

Postage Stamps As Visual Aids

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Abstract

Postage stamps are an inexpensive and readily available source of colorful visual aids that have been used to illustrate a lecture on the history of conservation in the U.S. The breadth of topics featured on stamps throughout the world makes their application as visual aids for teaching limitless.

Introduction

The collection and study of stamps is one of the most popular hobbies in the world, with over 20 million enthusiasts in the United States alone. These bits of postal paper are not only educational, inspiring, and enjoyable, but also can be colorful and informative visual aids for classroom instruction. The topics are exhaustively researched and the images depicted are designed and produced by professional artists. The intent is to relay a message at a glance. Few, if any, instructors can afford either the time or the expense to develop comparable graphic materials. The enormous number of stamps that have been issued and the variety of topics commemorated on them make their application as visual aids practically infinite.

Postage stamps have been used to enhance lectures in an introductory natural resources conservation course at Purdue University. Colored 35 mm slides of stamps and other postal materials are extensively used as visual aids for a discussion of the history of conservation in the United States, and are utilized frequently to illustrate points in other lectures. Student response to "viewing my stamp collection" has been favorable. They are intrigued by how relevant a common postage stamp can be. They also appreciate the personal touch of a teacher who melds his hobby and vocation.

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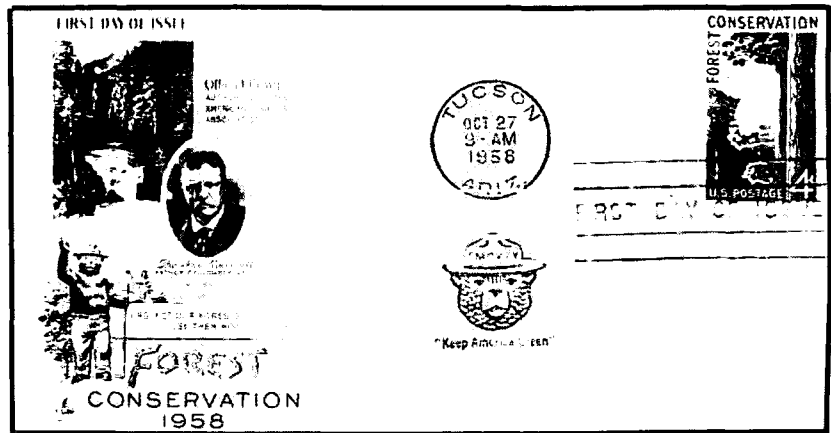


Figure 1. First day cover of Forest Conservation stamp (Scott No. 1122) commemorating the 100th anniversary of the birth of ardent conservationist Teddy Roosevelt who promoted wise forest management.

The Value of Visual Aids

The importance of an idea is no guarantee that students will remember it. Teachers must help students fix the idea in their minds. Because more students see alike than hear or read alike, visually-aided instruction is more effective than words alone. The nerves from the eyes to the brain are about twenty times more effective in learning than those from the ears to the brain. Therefore the most effective way of learning is through visual pathways (Bigge, 1982; Hilgard and Bower, 1975). More than 75 percent of what we learn is through the sense of light. Thus we learn more through our eyes than all other methods combined. This fact, coupled with the realization that after two days we forget approximately 75 percent of what we hear, means that most of that which is said in class is not retained unless it is visually reinforced. Many students have reported that courses in which effective use is made of visual aids are more interesting and easier to learn from than those in which instructors rely principally on the spoken word. Visual aids not only increase learning, they generate student interest and provide a change of pace (Campbell, 1972).

Not all visual aids actually enhance teaching, however. Only the good pictures are "worth a thousand words." Few words may be better than many bad pictures. A good visual aid must be large enough to be seen by all in the audience and simple enough to be understood (Day, 1983). Visual aids that cannot be clearly seen or readily understood may frustrate students to the extent that they slow down or even stop trying to learn. Not more than 20 seconds should be required for the viewer to decipher the concept conveyed or reinforced by the visual aid. Most postage stamps when photographed and projected onto a screen in a classroom meet the criteria for a good visual aid.

Stamps as Instructive Visual Aids

Postage stamps are one of the most familiar objects in everyday life all over the world. Since the first adhesive stamp appeared in 1840, more than 300,000

different stamps have been issued (Personal communication, Scott Publishing Company, Sidney, Ohio) by over 800 countries and postal administrations. At present there are about 240 stamp-issuing entities in the world. Because of postage meters and other efforts to aid business efficiency, stamp use in the traditional sense is now largely confined to the private sector. Were stamps used merely to indicate prepayment, they would have a bleak future. But, as their function in the strict sense has diminished, the other purposes have become increasingly important, and stamps are now regarded as a distinct branch of minuscule art. Today stamps can be used to raise money for government projects and charities, to promote the image of a country both to its own inhabitants and the world, and to publicize all manner of persons, places, events and even commercial products.

Almost all the early U.S. postage stamps depict stony-faced Presidents and founding fathers. A notable change came in 1893 when Columbus' explorations were pictured on sixteen commemorative stamps. Commemoratives differ from regular-issue postage stamps in that they are released to mark a noteworthy event or an historical occasion, to pay tribute to a distinguished human being, or to promote a cause, an idea or an ideal. These stamps honor the arts and sciences, feature studies of plants and animals and striking scenery, and call to mind great events and the personalities involved. They are more colorful and detailed than the regular-issues and provide a window to our nation's past and to that of the entire world. The

Figure 2. Photographs of selected examples of stamps used to illustrate points related to history of natural resource conservation in the U.S. Scott's catalogue numbers are indicated below each stamp.



stamps are issued in limited quantities (between 40 to 180 million stamps), but not so limited as to create an artificial demand among collectors. On the first day of issue the stamps are affixed to colorful cacheted envelopes that depict even more details of the event being commemorated (Figure 1).

Fashions in stamp collecting changed radically after the end of World War II due to a great deluge in postage stamps from all over the world. The flood of new regular and commemorative issues has continued up to the present and shows no signs of diminishing. Formerly collectors would organize their stamps according to the country of issue. Today, thematic or topical collecting is the rage. This, coupled with the large number of stamps issued, has enhanced their utility for instruction.

The first use of stamps in teaching apparently occurred in the early 1850's when a Brussels schoolmaster encouraged his pupils to adorn the pages of their workbooks with the stamps that were then available (Mackay, 1973). In this humble way the theory that postage stamps could teach history and geography was born, although it is doubtful whether stamps could have taught much when one considers the relative monotony of 19th Century stamps and the restricted range of subjects featured on them. Today greater thought is given than ever before to the development of the stamp as a work of art in its own right.

Stamps to Teach History of Conservation

The history of natural resource conservation in the U.S. is relatively recent. From colonial times until the late 1800's little thought was given to conserving resources that seemed inexhaustible. By 1890 the legacy of exploitation and abuse became increasingly apparent, and the voices of concern begin to swell. Some unique lands were preserved and other conservation actions were initiated. However, the major efforts to protect and conserve natural resources did not occur until the 20th Century. Owen (1985) describes three waves of conservation. The first (1900-1910), under the forceful and dynamic leadership of Theodore Roosevelt and Gifford Pinchot, dealt with preserving forest lands and protecting public lands, wildlife habitat, and riverine systems. The second (1930's) occurred under the aegis of Franklin D. Roosevelt. The creation of massive public employment during his administration initiated numerous programs to reclaim eroded, drought-stricken and abused lands. The third wave (1960's-1970's) was spearheaded by John F. Kennedy and initially focused on marine resources and protecting lands for recreational use by a public with more leisure time and money. This wave continued into the 1970's with efforts to deter environmental pollution and degradation.

The postage stamps used to illustrate the events that led to an awareness of resource conservation

Table 1. Postage Stamps Used to Illustrate Lecture on History of Conservation in the United States.

Stamp & Year Issued	Scott No.	Value (\$)	Description and Point Illustrated
Events leading to concern about conservation			
Yellowstone, Old Faithful, 1972	1453	0.18	First National Park, established in 1872.
Wildlife Conservation, Bison, 1970	1392	0.18	Number of bison reduced from 60 million to 150 by 1890. Exploitation caused decline in other wildlife species too.
John Muir, 1982	1245	0.12	Conservation activist in California. Founder of the preservationist school of conservation. Formed Sierra Club.
Yosemite, El Capitan, 1934	740	0.10	Second National Park, established in 1890. Result of effort by John Muir.
Homestead Act, 1962	1198**	0.10	Homestead Act of 1862 opened areas of the public domain to settlement.
Calif. Gold 100th Anniversary, 1948	954	0.10	Discovery of gold at Sutter's Mill brought thousands to dig gold on public lands. Resulted in first mining laws.
John Wesley Powell, 1969	1374	0.20	Studied and chartered arid lands of the southwest. Resulted in irrigation section in the U.S. Geologic Survey.
First Wave			
Teddy Roosevelt, 1955	1039	0.40	Avid outdoorsman and sportsman. President of U.S. from 1901-1909.
Grand Coulee Dam, 1952	1009	0.10	Bureau of Reclamation founded in 1902 to develop water resources such as Coulee Dam on Columbia River.
Brown Pelican, 1972	1466	0.25	Teddy Roosevelt established first National Wildlife Refuge, 1903, Pelican Island, for brown pelican.
Devils Tower, 1956	1084**	0.10	In 1906 Devils Tower in Wyoming became first National Monument.
White House, 1937	809	0.20	Teddy Roosevelt called a White House Conference on Natural Resources, 1908. Invited sportsmen and political leaders.
Forest Conservation, 1958	1122*	0.10	With counsel from Gifford Pinchot, 148 million acres added to National Forest during Teddy Roosevelt administration.
Second Wave			
Franklin Roosevelt, 1982	1950**	0.40	President of U.S. from 1933-1945. Responsible for public employment and programs that dealt with resource problems.
Soil Conservation, 1959	1133	0.10	F. Roosevelt established Soil Conservation Service to demonstrate erosion control and conservation practices.
Civilian Conservation Corps, 1983	2037	0.40	CCC functioned from 1933-1949. Its work involved 2.5 million young men in conservation projects.
George Norris, 1961	1184**	0.10	Senator from Nebraska who promoted multi-purpose dam at Mussel Shoals, Alabama. Ideal expanded to TVA.
Tennessee Valley Authority, 1983	2042	0.40	TVA established to integrate water, soil, forest, and wildlife resource development of an entire watershed.
Range Management, 1961	1176	0.10	Taylor Grazing Act, 1934, regulated livestock on Federal lands. Created Bureau of Land Management.
Preserving Wetlands, 1984	2092	0.40	Federal Duck Stamp Act, 1934, required hunters to purchase a stamp with proceeds devoted to wetland preservation.
Wildlife Conservation, Antelope, 1956	1078	0.12	F. Roosevelt convened the first North American Wildlife Conference, 1936, to deal with decline in wildlife.
Wildlife Conservation, Turkey 1956	1077	0.12	Through the Pittman-Robertson Act, 1937, states given assistance in acquisition of wildlife habitat.
Migratory Bird Treaty, 1966	1306	0.12	Treaty of 1916 with Canada was amended to include Mexico, 1937.
Third Wave			
John F. Kennedy, 1964	1246	0.12	President of U.S., 1961-1963. Focused attention once again on America's natural resources.
White House, 1950	990	0.10	J. Kennedy called White House Conference in 1962 to review status of U.S. resources.
Coral Reef, 1980	1827	0.30	Kennedy programs emphasized development of marine resources, reservation of remaining shoreline for public use, and preservation of wilderness areas.
Cape Hatteras Lighthouse, 1449	1449	0.06	
Rachael Carson, 1981	1857	0.34	Author of <i>Silent Spring</i> . Credited with motivating public concern about environmental pollution.
Preserve the Environment, 1974	1527	0.20	Theme of 1974 World's Fair
Save Our Water, 1970	1412	0.45	A large number of pollution control laws were passed in 1960's and 1970's including Water Pollution Control Act and Clean Air Act.
Save Our Air, 1970	1413	0.45	
Beautification of America, 1966	1318	0.12	Ladybird Johnson promoted planting in parks and cities and along highways.
Whooping Cranes, 1957	1098**	0.10	First Endangered Species Preservation Act passed, 1966.
Endangered Flora, 1979	1785	0.30	Endangered Species Act protected plants as well as animals.
Save Wildlife Habitat, 1981	1921	0.36	Emphasis on habitat development and preservation as important tool to protect wildlife.
Energy Conservation, 1977	1723	0.26	Urged by President Carter to conserve resources and reduce imports.
Cardinal, 1972		0.25	Development of programs for nongame wildlife species.
Fresh Water for Life, 1984	2086	0.40	Passage of laws dealing with drinking water and toxic substance control.

* Pictured in Figure 1

** Pictured in Figure 2

problems in the U.S. and the important programs and actions during the three waves of conservation are shown in Table 1. Each stamp is identified with the year of issue, its unique Scott's catalogue number, and the 1987 value of a mint or unused stamp. The total value of these 38 stamps is \$8.20. This nominal cost is less than the fee for preparation of a single visual aid by a professional illustrator. A requisition for all these stamps would not in all likelihood require an explanation to even the most suspicious purchasing agent. Used stamps have about half the value, but the cancellation markings may mask some details of the design. However, some of the stamps pictured in Figure 2 have been cancelled.

How to Identify and Acquire Stamps for Visual Aids

The broad interest in stamp collecting has spawned organizations, publications, and businesses to serve collectors. The American Topical Association (3306 North 50th Street, Milwaukee, WI 53216) recognizes 700 different topical headings and distributes information through their bimonthly journal, *Topical Times*. Questions related to topicals are answered free of charge by an information board. Annotated checklists of stamps for many of the topical headings are available. A comprehensive guide by Lehnus (1982) offers complete and indexed tabular data on the persons, objects, topics and themes which adorn the 1,844 U.S. stamps issued between 1847 and 1980. A book by Moolman (1964) pictures U.S. commemorative stamps issued to 1964 with a brief explanation of the person or event depicted. The Postal Service Guide to U.S. Stamps is reissued annually (United Postal Service, Washington, D.C.) and contains colored pictures of almost all U.S. stamps. Stamp catalogues, such as Scott's Standard Postage Stamp Catalogue, (Scott Publishing Co., 911 Vandermark Road, Sidney, Ohio 45365) picture stamps world-wide and give catalogue numbers and prices based on current market averages. These books and many other related ones are common in university and community libraries. Hence it is easy for even the non-collector to identify stamps that would be instructive visual aids. Local hobby shops or members of community stamp clubs can likely supply the stamps or provide the names and address of dealers or the dates and locations of shows where dealers display and sell stamps.

Many subjects, including those taught in colleges of agriculture and forestry, are illustrated on postage stamps. Portraits of prominent individuals in the arts and sciences and pictures of insects, fish, birds, mammals and domestic livestock can be found. Food, fiber and ornamental crops and the management techniques used throughout the world in horticulture, agronomy, animal husbandry and forestry are only a few examples of topics illustrated. An indication of the breadth of subject matter on stamps is the surprising lists that have been compiled of stamps that deal with

nuclear energy (Angelo, 1975) and mathematics (Scharf, 1978). The use of stamps in teaching is limited only by the imagination.

References

- Angelo, J.A., Jr. 1975. "Stamps Tell the Story of Nuclear Energy." U.S. Energy Research and Development Administration, Office of Public Affairs, Washington, D.C. 100 pp.
- Bigge, M.L. 1982. *Learning Theories for Teachers*. 4th Ed. Harper & Row Publishers, New York. 356 pp.
- Campbell, J.R. 1972. *In Touch with Students*. Educational Affairs Publishers, Columbia, Missouri. 367 pp.
- Day, R.A. 1983. *How to Write and Publish a Scientific Paper*. 2nd Ed., ISI Press, Philadelphia, Pennsylvania. 181 pp.
- Hilgard, E.R. and G.H. Bower. 1975. *Theories of Learning*. 4th Ed., Prentice-Hall, Inc., Englewood Cliffs, New Jersey. 698 pp.
- Lehnus, D.T. 1982. *Angels to Zeppelins: A Guide to the Persons, Objects, Topics and Themes on United States Postage Stamps, 1847-1980*. Greenwood Press, Westport, Connecticut. 279 pp.
- Mackay, J.A. 1973. *The Dictionary of Stamps in Color*. Macmillan Publishing Co., Inc. New York. 296 pp.
- Moolman, V. 1964. *The Complete Illustrated Guide to U.S. Commemorative Stamps*. Cornerstone Library, New York. 157 pp.
- Owen, O.S. 1985. *Natural Resource Conservation*. 4th Ed. Macmillan Publishing Co., Inc., New York. 657 pp.
- Scharf, W.L. 1978. *Mathematics and Science-An Adventure in Postage Stamps*. National Council of Teachers of Mathematics. Reston, Virginia. 152 pp.

Students Perceptions

Variables Influencing Learning Environment

Joe G. Harper and George C. Hill

Introduction

The primary purpose of this investigation was to provide information that would improve teaching effectiveness within the College of Agriculture. This investigation represented an analysis of data collected that will ultimately be used in a complete systematic approach toward improving college faculty instruction. The intended result of this study was to provide information and feedback to faculty regarding student perceptions of the learning environment.

The theoretical framework of this investigation was derived from a model of classroom learning developed by Mitzel and presented by Dunkin and Biddle (1974). The model describes student learning as a product outcome of the classroom learning environment. The learning environment involves an interaction of presage, context, and process variables relating to the student, the teacher, and the school.

Objectives

The primary objective of this study was to investigate the effect of selected variables on teaching effectiveness and classroom learning. The specific objectives were to:

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