

Science Quickie Lessons

Environment and Technology

Skill: Describe the relationship between technology and the environment.

Student finds articles and photos in the newspaper that illustrate aspects of water, air and land pollution that are related to technology that improves our lives. Have them determine what are the short and long-term consequences of the pollution described and offer suggests for preventive or corrective methods to deal with the problem.

Environment Editorial:

Skill: Relate the importance of the earth's ocean environment to the future of mankind and the quality of life.

Have students clip at least on article on each of these topics: Ocean foods, research & medicine, ocean pollution, offshore drilling or fuel refineries, and ocean recreation. Based on the information read in these articles, students write an editorial on the importance of the ocean environment to the future of mankind.

Catch the Wave

Skill: Describe and calculate the characteristics of a wave (wavelength, crest, amplitude, frequency).

Find the radio station listing in the paper and make a list of the frequencies they transmit. Using the formula $V = NW$ calculate the wavelength of each station. N = frequency in cycles per second. W = wavelength in meters. V = velocity of e-m waves per second (three hundred million m/sec).

Energy Sources

Skill: Classify energy sources as renewable, nonrenewable and/or inexhaustible.

Have students find five examples of energy sources from articles in the newspaper. Have them classify each as renewable, nonrenewable and or inexhaustible. Write a brief essay describing events that can lead to an energy crisis and give possible solutions.

Safe Responses

Skill: Identify safe and appropriate responses to a variety of hazardous and emergency situations.

Looking at articles about home or business fires, determine if combustion or chemicals (or other reasons) were the cause of the fire. Did conditions that could have been prevented, such as improper storage or handling, lead to these fires. What preventive measures could/should have been taken by the property owners?

Simple Machines

Skill: Identify simple machines

Have students find ads or photos that incorporate aspects of simple machines: levers, pulleys, inclined planes, wedges and screw. Also look for compound machines.

Other Science Quickie Lessons

Pull science stories daily for future science projects. You will usually find 1-5 significant science stories in the paper every day. Discuss one story briefly every day.

Find articles about natural disasters such as hurricanes, tornadoes, earthquakes, and flooding? Study the causes of these disasters. What factors make the disaster worse? Take action to help the victims by collecting food, raising money, write letters of support or other activities.

Have students collect and analyze newspaper articles and ads related to topics of alcohol, tobacco or drugs. Have students write stories/editorials, and design ads against using these substances.

Have students read articles and columns that inform the public about new or proposed health and safety laws then summarize the laws and write an editorial expressing their view.

Students can find articles on new scientific or medical breakthroughs. Discuss how these breakthroughs are likely to affect our lives. How has science changed the lives of people since our nation began, last 50 years, last 10 years?

Find stories of accidents such as fires, poisoning, drowning, etc. Discuss and/or write about safety rules and other ways that they can prevent accidents.

Have students collect articles on diet and exercise programs. What claims do these programs make? Do students agree with these claims?

Students can create a collage on progress in science or current science topics in the news.

Have students locate articles related to different climates around the country and world. Have them identify the effect climate has on the way people live.

Using the daily weather map discuss all the elements that cause weather (highs, lows, temperature, fronts). Also discuss tides, phases of the moon, precipitation, sun rise and set, found on the map.

Look at the weather map daily and compare the prediction to the actual weather. Prepare a graph comparing the predictions to the actual weather.

In articles find agencies or organizations that have a goal of protecting the environment. Have the students analyze the effort of these agencies or organizations and the degree to which they appear to be succeeding. They might also contact them or visit their web site to learn more.

Research a current crisis headlining in the paper such as the energy crisis, famine, overpopulation, global warming. After collecting stories and information, have students propose possible solutions to the crisis.

Identify countries that are at war. Have students determine to what extent scientific factors (natural resources, climate, overpopulation, etc.) are involved in the conflict, if at all.

Have students find articles on population growth and/or decline. What effects do advances in medical technology or population control policies have on population growth and/or decline. Have them write an article on how unchecked population growth might affect their lives, the lives of their children and/or the lives of people living in underdeveloped nations.

Have students examine stories related to the potential extinction of different species around the world. Have them present their findings as a news or feature story or an editorial (use graphs too).

Students collect articles about various sources of energy (light, petroleum products, water, geothermal energy, radioactive sources, wood, wind, etc.) and report with a chart that distinguishes between renewable and nonrenewable energy sources.

Have students locate, read and summarize newspaper articles on production, use and conservation of energy.

Students find stories on major technological breakthroughs and then do research to trace the scientific developments that led to these advances.

Have students find articles and/or ads with products where science was important to its development. How has that product reduced societies work load, improved worker efficiency and performance or improved the quality of peoples lives.

Locate articles on chemistry, physics, biology, astronomy, etc., and have students do a summary.

Create a classroom bulletin board with newspaper articles, graphs, and photos about people, events and places in the news—all related to science.

Have students identify news about practical applications related to science they are studying.

Students read article on predicted events such as meteor showers, eclipses, tidal flooding, etc. They can research and then observe (personally or on TV) and then write an article on their findings.

Help students see the real-world application of science by having them find items in the paper related to topics in their science course.

Have students examine newspaper ads and articles to identify at least 10 products that were not produced 20 years ago. Discuss what scientific developments or discoveries made the new products possible. How have these new products and scientific developments changed our present lifestyle?

In selecting 5-10 science articles from the newspaper, have students evaluate the proportion of “good” news and “bad” news reported.

Have students list major science-related problems facing today’s society. Assuming it is 100 years from now; have them write about how the problems were solved.

Find a local or national issue related to science that citizens hold a variety of opinions on. Research the issue in teams and prepare a presentation that outlines a course of action. Take a class poll to see which group made its case most effectively.

Have students find common measurements in the newspaper and convert them to metric measurements.

Inches x 25.4 = millimeters

Yards x .9144 = meters

Square yard x .836 = square meters

Ounces x 28.349 = grams

Fahrenheit $-32 \div 1.8 =$ Celsius

Feet x .3048 = meters

Miles x 1.609 = kilometer

Quarts x .946 = liters

Pounds x .453 = kilograms