change from higher concentration to lower concentration
 - c. A mixing of gases
 - d. The spreading out of molecules

3. Once equilibrium is reached...
 - a. The molecules remain in equilibrium until the conditions are changed
 - b. The molecules stop moving around the room
 - c. The molecules return to their original location
 - d. The movement of gases continues to reduce the overall concentration

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School Survey

1. Which of the following would not help asthmatic children while at school?
 - a. Keep the temperature warmer
 - b. Clean more often
 - c. Use different cleaning fluids
 - d. Reduce school bus idling time

2. Demographic questions on surveys are designed to
 - a. Gather information about a specific group of people
 - b. Gather information about the overall population being surveyed
 - c. Give a better understanding of public health
 - d. Determine the type of outbreak that has occurred

3. Why are survey's used in public health related issues?
 - a. There is no other information available on the population
 - b. Privacy law restricts any other type of information to be gathered
 - c. Doctor's medical records show only treatment information
 - d. People can often give a great deal of useful information about their health

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Straw Breathing Exercise

1. Asthma affects which of the following?
 - a. Peak flow of lungs
 - b. Cardiovascular rate
 - c. Bronchial numbers
 - d. Lung fluids

2. How can you keep your lungs healthy?
 - a. Use an inhaler from the drugstore whenever you feel short of breath
 - b. Breathe deeply every 15 minutes
 - c. Breathe pure oxygen once a week
 - d. Don't breathe polluted air including smoking

3. How can you assess how well your lungs function?
 - a. By measuring how long you can hold your breath
 - b. By how you feel and sound when you breathe
 - c. By monitoring your peak flow
 - d. By how you feel after doing 20 jumping jacks

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Temperature Inversion – Pollution Simulation

1. Which of the following is true about air inversions?
 - a. Polluted cold air is trapped by a layer of warm air above
 - b. Polluted cold air is trapped by an additional layer of cold air
 - c. Polluted warm air is trapped by a layer of cold air above
 - d. Polluted warm air is trapped by an additional layer of warm air above

2. How do temperature inversions affect air quality?
 - a. A temperature inversion traps cold polluted air at the surface
 - b. A temperature inversion traps warm polluted air at the surface
 - c. A temperature inversion causes increased air mixing increasing pollution
 - d. A temperature inversion causes pollution to be lifted away from the surface

3. Which of the following is not an effect of increased particulates in the air?
 - a. Enhanced sunsets
 - b. Intensified acid rain
 - c. More frequent breathing disorders
 - d. Increased temperature inversions

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Wildfire Study

1. Of the following statements, which is most accurate regarding carbon monoxide?
 - a. Carbon monoxide is an odorless gas
 - b. Carbon monoxide is most often found in smoke from fires
 - c. Carbon monoxide is not harmful by itself
 - d. The effects of carbon monoxide are similar to those of carbon dioxide

2. What are the factors affecting the behavior of smoke?
 - a. The fire's size, location, topography, weather
 - b. The fire's location, topography, climate
 - c. The topography, location, size
 - d. The weather, location, temperature

3. What is an aerosol index?
 - a. A measure of the aerosol content in hair sprays and other aerosol sprays.
 - b. A measure of how much ultraviolet light is absorbed by the aerosol particles within the atmosphere, and is approximately equal to the optical depth.
 - c. A way to observe aerosols crossing the land/sea boundary
 - d. A formula for aerosol content of particulates found in the ozone