



SCIENCE • TOOLS of SCIENCE



DIRECTIONS: Identify items from the newspaper that illustrate the types of tools used by scientists. If the newspaper does not feature items in a specific category, look through textbooks and in your classroom for appropriate items to add to the lists. You can list what you find below or cut and paste them on a large sheet of paper for display:

Laboratory	Printed
Field	Other Important Tools
	Other important loois

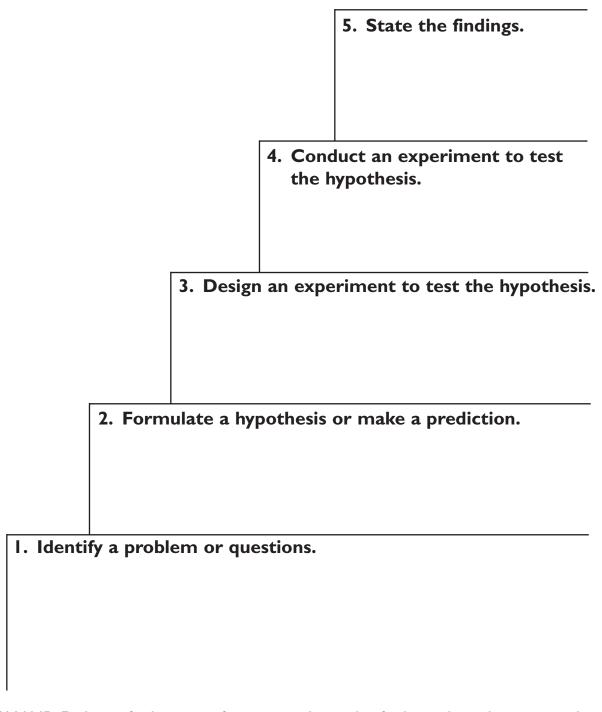
FOLLOW-UP: Write a newspaper ad for an important tool used in your classroom. Be sure to include its outstanding features, its many uses and its cost.

^{*}Daniel J. Barnekow, Graphic Organizers for Science Classes, Portland, Maine: Walch Publishing, 1998

SCIENCE • STEPS in SCIENTIFIC RESEARCH



DIRECTIONS: Choose one or more newspaper stories about science. Find references to as many steps in a research study as you can. Write what you find in the space below:



FOLLOW-UP: Did you find more information about the findings than about any other step? If so, why do you think newspapers focus on findings?

^{*}Daniel J. Barnekow, Graphic Organizers for Science Classes, Portland, Maine: Walch Publishing, 1998

SCIENCE • CAREERS in SCIENCE and TECHNOLOGY



DIRECTIONS: Keep an ongoing record of the people in the news who work in science or technology. Record answers for two scientists or technologists on this sheet and make copies as needed to record information about others.

	First Person	Second Person
Who are they?		
What do they do?		
Where do they work?		
Why is their work important?		
Would I enjoy their work? Why?		

FOLLOW-UP: Interview someone who works as a scientist or engineer. Take careful notes. Record the best quotes. Write a story about the person in journalistic style.

SCIENCE • PROFILE of a SCIENTIST



DIRECTIONS: Today's scientists continue to shape history. From the newspaper, select a story that features a modern-day scientist and complete as much of the following information as you can:

Name
Important dates / events
Places where the scientist lives and works
Fields of study
Important advances or breakthroughs
Other scientists whose life and work benefit the scientist
Interesting personal information
Additional information

^{*}Daniel J. Barnekow, Graphic Organizers for Science Classes, Portland, Maine: Walch Publishing, 1998

DIRECTIONS: Complete the chart below using news stories about science research that discuss grants and those who give and receive them.

Headline	Newspaper	Date of Publication	Who awarded funds?	For what purpose?	Who received funds?	Why?

FOLLOW-UP: Determine which parties have a financial stake in the outcome of the research.



DIRECTIONS: Over a period of time, read and collect news stories about scientific research. Copy the headline of each article in the first column of the chart below. Then state the hypothesis on which the research is based. In the last column, decide if the evidence clearly points to one conclusion and then rate the research and conclusions on a scale from one to ten.

Article Headline	Hypothesis of Research	Subject to question	Widely held to be true
		1 2 3 4 5	6 7 8 9 10



SCIENCE • SCIENTIFIC DEVELOPMENT



DIRECTIONS: Scientific discovery builds on the past. Trace the development of a scientific discovery. Find a story about a scientific breakthrough and explain what had to happen before the latest breakthrough could occur. Look for clues in the story.

Or, find a tool, instrument or an example of the latest technology in the newspaper. Think about and record what had to happen before it could be developed.

Scientific discovery or latest technology?
What discovery or invention came before that?
What discovery or invention came before that?
What discovery or invention came before that?
What discovery or invention came before that?
What do you predict what will come next?

SCIENCE • AGE of INVENTIONS



DIRECTIONS: Find objects in the newspaper that were invented or introduced within the last fifty years. Use the timeline to record guesses. After conducting research, produce another timeline that accurately reflects the dates when the items were invented or introduced into use.

_	1950	1960	1970	1980	1990	2000

FOLLOW-UP: Choose the item in the newspaper that is the earliest invention. Also group items from the newspaper that are likely to have been invented at the same time or items that are dependent on the same technology.

SCIENCE • TOOLS of SCIENCE



DIRECTIONS: The definition of the word "technology" has many definitions according to Stephen Kiln, Professor of Mechanical Engineering at Stanford University.* Classify things you find the newspaper into the following categories to illustrate what technology means in the real world:

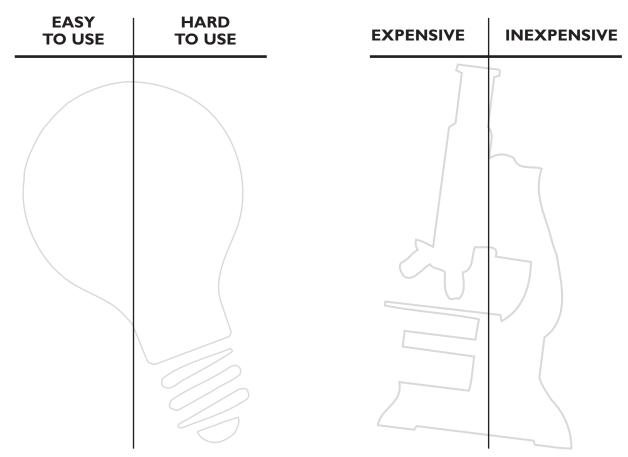
ARTIFACT or HARDWARE	METHODOLOGY or TECHNIQUE
SYSTEM of PRODUCTION	SOCIAL and TECHNICAL SYSTEM

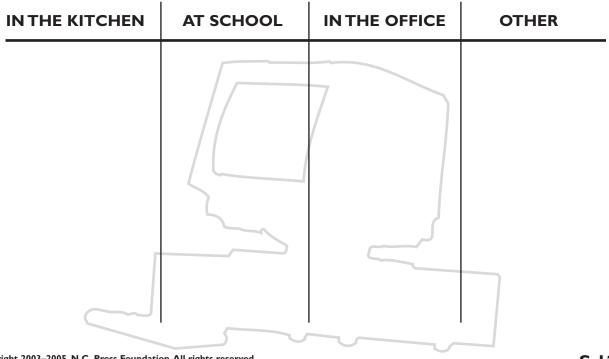
^{*}Definition taken from the Science section of the N.C. Standard Course of Study, www.ncpublicschools.org/curriculum/science.

SCIENCE • MACHINES and their **PROPERTIES**

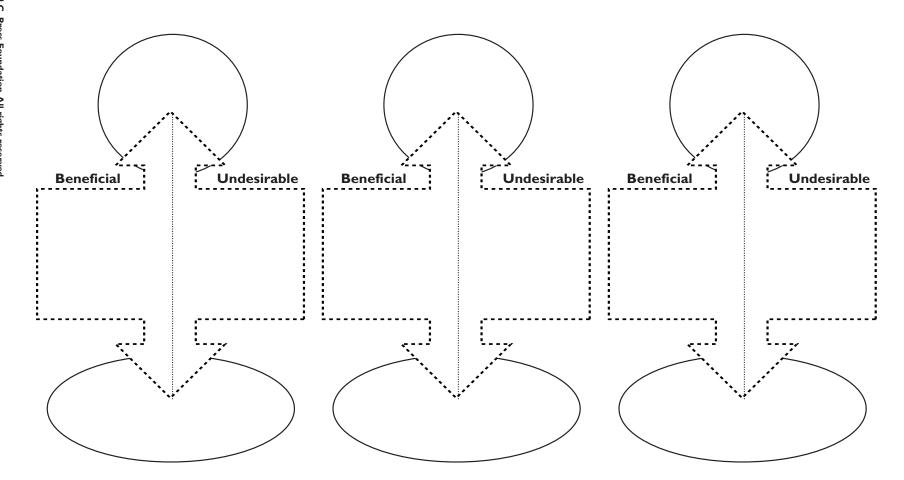


DIRECTIONS: Using the newspaper, locate and list machines that make work easier. Some examples include calculators, washing machines and can openers. Categorize your examples according to the charts below:





DIRECTIONS: Read newspaper articles dealing with the cause-effect situations arising from the energy or fuel shortages. State the causes in the circles and, in the boxes below, list the beneficial and/ or undesirable results that each cause produces. In the ovals at the bottom of the page, write possible solutions to the problems presented.

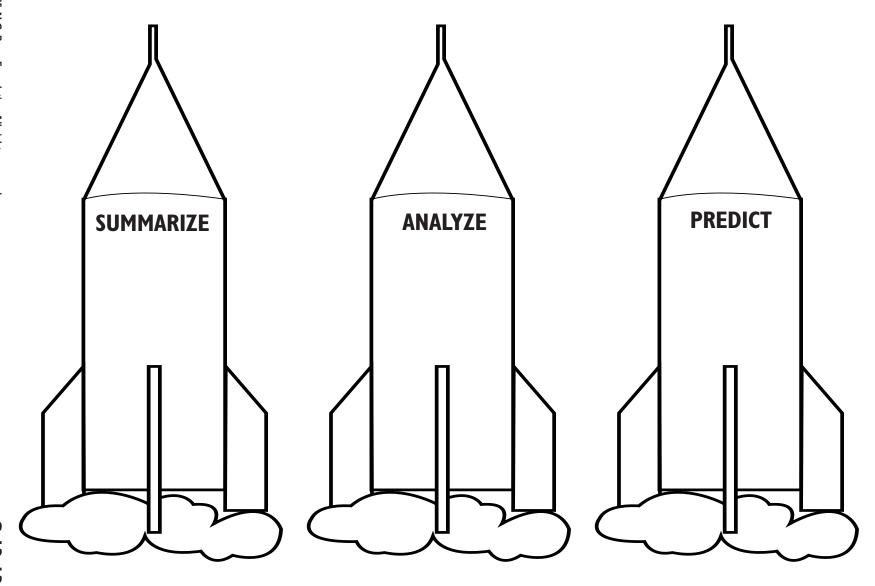




SCIENCE

EXPANDING ENERGY NEEDS

DIRECTIONS: For several weeks, read and take notes on articles in the newspaper dealing with U.S. space exploration. Based on the information you obtain, SUMMARIZE the status of U.S. space exploration. Then ANALYZE how space exploration has contributed to society. Finally, PREDICT what will happen in the next 25 years and how that will affect our lives.





SCIENCE · SPACE

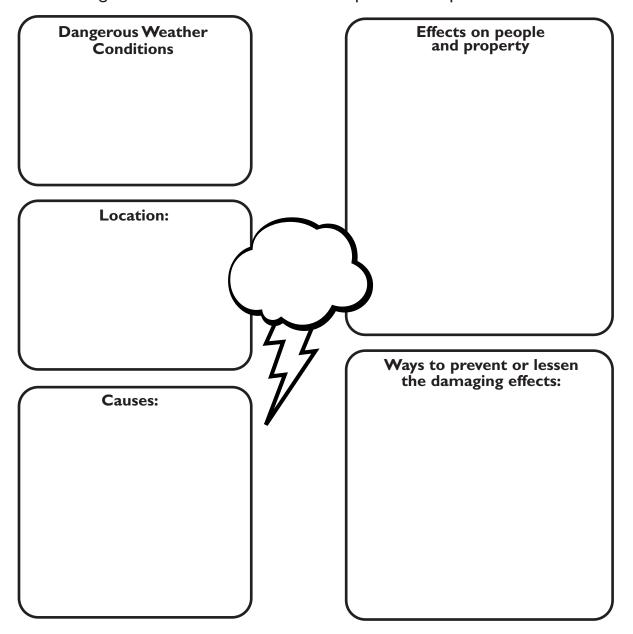
EXPLORATION

SCIENCE • EXTREME WEATHER



DIRECTIONS: Nature presents dangers, such as tornados, hurricanes, drought and floods, that damage property and threaten people's safety.

Use the news to obtain information about hazardous weather conditions, their causes, effects and ways to prevent or lessen their damaging effects. Complete the following for a threatening weather condition that shows up in news reports.



FOLLOW-UP: On maps, locate the places where the weather is hazardous. Does geography contribute to the devastation? Do socio-economic factors such as lack of adequate housing or sanitation contribute to the problem and make life harder for those affected? Who steps forward to help? individuals? religious organizations? state agencies? federal government? international community? other?

DIRECTIONS: Read articles pertaining to local pollution problems and answer the questions below:



FOLLOW-UP: Take further action if the problem is of great concern to you. Conduct more research to find out as much as you can about the problem. Write a letter to the editor and/ or submit a proposal for solving the problem to local officials.



SCIENCE · INVESTIGATING POLLUTION

SCIENCE • The CHANGING EARTH

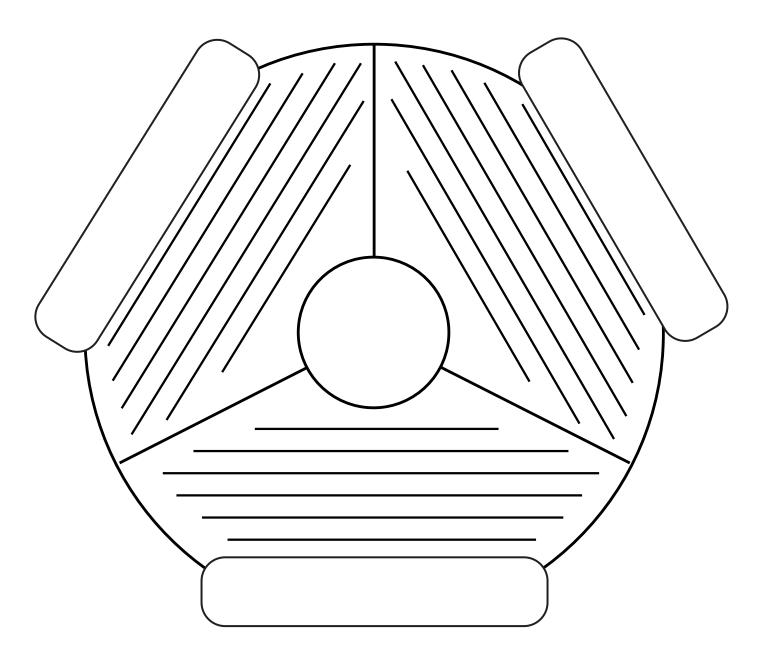


DIRECTIONS: Find newspaper articles dealing with human attempts to modify the environment. Next to each "earth," copy the headline of the story. Summarize the main points of each article in the spaces provided. For each article, be prepared to discuss: What are the people trying to achieve? Do you think efforts to modify the environment are likely to succeed? Why or why not?

SCIENCE • PEOPLE SOLVING ENVIRONMENTAL PROBLEMS



DIRECTIONS: Place the names of three students in your group in the center of the circle. Working with several different newspapers, describe problems dealing with soil, air or water in the outlined labels around the circle. Identify people working to solve them or, if no work has yet been done, list ideas for solving each problem that you discover through reading newspapers. Record the answers on the lines.



FOLLOW-UP: Share your completed outline with other groups of students. Take notes about what you learn from the discussions. Use the notes to write a position paper about what people can do to protect their environment.

DIRECTIONS: Read and take notes on newspaper articles dealing with the effects of overpopulation such as famine, disease and inadequate living conditions. On the arrows, identify areas where those problems are prevalent and conduct further research to learn why overpopulation is a difficult problem to solve, particularly in some areas of the world. Record the effects of overpopulation in the ovals and in the diamond shapes give examples of ways people are working (or could work) to help solve the problem.

