

MERIT BADGE SERIES



GRAPHIC ARTS



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"Enhancing our youths' competitive edge through merit badges"



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Requirements

1. Review with your counselor the processes for producing printed communications: offset lithography, screen printing, electronic/digital, relief, and gravure. Collect samples of three products, each one produced using a different printing process, or draw diagrams to help with your description.
2. Explain the differences between continuous tone, line, and halftone artwork. Describe how digital images can be created and/or stored in a computer.
3. Design a printed piece (flier, T-shirt, program, form, etc.) and produce it. Explain your decisions for the typeface or typefaces you use and the way you arrange the elements in your design. Explain which printing process is best suited for printing your design. If desktop publishing is available, identify what hardware and software would be appropriate for outputting your design.
4. Produce the design you created for requirement 3 using one of the following printing processes:
 - a. **Offset lithography.** Make a layout, and produce a plate using a process approved by your counselor. Run the plate and print at least 50 copies.
 - b. **Screen printing.** Make a hand-cut or photographic stencil and attach it to a screen that you have prepared. Mask the screen and print at least 20 copies.

- c. Electronic/digital printing.** Create a layout in electronic form, download it to the press or printer, and run 50 copies. If no electronic interface to the press or printer is available, you may print and scan a paper copy of the layout.
 - d. Relief printing.** Prepare a layout or set the necessary type. Make a plate or lock up the form. Use this to print 50 copies.
5. Review the following postpress operations with your counselor:
- a. Discuss the finishing operations of padding, drilling, cutting, and trimming.
 - b. Collect, describe, or identify examples of the following types of binding: perfect, spiral, plastic comb, saddle-stitched, and case.
6. Do ONE of the following, then describe the highlights of your visit:
- a. Visit a newspaper printing plant. Follow a story from the editor to the press.
 - b. Visit a retail, commercial, or in-plant printing facility. Follow a project from beginning to end.
 - c. Visit a school's graphic arts program. Find out what courses are available and what the prerequisites are.
 - d. Visit three websites (with your parent's permission) that belong to graphic arts professional organizations and/or printing-related companies (suppliers, manufacturers, printers). With permission from your parent or counselor, print out or download product or service information from two of the sites.
7. Find out about three career opportunities in graphic arts. 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.

Graphic Arts Resources

Scouting Literature

American Business, Art, Communication, Digital Technology, Journalism, and Photography 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

- Adam, Robert, and Carol Robertson. *Screenprinting: The Complete Water-Based System*. Thames and Hudson, 2004.
- Adams, J. Michael, and Penny Ann Dolin. *Printing Technology*. Thomson Delmar Learning, 2001.
- AdamsMorioka and Terry Lee Stone. *Color Design Workbook: A Real World Guide to Using Color in Graphic Design*. Rockport Publishers, 2008.
- Airey, David. *Logo Design Love: A Guide to Creating Iconic Brand Identities*, 2nd ed. Peachpit Press, 2014.
- Blake, Kathy. *Handmade Books: A Step-by-Step Guide to Crafting Your Own Books*. Little, Brown, & Co., 1997.
- Bringhurst, Robert. *The Elements of Typographic Style*, 4th ed. Hartley and Marks Publishers, 2013.
- Brookfield, Karen. *Eyewitness: Book*. Dorling Kindersley Publishing, 2000.
- Cullen, Kristin. *Layout Workbook: A Real-World Guide to Building Pages in Graphic Design*. Rockport Publishers, 2007.
- Fleishman, Michael. *Starting Your Career as a Freelance Illustrator or Graphic Designer*. Watson-Guptill Publications, 2001.
- Friedl, Friedrich. *Typography: An Encyclopedic Survey of Type Design and Techniques Throughout History*. Black Dog & Levanthal, 1998.
- Gatter, Mark. *Getting It Right in Print: Digital Prepress for Graphic Designers*. Harry N. Abrams, 2005.

- Goldfarb, Roz. *Careers by Design: A Business Guide for Graphic Designers*. Allworth Press, 2002.
- Gomez-Palacio, Bryony, and Armin Vit. *Graphic Design, Referenced: A Visual Guide to the Language, Applications, and History of Graphic Design*. Rockport Publishers, 2011.
- Gordon, Barbara. *Opportunities in Commercial Art and Graphic Design Careers*. McGraw-Hill, 2003.
- Graham, Lisa. *Basics of Design: Layout and Typography for Beginners*, 2nd ed. Delmar Cengage Learning, 2005.
- Graphic Artists Guild. *Graphic Artists Guild Handbook of Pricing and Ethical Guidelines*, 14th ed. Graphic Artists Guild, 2013.
- Griffiths, Antony. *Prints and Printmaking: an Introduction to the History and Techniques*. University of California Press, 1996.
- Lupton, Ellen. *Graphic Design: The New Basics*. Princeton Architectural Press, 2008.
- . *Thinking With Type: A Critical Guide for Designers, Writers, Editors, & Students*, 2nd rev. and expanded ed. Princeton Architectural Press, 2010.
- Olmert, Michael. *The Smithsonian Book of Books*. Smithsonian Books, 2003.
- Prust, Z.A. *Graphic Communications: The Printed Image*. Goodheart-Wilcox Co., 2009.
- Romano, Frank, ed. *Pocket Pal: The Handy Book of Graphic Arts Production*, 20th ed. Graphic Arts Technical Foundation, 2007.
- Sherwin, David. *Creative Workshop: 80 Challenges to Sharpen Your Design Skills*. HOW Books, 2010.
- Sidles, Constance. *Graphic Designer's Digital Printing and Prepress Handbook*. Rockport Publishers, 2001.
- White, Alexander. *The Elements of Graphic Design: Space, Unity, Page Architecture and Type*, 2nd ed. Allworth Press, 2011.
- Williams, Robin. *The Non-Designer's Design Book*, 4th ed. Peachpit Press, 2014.
- . *The Non-Designer's Type Book*. Peachpit Press, 2005.
- Wilson, Daniel G. *Lithography Primer*, 3rd ed. GATFPress, 2005.

Organizations and Websites

Graphic Comm Central

Website:

<http://www.graphiccommcentral.org>

This portal site for graphic communications education and training includes links to lessons and activities as well as career resources and virtual tours of printing plants.

Print and Graphics Scholarship Foundation

Website:

<http://www.printing.org/page/3273>

This online resource provides information about applying for college scholarships to study graphic communications.

**Vocational Information Center:
Graphic Arts and Printing
Career Guide**

Website:

<http://www.khake.com/page27.html>

This site provides a comprehensive listing of links to descriptions of hundreds of career opportunities in the fields of graphic arts and printing.

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