

Understanding Science and Agriculture with Newspapers



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FOUNDATION



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Teachers:

Iowa has an enviable tradition of educating world-class scientists and agriculturists. From NASA Commander Peggy Whitson of Mount Ayr to Nobel Peace Prize Winner Norman Borlaug of Cresco to Iowa State graduate George Washington Carver, Iowa schools have produced students excelling in science. We encourage middle school educators to inspire the next generation of Iowa scientists by experimenting with the activities in this booklet.

For a competitive workforce it is imperative Iowa students continue to succeed in science. Recent studies rank the United States 29th in the world, ahead of only nine other countries in science knowledge. Iowa's newspapers are committed to providing resources to educators that will enhance science literacy. Using these activities and the newspaper, students can better understand the importance of science in their communities and lives.

We know that science education and literacy are critical to our state's prosperity. No textbook can offer such an excellent source of local information and current events as the newspaper. It's exciting to have the support of Pioneer to promote science education in conjunction with Iowa newspapers. If you have any questions about this publication or other Newspaper in Education resources contact the Iowa Newspaper Foundation at (515) 244-2145.

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Activity 1

The Basics of Science

Science is the study of the natural world. Find a newspaper story about science and describe what it is investigating and the results.

PLACE STORY HERE

Activity 2

Science Scavenger Hunt

Objective: Find pictures, words, comics and ads of items and issues that have to do with science. The goal is to acquaint students with the newspaper as an information source for science information.

Materials: Scissors, glue, newspapers, paper.

Directions: Find the following items in your newspaper, cut them out and paste them on paper. Students may work individually or as a team.

Discuss the results of the activity.

- A simple machine
- Three simple shapes
- A sweet taste and a sour taste found naturally
- An animal or plant picture
- A pleasant and unpleasant smell found in nature
- Action of water on land
- A weather word
- A scientific term that starts with the letter "M"
- An invention that will affect the future
- Something that runs on a battery
- An example of conversation
- An example of how people are helping the universe/nature
- An example of how people are harming the universe/nature
- The town with the highest temperature/lowest temperature
- The name of a television program relating to science

Activity 3

New Technology



Have students collect ads for products that were not available 10, 20 or 30 years ago. Have them identify scientific advances that made this product possible.

Product:

This product is possible because of...

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Activity 4

Science Literacy

Make a list or keep a notebook on any words about science you find in the newspaper with which you are unfamiliar. Write a definition for each.

Word:

Definition...

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Activity 5

Science and the Environment



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Look through your newspaper for articles about the environment.
Share with your classmates the threats you read about and how to solve them.

PLACE STORY HERE

Activity 6

Facts in Fours - Farming & Science

Fill in a different random letter in each space in the far left column.
Use the newspaper to find a word that starts with the letter that fits into each category.
Write the word and page number where the word was found in each box.
It is OK to leave a box blank but fill in as many as you are able.

Random Letter	Farm Machine	Fruit or Vegetable	Weather Word	Animal

Activity 7

Tame and Wild Animals

Make a list of tame animals and wild animals based on pictures and words you see in the newspaper. Discuss what animals are common in your area and those that are not. What role do the animals play in their ecosystem, on a farm or in a home? Are any species in decline or becoming more common? Why?

Tame Animals	Wild Animals

Activity 8

Photosynthesis and Plants

Label this picture showing the process of photosynthesis following these directions:

- Draw a sun with arrows pointing out from it above the corn plant and write "light energy." Next to the corn stalk, write "carbon dioxide." Draw arrows toward the plant.
- Draw a simple root system for the plant. Next to the root system, write the following words: "water" and "minerals." Draw arrows, going up from the roots, toward the top of the corn plant.
- Write the word "glucose" across the corn stalk.
- From the leaves on the corn plant, draw an arrow pointing out of the plant and write "oxygen"



This illustrates how photosynthesis takes place in a plant. The plant absorbs water and minerals from the soil and chlorophyll in the plant combines those with carbon dioxide and sunlight to produce sugar and oxygen. The sugar or glucose is the food manufactured by green plants. Humans and other living things breathe the oxygen.

Look in the newspaper and list common crops, plants or trees growing or for sale.

Activity 9

Science Inventions



Divide into pairs. Look through the newspaper for an agricultural product.

PLACE STORY/AD HERE

What steps were involved with getting it from the field to the store?

Describe an improvement in how the crop could be harvested or processed.

Activity 10

Careers in Science and Farming

Look through the job announcements in the classified ads in your newspaper.

What jobs related to science and farming do you find?

What training or skills are necessary for the positions?

What job would you most like to do?

How much education would you need?

Activities All Year!

Elementary Science, Health and Safety Activities

- Many things around the home need electricity to work. Search through the newspaper and find as many things as you can that need electricity. How many did you find? How many of them do you have in your home?
- Create a collage of pictures from the newspaper of things that use energy. The students may want to categorize them by the type of energy used.
- Cut out newspaper pictures of different forms of weather you may be studying. Mount them on posters and label them as clouds, storms, rain, snow, etc.
- Construct a classroom bulletin board about pollution by cutting pictures and stories from the newspaper. Divide them into air pollution, water pollution and noise pollution.
- Follow the weather forecast for several weeks if your newspaper has a weather section. Why is weather information important? Try to find news articles about the effects of weather on your local area.
- Keep a notebook on any words about science you find in the newspaper with which you are unfamiliar. Write a definition for each.
- Be on the watch for newspaper articles in your newspaper which discuss the impact of hunting and fishing in your area. Write an editorial supporting the rights of hunters and fishermen or detailing why these activities should be limited.
- Create a machine that you think would save energy. Write a news story telling about your invention.
- Give each student a paper plate. Ask them to find pictures to paste on the plate that would create a healthy meal. Stress good nutrition.
- Let each student create a notebook called "Advances in Science." They should place articles into the notebook as they find them.
- Look at the weather map in your newspaper. Predict what you think tomorrow's weather will be. Create a chart of your prediction and the actual weather that occurred.
- Examine the comic strips and find examples of things that defy the laws of nature. Examples, animals talking, a super hero flying, etc.

Secondary Science, Health and Safety Activities

- Study the periodic chart of the elements. Use a red marker to write the appropriate chemical symbols on articles, ads or anything else that mentions an element.
- Keep a collection of newspaper articles that discuss a local health problem. Determine the most significant health problems for your community.
- Find articles about potentially dangerous household substances, such as bathroom cleaners; drain openers, over-the-counter medications, etc. Make a chart of them; classify each substance as an acid or base and list the antidote needed if an accidental ingestion or overdose occurred.
- Make a bulletin board of community health services offered in your town such as rehabilitation centers, poison control centers or farm safety programs.
- Draw a map of your county. During the semester look for articles about any type of conservation matters occurring in your county and cut them from the newspaper. Post them on the board around your map. Connect each with string or yarn to the location within the county.
- Research the area of drugs, tobacco or alcohol and write an article that informs the local readers of the dangers of one of the substances.
- Cut out articles telling of the work and problems of local health agencies and services. Write a help wanted ad for a position at one of the agencies.
- Using the grocery store flyers for this week, if the newspaper has any, ask students to plan healthy meals for the next 7 days.
- Have your students keep a clipping file of scientific and medical advances that are reported in the newspaper.
- Let your students develop a method of making predictions. For example, given one article in the newspaper, can they predict how often the word "the" will appear in the newspaper?
- Using photographs in the newspaper determine the percentage of people in the population who have dark colored hair and who have light colored hair. Do this for other characteristics.



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