Preservation of Historic Buildings Lesson Plan

**Objective:**
The students will learn about the importance of respecting historical buildings through concepts of preservation.

**Grade Level:** 3rd - 6th

**Michigan Standards and Benchmarks:**
- Soc I.1.3ee  Distinguish among the past, the present and the future
- Soc II.1  Students will describe, compare and explain the locations and characteristics of places, cultures and settlements.
- 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).
- Sci V.1e5  Describe uses of materials taken from the earth.
- Sci V.1e6  Demonstrate ways to conserve natural resources and reduce pollution through reduction, reuse, and recycling of manufactured materials.
- Sci V.3e2  Describe seasonal changes in Michigan’s weather.

**Relevant Vocabulary Terms:**
- **Conservation:** careful repair in keeping with the original materials
- **Preservation:** maintaining and protecting against damage and destruction
- **Re-use:** further use of something after reclaiming or reprocessing
- **Weathering:** the action of the elements in altering the color, texture, composition, or form of exposed objects
- **Erosion:** act of wearing away due to wind, water, sun, ice
- **Historic Buildings:** a building or structure that is over 50 years old (although there are exceptions) and a building that posses integrity of location, design, setting, materials, workmanship, feeling, and association and meets at least one of the four National Register criteria for Evaluation. These criteria include:
  - A) association with events that have made a significant contribution to the broad patterns of history, which can be remembered as important Actions
B) associated with the lives of significant persons in our past or more simply **Big people**;

C) that embody the **distinctive characteristics of a type, period, or method of construction**, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction. This may be remembered as **Cute Buildings**; or

D) have yielded or may yield information important in our past. Since this criterion is primarily intended to cover archaeological finds, think of this as a determination that is made by **Digging**.

There are seven different exceptions to the Criteria for Evaluation—which can be learned about at [http://www.cr.nps.gov nr listing.htm](http://www.cr.nps.gov/nr/listing.htm) Examples include: barns, churches, lighthouses, courthouses, funeral homes, schools, post offices, railroad stations, houses.

**Activity 1: Researching and Mapping Historical Buildings in Michigan**

**Materials Needed:**
- Map of Michigan
- Computer

**Procedure:**
1. Using the computer, have students find the location of 8-10 Michigan historical buildings.
2. Mark and label the location of each historical building on the Michigan map.
3. Record the average high temperature and average low temperature for each city where the historical building is located.
4. Record the material from which each historical building was constructed.
5. Record the year in which each historical building was built.
6. Mark and label where the students live on the map.

**Discussion Questions:**
1. What comes to mind when you think of a historical building?
2. Where are the historical buildings located?
3. What do you think they were used for?
4. What are the historical building used for today?
5. Why are the old buildings important to our history?
6. How do old buildings relate to historical preservation?

**Activity 2: Green Pennies**

**Materials:**
- Pennies
- Vinegar
- Bowl
Paper Towel

Procedure:
1. Divide the class into groups of 3-4 students.
2. Provide each group with a penny, piece of paper towel, and a bowl filled with vinegar.
3. Fold the paper towel into a square.
4. Submerge the paper towel into the bowl of vinegar.
5. Let the paper towel soak for 30-60 seconds, then remove.
6. Place the penny (Lincoln-face down) on to the paper towel.
7. Let stand overnight.
8. The next morning, observe and record the results.

Discussion Questions:
1. What happened to the penny?
2. Why do you think this happened?
3. How does this relate to the preservation of historical buildings?
4. In terms of the preservation of historical buildings, what does the penny represent?
5. In terms of the preservation of historical buildings, what does the vinegar represent?
6. How does this activity relate to weathering and erosion of building materials?
7. Why are old buildings historically significant?
8. Why should we study historical buildings?
9. Why is it important to preserve historical buildings?

Activity 3: Rubbing Rocks

Materials:
Sandstone rocks
Granite rocks
White paper

Procedure:
1. Divide the class into groups of 3-4 students.
2. Provide each group with two sandstone rocks, two granite rocks and one sheet of white paper.
3. Over the white paper, rub the two sandstone rocks together.
4. Over the white paper, rub the two granite rocks together.
5. Drop both a granite rock and a sandstone rock on the floor.
6. Place both a granite rock and sandstone rock under running water.
7. Observe and record the results.

Discussion Questions:
1. What happened to sandstone rocks when they were rubbed together?
2. Why do you think this happened?
3. What happened to granite rocks when they were rubbed together?
4. Why do you think this happened?
5. How easily did the granite rocks break or crumble?
6. How easily did the sandstone rocks break or crumble?
7. Which type of rock is more durable?
8. How does this relate to the preservation of historical buildings?
9. In terms of the preservation of historical buildings, what do the two types of rock represent?
10. How does this activity relate to weathering and erosion of building materials?
11. Why are old buildings historically significant?
12. Why is it important to preserve historical buildings?

Activity 4: Historical Building Bookmarks

Materials:
Crayons
Complete Michigan map from Activity 1
Strips of paper 3” x 8.5”
Hole punch
String

Procedure:
1. Each student will make a bookmark that advertises one of the 8-10 historical buildings that the student researched in Activity 1.
2. On the bookmark, include information from the Michigan map in Activity 1 to attract people to the historical building.
3. On the bookmark, address preservation issues and why it is important to conserve historical buildings.
4. When finished, punch a hole in the top of the bookmark and tie on a piece of string.
5. Have students share their bookmarks with the whole class.

Discussion Questions:
1. How do we learn about history?
2. What happens if we do not take care of historical buildings?
3. How can we use, or reuse, something that is old?
4. How can historic buildings be preserved?
5. Why is historical and cultural preservation important?

Selected Resources:
National Register of Historic Places, Teaching with Historic Places
http://www.cr.nps.gov/nr/twhp/
National Register of Historic Places in Michigan
michsite.state.mi.us/voyager.cfm

Lesson plans geared to historic preservation week
http://www.cr.nps.gov/nr/twhp/preswk.htm

Center for the Understanding of the Built Environment
http://www.cubekc.org/lessons.html

The Wisconsin Historical Society,
http://www.wisconsinhistory.org/teachers/lessons/elementary/detective.asp

Material on each lighthouse in Michigan
www.michiganlighthouse.org

Conservation of lighthouses:
www.michigan.gov/hal

Michigan Lighthouse websites:
www.northernmichigan.com/public/lighthouses
www.ddc.com/milights/
www.michiganlighthouse.com
www.us-lighthouses.com/displaystate.php?StateID=15
www.photography-plus.com/lighthouses.htm

Photographs of all lighthouses in the US:
www.ipl.org/div/light/Alphaidx.html

Lighthouse information and pictures by U.S. Coast Guard:
http://www.uscg.mil/hq/g-cp/history/h_lhindex.html

Selected Bibliography:

Architecture

Author: Adam, Robert
Year: 1994
Title: Buildings: how they work
City: New York
Publisher: Sterling Pub. Co.
Number of Pages: 45
ISBN: 0806909587 LCCN: 95-21850
Abstract: Examines different kinds of buildings throughout history, discussing their forms and purposes and how they were built.
Keywords: Descriptor: Buildings -- Juvenile literature.
Architecture -- Juvenile literature.
Buildings.
Architecture.

Notes:
Material Type: Juvenile (no specific ages) (jau)

Author: Corbishley, Mike
Year: 1996
Title: The world of architectural wonders
City: New York
Publisher: Peter Bedrick Books
Number of Pages: 45
ISBN: 0872262790 LCCN: 96-47596
Abstract: Examines the stories behind such wonders of the world's architecture as the pyramids of Giza, the Great Wall of China, Chartes Cathedral, the city of Venice, and Hoover Dam.
Keywords: Descriptor: Structural engineering -- Juvenile literature.
Building, Stone -- Juvenile literature.
Structural engineering.
Architecture.
Notes: "Second printing, 1998."/ Simultaneously published in England as: Superstructures, building the world's great monuments./ Includes index. Class Descriptors: LC: TA634; Dewey: 720 Material Type: Pre-adolescent (ejh)

Author: Devlin, Harry
Year: 1967
Title: To grandfather's house we go; a roadside tour of American homes
Publisher: New York, Parents' Magazine Press
Number of Pages: [48]
Abstract: Presents 22 styles of American homes popular at various periods in our history.
Keywords: Descriptor: Architecture, Domestic -- United States -- Juvenile literature.
Architecture, Domestic.
Dwellings. Geographic: United States -- Historic houses, etc.
Class Descriptors: LC: NA7205; Dewey: 728.3/7/0973
Material Type: Juvenile (no specific ages) (jau)

Author: Glenn, Patricia Brown
Year: 1995
Title: Under every roof: a kid's style and field guide to the architecture of American houses
City: New York
Publisher: John Wiley & Sons
ISBN: 0471144282 (cloth) LCCN: 95-50574
Abstract: A history and description of American house styles from colonial times through the present.
Keywords: Descriptor: Architecture, Domestic -- United States -- Juvenile literature.
Architecture, Domestic.
Dwellings.
Notes:

Author: Isaacson, Philip M.
Year: 1988
Title: Round buildings, square buildings & buildings that wiggle like a fish
City: New York
Publisher: Knopf: Distributed by Random House
Number of Pages: 121
Abstract: Explores various architectural styles around the world, depicting churches, fortresses, bridges, air terminals, mills, cliff dwellings, tombs, and lighthouses of particular note.
Keywords: Descriptor: Architecture -- Juvenile literature.
Architecture.
Notes: English
Includes index. Class Descriptors: LC: NA2555; Dewey: 720 Material Type: Juvenile (no specific ages) (jau)

Author: Macaulay, David
Year: 1977
Title: Castle
City: Boston
Publisher: Houghton Mifflin/Walter Lorraine Books
Number of Pages: 80
ISBN: 0395257840
Abstract: In the Caldecott Honor Book Castle, David Macaulay--author, illustrator, former architect and teacher--sets his sights on the creation and destiny of Lord Kevin's magnificent castle perched on a bluff overlooking the sea. Brick by brick, tool by tool, worker by worker, we witness the methodical construction of a castle through exquisitely detailed pen-and-ink illustrations. Children who love to know how things work especially appreciate Macaulay's passion for process and engineering. Moats, arrow loops, plumbing, dungeons, and weaponry are all explained in satisfying detail. This talented author also has
a keen sense of irony and tragedy, which is played out in the intricacies of the human story: a castle can be built as a fortress, but ultimately it becomes obsolete when humans discover that cooperation works best.

**Notes:** Reading level ages 9-12, but also appeals to much older audience due to accompanying artwork.

**Author:** Milo, Francesco; Cecchi, Lorenzo; Ricciardi, Andrea Corp Author Studio Galante  
**Year:** 1999  
**Title:** The story of architecture  
**Series Title:** Masters of art (Peter Bedrick Books);  
**City:** New York  
**Publisher:** Peter Bedrick Books  
**Number of Pages:** 64  
**ISBN:** 0872265285  
**Keywords:** Descriptor: Architecture -- History. Architectural design -- History.  
**Notes:** English  
Includes index./ Original title: L'Architettura. Class Descriptors: LC: NA200; Dewey: 720.9 Material Type: Juvenile (no specific ages) (jau)

**Author:** Paine, Roberta M.  
**Year:** 1974  
**Title:** Looking at architecture  
**Publisher:** New York, Lothrop, Lee & Shepard  
**Number of Pages:** 127  
**ISBN:** 0688415539 0688515533 (lib. bdg.) LCCN: 73-17718  
**Abstract:** An introduction to architecture, which examines some of the great buildings of the world, from the Egyptian pyramids to modern skyscrapers.  
**Keywords:** Descriptor: Architecture -- Juvenile literature. Architecture. Architecture.  
**Notes:** English  
Bibliography: p. 125. Class Descriptors: LC: NA2555; Dewey: 720 Material Type: Juvenile (no specific ages) (jau)

**Author:** Severance, John B.  
**Year:** 2000  
**Title:** Skyscrapers: how America grew up  
**City:** New York  
**Publisher:** Holiday House  
**Number of Pages:** 112  
**ISBN:** 0823414922 LCCN: 99-51842  
**Abstract:** Details some of the innovations that enabled the building of taller and taller buildings, describes the various schools of skycraper architecture, and explores the history of several famous skyscrapers.
Keywords: Descriptor: Skyscrapers -- United States -- Juvenile literature. Skyscrapers.

Notes: English
Includes bibliographical references (p. 105-107) and index. Class Descriptors: LC: NA6232; Dewey: 720/.483/0973 Material Type: Juvenile (no specific ages) (jau)

Author: Wilkinson, Philip
Year: 1993
Title: Amazing buildings
City: London; New York
Publisher: Dorling Kindersley
Number of Pages: 48
Edition: 1st American
Abstract: Provides the reader with glimpses inside twenty-one famous buildings from around the world.
Keywords: Descriptor: Buildings -- Juvenile literature. Buildings.
Identifier: Architecture

Author: Wilson, Forrest
Year: 1968
Title: Architecture; a book of projects for young adults
Publisher: New York, Reinhold Book Corp.
Number of Pages: 96
Abstract: Thirty-three architectural projects explain the principles of structure, classic symmetry, scale and space.
Keywords: Descriptor: Architecture -- Juvenile literature. Architecture -- Composition, proportion, etc.
Identifier: Architecture
Notes: English
Bibliography: p. 95-96. Class Descriptors: LC: NA2555; Dewey: 721 Material Type: Juvenile (no specific ages) (jau)

Barns
**Author:** High, Linda Oatman; Lewin, Ted  
**Year:** 1999  
**Title:** Barn savers  
**City:** Honesdale, Pa.  
**Publisher:** Boyds Mills Press  
**Edition:** 1st  
**ISBN:** 1563974037 (hardcover) LCCN: 98-88213 98-73068  
**Abstract:** A boy spends a long day helping his father dismantle a nineteenth-century barn so that the pieces can be used in other barns and houses to live another one hundred years.  
**Keywords:** Descriptor: Barns -- Salvaging -- Fiction.  
Fathers and sons -- Fiction.  
Barns -- United States -- History -- Juvenile fiction.  
Barns -- United States -- Conservation and restoration -- Juvenile literature.  
Class Descriptors: LC: PZ7.H543968; Dewey: [Fic]  
Material Type: Fiction (fic); Primary school (pri)

**Author:** Nieson, Marc  
**Year:** 2002  
**Title:** Barns  
**Series Title:** Designing the future;  
**City:** Mankato, MN  
**Publisher:** Creative Education  
**Number of Pages:** 31  
**Edition:** 1st  
**ISBN:** 1583411895 (alk. paper) LCCN: 00-47454  
**Keywords:** Descriptor: Barns -- History -- Juvenile literature.  
Barns -- Design and construction -- Juvenile literature.  
Barns.  
**Notes:** English  
Includes index. Class Descriptors: LC: TH4930; Dewey: 631.2/2 Material Type:  
Primary school (pri)

**Historic Preservation**

**Author:** Holden, Carol D.; Olsen, Gary L.; Olsen, Michele R.  
**Year:** 1980  
**Title:** Historic preservation education: curriculum materials  
**City:** Champaign, Ill.  
**Publisher:** [Champaign County Historical Museum?]  
**Number of Pages:** 155 leaves 22 x 28 cm.  
**Keywords:** Descriptor: Historic buildings -- Conservation and restoration -- Study and teaching.  
Architecture -- Illinois -- History.  
**Notes:** English  
**Lighthouses**

**Author:** Cooper, Jason  
**Year:** 1991  
**Title:** Lighthouses  
**Series Title:** Man made wonders; Variation: Cooper, Jason, 1942-; Man made wonders.  
**City:** Vero Beach, Fla.  
**Publisher:** Rourke Enterprises  
**Number of Pages:** 24  
**ISBN:** 0865926301 LCCN: 91-12277  
**Abstract:** An introduction to lighthouses, their history, keepers, and use.  
**Keywords:** Descriptor: Lighthouses -- Juvenile literature. Lighthouses.  
**Notes:** English  
Includes index. Class Descriptors: LC: VK1013; Dewey: 387.1/55  

**Author:** Gibbons, Gail  
**Year:** 1990  
**Title:** Beacons of light: lighthouses  
**City:** New York  
**Publisher:** Morrow Junior Books  
**Number of Pages:** [32]  
**ISBN:** 0688073794 0688073808 (lib. bdg.) LCCN: 89-33884  
**Abstract:** A survey of lighthouses and how they work in simple text and pictures.  
**Keywords:** Descriptor: Lighthouses -- United States -- Juvenile literature. Lighthouses.  
Class Descriptors: LC: VK1023; Dewey: 387.1/55  

**Author:** Greene, Carla  
**Year:** 1969  
**Title:** Let's learn about lighthouses  
**Publisher:** Irvington-on-Hudson, N.Y., Harvey House  
**Number of Pages:** 45  
**ISBN:** LCCN: 69-20292  
**Abstract:** Briefly traces the history of lighthouses and describes the equipment of a modern lighthouse and the duties of the men who operate it.  
**Keywords:** Descriptor: Lighthouses -- Juvenile literature. Lighthouses.  
Class Descriptors: LC: VK1013; Dewey: 623.8942  

**Author:** Guiberson, Brenda Z.  
**Year:** 1995
Title: Lighthouses: watchers at sea
Series Title: A redfeather book; Variation: Redfeather books.
City: New York
Publisher: Henry Holt
Number of Pages: 70
Edition: 1st
ISBN: 0805031707 LCCN: 95-4204
Abstract: Recounts the history of lighthouses from the struggle to build invincible towers, through heroic rescues of lost ships, to the haunted tales surrounding these isolated structures.
Keywords: Descriptor: Lighthouses -- United States -- History -- Juvenile literature.
Lighthouses.
Notes: English
Includes bibliographical references (p. [65]-67) and index. Class Descriptors: LC: VK1023; Dewey: 387.1/55/0973 Material Type: Juvenile (no specific ages) (jau)

Author: Krebs, Laurie
Year: 2004
Title: A day in the life of a colonial lighthouse keeper
Series Title: The library of living and working in colonial times;
City: New York
Publisher: PowerKids Press
Number of Pages: 24
Edition: 1st
Abstract: Describes a day in the life of a Massachusetts lighthouse keeper.
Keywords: Descriptor: Lighthouse keepers -- Massachusetts -- Juvenile literature.
Lighthouses -- Massachusetts -- History -- 18th century -- Juvenile literature.
Lighthouse keepers.
Water mills.
Named Corp: Boston Light (Mass.) -- Juvenile literature.
Geographic: Massachusetts -- History -- Colonial period, ca. 1600-1775.
United States -- History -- Colonial period, ca. 1600-1775.
Notes: Material Type: Primary school (pri)

Author: Lytle, Robert A.; Howell, Karen
Year: 2001
Title: Mackinac passage: mystery at Round Island Light
City: Auburn Hills, MI
Publisher: Edco
Number of Pages: 151
ISBN: 0971269238 (pbk.): 0971269203 (hardcover)
Abstract: Pete Jenkins and his friends explore the Round Island Lighthouse and the island after crossing Lake Huron in their dingy, only to find a warning
message in their boat and a threat on their lives. Here, their curiosity leads them on the trail of dangerous thieves.

**Keywords**: Descriptor: Mystery and detective stories.
Lighthouses -- Michigan -- Juvenile fiction.
Geographic: Mackinac Island (Mich.: Island) -- Juvenile fiction.
Other Titles: Mystery at Round Island Light
Material Type: Fiction (fic); Juvenile (no specific ages) (jau)

**Author**: O'Hara, Megan
**Year**: 1998
**Title**: Lighthouse: living in a Great Lakes lighthouse, 1910 to 1940
**Series Title**: Living history; Variation: Living history (Mankato, Minn.)
**City**: Mankato, Minn.
**Publisher**: Blue Earth Books
**ISBN**: 1560657251 LCCN: 97-31875
**Abstract**: Tells about the daily activities of workers and their families who lived at Split Rock Lighthouse located on a rocky cliff overlooking Lake Superior.
**Keywords**: Descriptor: Lighthouses.
Named Corp: Split Rock Lighthouse (Minn.) -- Juvenile literature.
Split Rock Lighthouse (Minn.)
**Notes**: Includes bibliographical references and index. Class Descriptors: LC: VK1025.S64; Dewey: 386/.855/0977676 Material Type: Primary school (pri)

**Author**: Panagopoulos, Janie Lynn; Evans, Laura
**Year**: 2003
**Title**: A castle at the Straits
**City**: Mackinac Island, Mich.
**Publisher**: Mackinac Island State Park Commission
**Edition**: 1st
**ISBN**: 0911872833 (hardcover) LCCN: 2003-2225
**Abstract**: At Michigan's Straits of Mackinac, eight-year-old Charles quickly learns the importance of the "Castle at the Straits" and the work he will help his uncles, the "wicki," or lighthouse keeper, and his assistant, do there.
**Keywords**: Descriptor: Lighthouses -- Great Lakes -- Fiction.
Lighthouse keepers -- Fiction.
Mackinac Island (Mich.: Island) -- Fiction.
Geographic: Michigan -- Fiction.
Class Descriptors: LC: PZ7.P18855; Dewey: [Fic].Material Type: Fiction (fic); Primary school (pri)

**Shipwrecks**

**Author**: Hertel, Robert
**Year**: 1999
**Title**: The Edmund Fitzgerald: lost with all hands: a true story for young readers
Abstract: Describes the events involved in the shipwreck of the iron-ore freighter S.S. Edmund Fitzgerald in the icy waters of Lake Superior on November 10, 1975, and subsequent expeditions to the wreck site to uncover clues to the mysterious disappearance.

Keywords: Descriptor: Shipwrecks -- Superior, Lake -- Juvenile literature. Shipwrecks. Named Corp: Edmund Fitzgerald (Ship) -- Juvenile literature. Edmund Fitzgerald (Ship) Class Descriptors: LC: G530.E26; Dewey: 917.7/49 Material Type: Pre-adolescent (ejh)

Author: Kantar, Andrew Klekner
Year: 1998
Title: 29 missing: the true and tragic story of the disappearance of the S.S. Edmund Fitzgerald
City: East Lansing
Publisher: Michigan State University Press
Number of Pages: xi, 50
Abstract: Recounts the sinking of the huge freighter the S.S. Edmund Fitzgerald in the icy waters of Lake Superior in 1975 and describes subsequent expeditions to the wreck site to uncover clues to her mysterious disappearance.

Notes:
Includes bibliographical references (p. 49-50). Class Descriptors: LC: G530.E26; Dewey: 363.1/23/097749 Material Type: Juvenile (no specific ages) (jau)

Author: Stonehouse, Frederick; Meyer, Susan Alby
Year: 2002
Title: Final passage: true shipwreck adventures
City: Gwinn, Mich.
Publisher: Avery Color Studios
Abstract: Stories of the famous shipwrecks, including the wrecks of the Griffon, the Edmund Fitzgerald, and others.

Keywords: Descriptor: Shipwrecks -- Great Lakes -- History -- Juvenile literature. Great Lakes -- History -- Juvenile literature. Class Descriptors: LC: G525; Dewey: 977.
Author: Wargin, Kathy-Jo; Frankenhuyzen, Gijsbert van
Year: 2003
Title: The Edmund Fitzgerald : song of the bell
City: Chelsea, Mich.
Publisher: Sleeping Bear Press
Abstract: Describes the voyage and sinking of the giant transport ship, the Edmund Fitzgerald, which was caught in a raging storm while crossing Lake Superior in November, 1975.
Keywords: Descriptor: Shipwrecks -- Superior, Lake -- Juvenile literature. Shipwrecks.
Named Corp: Edmund Fitzgerald (Ship) -- Juvenile literature.
Edmund Fitzgerald (Ship)
Class Descriptors: LC: G530.E26; Dewey: 917.74/9043
Material Type: Pre-adolescent (ejh)