Photograph and Paper Preservation Lesson Plan

Objective:
The students will learn about the importance of respecting historical photographs, paper and books through concepts of preservation and conservation. Preventive conservation is the protection and careful storage and use of materials to avoid damage. Appropriate storage is one means of preventive conservation. Conservation treatment refers to the expert repair of damaged materials. Preservation is the overarching protection of cultural heritage of any sort. Preservation includes environmental controls, protection from fire and water and proper care and handling of objects.

Grade Level: 3rd - 6th

Michigan Standards and Benchmarks:
Soc I.1.3ee  Distinguish among the past, the present and the future
Sci IV.1e1  Classify common objects and substances according to observable attributes/properties.
Sci IV.1e2  Identify properties of materials which make them useful.
Sci IV.2e1  Describe common physical changes in matter – size, shape; melting, freezing (k-2); dissolving, evaporating (3-5).

Relevant Vocabulary Terms:
• Conservation: preventive conservation means protection from damage. Conservation treatment is the correct repair of a damaged object.
• Preservation: maintaining and protecting against damage and destruction

Activity 1: Oil Picture

Materials Needed:
Camera
Rag
Vegetable Oil (or any oil-based substance)

Procedure:
1. Divide the class into groups of two or three students.
2. Take a class photo and develop enough copies for each group to have one photo.
3. Place several drops of the oil onto the rag.
4. Rub the oil onto the right half of the photograph.
5. Let the picture sit for 3-4 days.
6. Observe and record results.
Discussion Questions:
1. What happened to the right half of the photograph?
2. Why do you think this happened?
3. How does this relate to the preservation of photographs?
4. In terms of the preservation of photographs, what does the oil represent?
5. How should we handle photographs to keep them from being stained?
6. Do any students have old photographs that show changes through time?
7. Why are photographs historically significant?
8. Why is it important to preserve our historical photographs?

Activity 2: Photograph Fading

Materials:
Camera

Procedure:
1. Divide the class into groups of two or three students.
2. Take a class photo and develop enough copies for each group to have two photos.
3. Move one picture into direct sunlight.
4. Move the other picture into a dark area, or store face down out of sunlight.
5. Wait 5-6 days.
6. Compare the two photographs.
7. Observe and record results.

Discussion Questions:
1. What happened to the photograph that was in the sun?
2. What happened to the photograph that was in the dark?
3. Why do you think this happened?
4. How does this relate to the preservation of photographs?
5. Why are photographs historically significant?
6. Why is it important to preserve our historical photographs?

Activity 3: Newspaper Fading

Materials:
Newspaper
Construction Paper (2” x 2”)

Procedure:
1. Divide the class into groups of two or three students.
2. Provide each group of students with a piece of newspaper (5” x 5”) and a 2” x 2” square of construction paper.
3. Place the construction paper in the center of the newspaper.
4. Set the newspaper, with construction paper, into direct sunlight.
5. Wait 5-6 days (It is important that the construction paper is not moved).
6. Observe and record results.

Discussion Questions:
1. What happened to the part of the newspaper that was under the construction paper?
2. What happened to the part of the newspaper that was not covered by the construction paper?
3. Why do you think this happened?
4. What happened to the part of the construction paper that was exposed to the sunlight?
5. What does the side of the construction paper that was touching the photograph look like?
6. How does this relate to the preservation of paper?
7. Why are paper and books historically significant?
8. Why is it important to preserve our historical books?

Activity 4: Chips, Popcorn and the News

Materials Needed:
Newspaper
Potato Chips
Butter Popcorn

Procedure:
1. Divide the class into groups of two or three students.
2. Provide each group of students with two chips and several pieces of popcorn.
3. Provide each group of students with a piece of newspaper (5” x 5”).
4. Place the chips and popcorn onto the newspaper.
5. Let the newspaper, chips and popcorn sit overnight.
6. Observe and record results.

Discussion Questions:
1. What happened to the newspaper when it touched the popcorn and chips?
2. Why do you think this happened?
3. How does this relate to the preservation of paper?
4. In terms of the preservation of paper, what do the chips and peanuts represent?
5. What ingredient does the chips and peanuts have in them that make them harmful to the newspaper?
6. Why are books historically significant?
7. Why is it important to preserve our historical books?

Activity 5: Wet Paper

Materials:
Large tray
Water
11 x 17 sheet of construction paper
Markers
Pens
Chalk
Pencils
Crayons
Paint

Procedure:
1. Fill the large tray with water.
2. Have each student print their name on the construction paper using one of the writing utensils listed under materials.
3. Submerge the construction paper underwater.
4. Leave the construction paper in the water for 2-3 days.
5. Have students make predictions about what they think is going to happen to the construction paper and the print when it sits in the water.
6. Observe and record results.

Discussion Questions:
1. What happened to the construction paper when it was left under water?
2. Why do you think this happened?
3. What happened to the printing on the construction paper when it was left under water?
4. Why do you think this happened?
5. How do the results compare to the students predictions?
6. Since books are composed of many pieces of paper, how does this activity relate to book preservation?
7. How should we care for books and paper?
8. How should we protect paper, which forms books, from elements such as rain and snow?
9. Why are books historically significant?
10. Why is it important to preserve our historical books?

Selected Bibliography:

**Care and Handling of Photographs**

International Federation of Library Associations and Institutions. Care, Handling, and Storage of Photographs.
http://palimpsest.stanford.edu/byauth/roosa/roosa1.html

http://aic.stanford.edu/library/online/brochures/photos.html
Care and Handling of Paper


Selected Bibliography:

Bookmaking

Author: Diehn, Gwen
Year: 1998
Title: Making books that fly, fold, wrap, hide, pop up, twist, and turn: books for kids to make
City: Asheville, N.C.
Publisher: Lark Books
Number of Pages: 96
Edition: 1st
ISBN: 1579900232 1579903266 (pbk.) 18873740232 LCCN: 97-41037
Abstract: Presents instructions for making various kinds of books including those that carry messages across space and time as well as those that save words, ideas, and pictures.
Keywords: Descriptor: Toy and movable books -- Design. Handicraft.
Notes: Class Descriptors: LC: Z1033.T68; Dewey: 736/.98

Author: Doggett, Sue
Year: 1998
Title: Bookworks: books, memory and photo albums, journals, and diaries made by hand
City: New York
Publisher: Watson-Guptill Publications
Number of Pages: 144
ISBN: 0823004910 (cloth) LCCN: 98-22960
Keywords: Descriptor: Bookbinding. Bookbinding -- United States.
Notes: Class Descriptors: LC: Z271; Dewey: 686.3

Author: Gaylord, Susan Kapuscinski
Year: 1994
Title: Multicultural books to make and share: easy-to-make, authentic, cross-curricular
**Series Title:** Instructor books;  
**City:** New York  
**Publisher:** Scholastic Professional Books  
**Number of Pages:** 136  
**ISBN:** 0590489216  
**LCCN:** 94-234511  
**Keywords:** Descriptor: Book design -- Study and teaching (Elementary)  
Multicultural education -- Activity programs.  
Toy and movable books -- Design -- Study and teaching (Elementary)  
**Notes:** English  
Includes bibliographical references. Class Descriptors: LC: Z116.A3; Dewey: 372.13/2

**Author:** Johnson, Paul  
**Year:** 2000  
**Title:** Making books  
**City:** London  
**Publisher:** A. & C. Black  
**Number of Pages:** 64  
**ISBN:** 071365077X  
**Keywords:** Descriptor: Book design -- Juvenile literature.  
Bookbinding -- Juvenile literature. Class Descriptors: Dewey: 686.3

**Author:** Johnson, Paul  
**Year:** 1993  
**Title:** Literacy through the book arts  
**Place Published:** Portsmouth, NH  
**Publisher:** Heinemann  
**ISBN/ISSN:** 0435087665; LCCN 93-18134  
**Keywords:** Descriptor: Activity programs in education -- Great Britain.  
Book design -- Study and teaching (Elementary) -- Great Britain.  
Child artists.  
Children -- Great Britain -- Books and reading.  
Note(s): Includes bibliographical references (p. 155-156).  
Class Descriptors: LC: LB1027.25; Dewey: 372.5/2  
**Notes:** English

**Author:** Johnson, Paul  
**Year:** 1992  
**Title:** A book of one's own: developing literacy through making books  
**Place Published:** Portsmouth, N.H.  
**Publisher:** Heinemann  
**ISBN/ISSN:** 0435087088; LCCN 91-28908  
**Keywords:** Descriptor: Activity programs in education -- Great Britain -- Handbooks, manuals, etc.  
Book design -- Study and teaching (Elementary) -- Great Britain -- Handbooks, manuals, etc.
Child authors -- Great Britain.
Class Descriptors: LC: LB1027.25; Dewey: 372.13/078

Author: Liddle, Matthew
Year: 1993
Title: The bookmaking handbook
City: Philadelphia, Penn.
Publisher: Running Press
Number of Pages: 63
Keywords: Descriptor: Bookbinding.
Books.
Papermaking -- History -- Juvenile literature.
Notes: Class Descriptors: Dewey: 686.3/LIDDLE Responsibility: Matthew Liddle.

Author: LaPlantz, Shereen
Year: 1995
Title: Cover to cover: creative techniques for making beautiful books, journals & albums
City: Asheville, N.C.
Publisher: Lark Books
Number of Pages: 144
Keywords: Descriptor: Bookbinding.
Notes: Class Descriptors: LC: Z271; Dewey: 686.3

Author: O'Brien-Palmer, Michelle; Rubin, Shannon
Year: 1992
Title: Book-write: a creative bookmaking guide for young authors
City: Kirkland, Wash.
Publisher: MicNik Publications
Number of Pages: 117
ISBN: 1879235013 (pbk.): LCCN: 91-68412
Keywords: Descriptor: Publishers and publishing -- Juvenile literature.
Bookbinding -- Juvenile literature.
Authorship -- Juvenile literature.
Class Descriptors: LC: Z286.C48; Dewey: 808.02

Author: Pluckrose, Henry Arthur; Fairclough, Chris
Year: 1992
Title: Book craft
Series Title: Fresh start; Variation: Fresh start (London, England)
City: New York  
Publisher: F. Watts  
Number of Pages: 40  
ISBN: 0531141691 LCCN: 91-40501  
Abstract: Provides step-by-step instructions for putting together several kinds of books by hand.  
Keywords: Descriptor: Books -- Juvenile literature.  
Handicraft -- Juvenile literature.  
Bookbinding -- Juvenile literature.  
Bookbinding.  
Books.  
Notes: Includes index. Class Descriptors: LC: Z4.Z9; Dewey: 686

Author: Purdy, Susan Gold  
Year: 1973  
Title: Books for you to make  
Publisher: Philadelphia, Lippincott  
Number of Pages: 96  
Edition: 1st  
Abstract: Step-by-step instructions for making up and binding a book. Includes several binding techniques.  
Keywords: Descriptor: Books -- Juvenile literature.  
Bookbinding -- Juvenile literature.  
Books.  
Bookbinding.  
Class Descriptors: LC: Z4.Z9; Dewey: 686

Author: Shoen, Harriet Hetta  
Year: 1934  
Title: Let's make a book  
Publisher: New York  
ISBN: LCCN: 34-31583  
Keywords: Descriptor: Bookbinding -- Juvenile literature.  
Notes: Class Descriptors: LC: Z271; Dewey: 686

For additional bibliography and abstract resources also see:  
Author: Drewes, Jeanne and Julie Page (eds.)  
Year: 1997  
Title: Promoting Preservation Awareness in Libraries, A Sourcebook for Academic, Public, School, and Special Collections.  
City: Westport  
Publisher: Greenwood Press  
ISBN: 0313302065  
Keywords: Library materials – Conservation and restoration – Study and teaching – United States
Class Descriptors: LC: Z701.3.E38; Dewey: 025.8/4;

**Papermaking**

**Author:** Doney, Meryl  
**Year:** 1997  
**Title:** Papercraft  
**Series Title:** World crafts; Variation: Doney, Meryl, 1942-; World crafts.  
**City:** New York  
**Publisher:** Franklin Watts  
**Number of Pages:** 32  
**Edition:** 1st American  
**ISBN:** 0531144461 LCCN: 96-35495  
**Abstract:** Information about the history of paper and how it has been used around the world accompanies directions for activities that include making different types of papers and objects such as flowers, trays, lanterns, and more from paper.  
**Keywords:** Descriptor: Paper work -- Juvenile literature.  
Paper, Handmade -- Juvenile literature.  
Decorative paper -- Juvenile literature.  
Papermaking.  
Paper work.  
Handicraft.  
**Notes:** Class Descriptors: LC: TT870; Dewey: 745.54

**Author:** Llewellyn, Claire  
**Year:** 2002  
**Title:** Paper  
**Series Title:** Material world; Variation: Material world (Franklin Watts)  
**City:** New York  
**Publisher:** Franklin Watts  
**Number of Pages:** 30  
**Edition:** 1st American  
**ISBN:** 0531146294 0531148319 (pbk.) LCCN: 2001-24873  
**Abstract:** Explores the history, composition, production, and uses of paper.  
**Keywords:** Descriptor: Papermaking -- History -- Juvenile literature.  
Paper.  
Class Descriptors: LC: TS1105.5; Dewey: 676/.2

**Author:** Marshall, Pam  
**Year:** 2003  
**Title:** From tree to paper  
**Series Title:** Start to finish; Variation: Start to finish (Minneapolis, Minn.)  
**City:** Minneapolis  
**Publisher:** Lerner Publications Co.  
**Number of Pages:** 24
**ISDN**: 082250720X (acid-free paper) LCCN: 2001-7206

**Abstract**: Introduces the process through which trees are turned into paper.

**Keywords**: Descriptor: Paper -- Juvenile literature.
Papermaking -- Juvenile literature.
Paper.
Papermaking.

**Notes**: Class Descriptors: LC: TS1105.5; Dewey: 676

**Author**: Watson, David
**Year**: 2000
**Title**: Papermaking
**Series Title**: Step-by-step;
**City**: Tunbridge Wells
**Publisher**: Search
**Number of Pages**: 32
**ISBN**: 0855329130

**Keywords**: Descriptor: Papermaking -- Juvenile literature.
Paper, Handmade -- Juvenile literature.
Class Descriptors: Dewey: 745.54

**Author**: Wilkinson, Beth
**Year**: 1997
**Title**: Papermaking for kids: simple steps to handcrafted paper
**City**: Salt Lake City
**Publisher**: Gibbs Smith
**Number of Pages**: 48
**Edition**: 1st
**ISBN**: 0879058277 (pbk.) LCCN: 97-6908

**Keywords**: Descriptor: Papermaking -- Juvenile literature.
Paper, Handmade -- Juvenile literature.
Notes: Class Descriptors: LC: TS1105.5; Dewey: 676/.22

**Photography**

**Author**: Freeman, Tony
**Year**: 1983
**Title**: Photography
**Series Title**: A New true book;
**City**: Chicago
**Publisher**: Childrens Press
**Number of Pages**: 45
**ISBN**: 0516017047 (lib. bdg.) LCCN: 83-7359

**Abstract**: Briefly describes the basic principles of photography, how a camera works, the different types of cameras and films, how film is developed, and techniques for taking pictures. Also discusses careers in photography.

**Keywords**: Descriptor: Photography -- Juvenile literature.
Photography.

Notes: English
Includes index. Class Descriptors: LC: TR149; Dewey: 770 Material Type: Juvenile (no specific ages) (jau)

Author: Haslam, Andrew; Senior, Kathryn; Barnes, Jon
Year: 1996
Title: Make it work!
City: Chicago, IL
Publisher: World Book/Two-Can
Number of Pages: 48
ISBN: 0716617315 (hbk.): LCCN: 96-60453
Abstract: Explores photography from simple pinhole cameras to cameras that use film. It explains how different parts of a camera work and shows how to process and develop your own photographs.
Notes: English
Includes index. Class Descriptors: LC: TR149; Dewey: 771. Material Type: Pre-adolescent (ejh)

Author: Laycock, George
Year: 1979
Title: The complete beginner's guide to photography
Series Title: The Complete beginner's guide series;
City: Garden City, N.Y.
Publisher: Doubleday
Edition: 1st
Abstract: Discusses the selection and care of cameras and equipment, techniques of photography, development of film, and photography as a business.
Keywords: Descriptor: Photography -- Juvenile literature. Photography.
Includes index. Class Descriptors: LC: TR149; Dewey: 770/.28 Material Type: Juvenile (no specific ages) (jau)

Author: Noren, Catherine
Year: 1983
Title: The way we looked: the meaning and magic of family photographs
City: New York
Publisher: Dutton
Number of Pages: 116
Abstract: Discusses the importance of family photographs as a means of understanding the passage of time, establishing ties with ancestors, and varying ways of recording important events in family life. Includes suggestions for collecting photographs and putting together an album.

Keywords: Descriptor: Photography of families -- Juvenile literature.
Photography of families.
Photography.

Notes: English
"Lodestar books."/ Includes index. Class Descriptors: LC: TR681.F28; Dewey: 778.9/2 Material Type: Juvenile (no specific ages) (jau)