MERIT BADGE SERIES



ARCHITECTURE AND LANDSCAPE Architecture



STEM-Based

BOY SCOUTS OF AMERICA Merit Badge Series

ARCHITECTURE AND LANDSCAPE ARCHITECTURE



"Enhancing our youths' competitive edge through merit badges"



Architecture Requirements

- 1. Do the following:
 - a. Tour your community and list the different types of buildings you see. Try to identify buildings that can be associated with a specific period of history or style of architecture. Make a sketch of the building you most admire.
 - b. Select an architectural achievement that has had a major impact on society. Using resources such as the Internet (with your parent's permission), books, and magazines, find out how this achievement has influenced the world today. Tell your counselor what you learned.
- 2. In the Outdoor Code, a Scout pledges to "be conservationminded." Discuss the following with your counselor:
 - a. The term *sustainable architecture*. Identify three features typical of green buildings.
 - b. The difference between renewable building materials and recycled building materials, and how each can be used in construction.
 - c. The relationship of architecture with its surrounding environment and the community.
 - d. How entire buildings can be reused rather than torn down when they no longer serve their original purpose.



- 3. Do ONE of the following:
 - a. With your parent's and counselor's permission and approval, arrange to meet with an architect. Ask to see the scale model of a building and the drawings that a builder would use to construct this building.

Discuss why the different building materials were selected. Look at the details in the drawings and the model to see how the materials and components are attached to each other during construction.



Thorncrown Chapel near Eureka Springs, Arkansas; Fay Jones + Maurice Jennings Architects

Pine Eagle Chapel at Camp Tiak Scout Camp, near Wiggins, Mississippi, makes an impressive backdrop for outdoor gatherings; Fay Jones + Maurice Jennings Architects. b. With your parent's and counselor's permission and approval, arrange to meet with an architect at a construction site. Ask the architect to bring drawings that the builder uses to construct the building. While at the site, discuss why the different building materials being used were selected. Discuss how the different building materials and components are attached to each other during construction.

Note: To visit a construction site will require advance planning. You will need permission from your parents, counselor, the architect, and the construction site manager. A construction site is a very dangerous place. While there, you will need to closely follow the site manager's directions and comply with all the safety procedures, including wearing a hard hat, protective eyewear, and proper footwear. Be aware of the changing conditions at the site, and stay with the architect or site manager.

- c. Interview someone who might be your client (such as a prospective homeowner or business owner) if you were an architect. Find out what your client's requirements would be for designing a new home or business building. Write a short program including a list of requirements for the project, the functions of the building and site, how the functions relate to one another, and the goals of the project.
- 4. Measure a room such as one where you live or where your troop meets. Make an accurately scaled drawing of the room's floor plan showing walls, doors, closets, windows, and any built-in furniture or cabinets. Neatly label your drawing with the following: your name, the date, what room you drew, and the scale of the drawing. (Drawing scale: ¹/₄ inch = 1 foot)
- 5. Find out about three career opportunities in architecture. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor, and explain why this profession might interest you.

Architecture Resources

Scouting Resources

Art, Computers, Drafting, Engineering, Model Design and Building, Photography, Surveying, and Sustainability merit badge pamphlets

Visit the Boy Scouts of America's official retail website (with your parent's permission) at http://www.scoutstuff.org for a complete listing of all merit badge pamphlets and other helpful Scouting materials and supplies.

Books

ARCHITECTURAL DESIGN, HISTORY, AND NOTABLE BUILDINGS

- Ching, Francis D.K. *Architecture: Form, Space, and Order*, 3rd ed. John Wiley and Sons, 2007.
- Building Construction Illustrated, 5th ed. John Wiley and Sons. 2014.
- Gossel, Peter. *Modern Architecture A–Z*. Taschen, 2010.
- Isaacson, Phillip M. Round Buildings, Square Buildings, and Buildings That Wiggle Like a Fish. Knopf, 2001.

Kostof, Spiro. A History of Architecture: Settings and Rituals, 2nd ed. Oxford University Press, 1995.

Macaulay, David. City: A Story of Roman Planning and Construction. HMH Books for Young Readers, 1983.

- -------. Cathedral: The Story of Its Construction. Houghton Mifflin, 1973.
- Nelson, Peter. *The Tree House Book*. Universe, 2000.
- Rifkind, Carole. *A Field Guide to American Architecture.* Random House Value Publishing, 1987.
- Sharp, Dennis. Twentieth Century Architecture: A Visual History. Images. 2006.
- Susanka, Sarah, and Kira Obolensky. *The Not So Big House*. Taunton Press, 2009.

Susanka, Sarah. *Creating the Not So Big House.* Taunton Press. 2002.

Wilson, Forrest. What It Feels Like to Be a Building. John Wiley and Sons, 1988.



BIOGRAPHIES

- Heinz, Thomas A. *The Vision of Frank Lloyd Wright*. Chartwell Books, 2000.
- Hoag, Edwin, and Joy Hoag. Masters of Modern Architecture: Frank Lloyd Wright, Le Corbusier, Mies van der Rohe, and Walter Gropius. Bobbs-Merrill, 1977.
- Huxtable, Ada Louise. Frank Lloyd Wright: A Life. Penguin, 2008.
- Ivey, Robert Adams. Fay Jones. McGraw-Hill Professional, 2001.
- Rubalcaba, Jill. *I.M. Pei: Architect* of Time, Place and Purpose. Skyscape. 2011.
- Sieden, L. Steven. A Fuller View: Buckminster Fuller's Vision of Hope and Abundance for All. Divine Arts, 2012.



Scout sketching the Philmont Museum and Seton Memorial Library, Cimarron, New Mexico

DRAWINGS AND MODELS

- Biesty, Stephen, and Richard Platt. Stephen Biesty's Incredible Cross-Sections. Knopf, 1992.
- Eisen, David. Fun With Architecture. Viking Press, 1992.
- Maddex, Diane. *Architects Make Zigzags: Looking at Architecture From A to Z.* John Wiley and Sons, 1986.
- Salvadori, Mario. *The Art of Construction,* 3rd ed. Chicago Review Press, 2000.
- Werner, Megan. *Model Making*. Princeton Architectural Press, 2011.

Organizations and Websites

American Architectural Foundation

Telephone: 202-787-1001 Website: http://www.archfoundation.org

The American Institute of Architects

1735 New York Ave. NW Washington, DC 20006-5292 Telephone: 202-242-3837 Website: http://www.aia.org

The American Institute of Architecture Students

Telephone: 202-626-7472 Website: http://www.aiasnatl.org

Association of Collegiate Schools of Architecture

1735 New York Ave. NW Washington, DC 20006-5292 Telephone: 202-785-2324 Website: http://www.acsa-arch.org

Association of Licensed Architects

Telephone: 847-382-0630 Website: http://www.alatoday.org

National Council of Architectural Registration Boards

Telephone: 202-879-0520 Website: http://www.ncarb.org

National Organization of Minority Architects Website: http://www.noma.net

The New York Society of Architects Telephone: 212-385-8950 Website: http://www.nysarch.com

Society of American Registered Architects

Toll-free telephone: 888-385-7272 Website: http://www.sara-national.org

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Task Group Members, 2004 Edition

William J. Richardson, AIA (chairman) Robert J. Kilduff, AIA (vice chairman) Richard B. Ferrier, FAIA Milton P. Anderson, AIA Michael L. Archer, AIA Christopher Q.A. Marrs, Associate AIA Thomas S. Harrover, AIA (BSA adviser)

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