



BLOCK PRINTING

EVENING ACTIVITY

Wolf Ridge Environmental Learning Center
6282 Cranberry Rd, Finland, MN 55603 • 800-523-2733 (MN, WI) • 218-353-7414



"Deer Mice" Block Print by Betsy Bowen

BLOCK PRINTING

WOLF RIDGE CLASSES:

Animals:

Animal Signs
Beavers
Birds
Small Mammals
Snowshoe Hare
White-tailed Deer
Wildlife Management

Plants:

Forest Ecology
Plant Study
Trees and Keys
Wetlands Ecology

Aquatics:

Lake Study
Stream Study
Fisheries Management
Frozen Lake Study

Earth Science:

Acid Rain
Geology
Weather

Human Culture and History:

Living Lightly
Nature's Timing
Ojibwa Heritage
Ojibwa Snowshoe
Seeds of Change
Voyageur Life

Personal Growth:

Adventure Ropes Course
Rock Climbing

Group Building:

Basic Survival
F.I.R.S.T. Games

Outdoor Recreation:

Beginning Orienteering
Competitive Orienteering
Canoeing
Cross Country Skiing
Superior Snowshoe
Superior View Hike

Evening Activities:

Astronomy
Block Printing
Creative Expressions
Creature from Wolf Lake
Dream Catchers
Lake Superior Game
Night Hike
Owl Pellets
Paper Making
Star Lab
Woodland Art
Volleyball

Naturalist Presentations:

Bats
Fur Trade
History of the North Shore
Logging Camp Life
Raptors
Wolves

Class Description: An Evening Activity

Students will learn about the history of printing. They will learn the ancient technique of block printing to express a natural history event experienced or inspired while at Wolf Ridge. Students will take home their original 3" x 3" art block for future printing, as well as 6-12 printed cards.

Total time: 1.5 hours (indoors)

Audience: 6-20 students, 4th grade through adult

Activity level: low

Travel: none

Total uphill travel: none



About Wolf Ridge

Wolf Ridge is an accredited residential environmental education school for persons of all ages. We offers immersion programs which involve direct observation and participation in outdoor experiences. Wolf Ridge programs focus on environmental sciences, human culture and history, personal growth, team building and outdoor recreation.

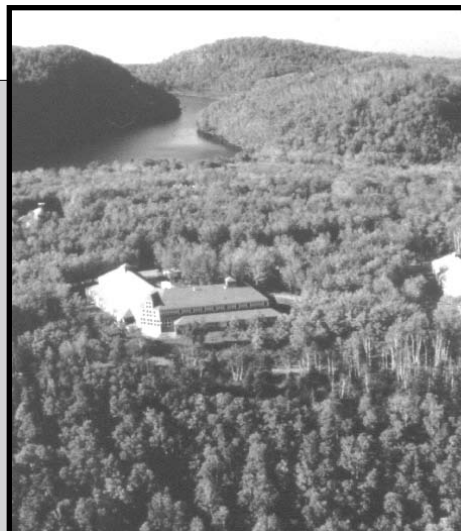
Our Mission

To develop a citizenry that has the knowledge, skills, motivation and commitment to act together for a quality environment.

What We Do

We meet our mission by:

- Fostering awareness, curiosity and sensitivity to the natural world.
- Providing lifelong learning experiences in nature.
- Developing social understanding, respect and cooperation.
- Modeling values, behaviors and technologies, which lead to a sustainable lifestyle.
- Promoting the concepts of conservation and stewardship.



Wolf Ridge Campus

Photo by Jim Brandenburg



Wolf Ridge

Environmental Learning Center

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Wolf Ridge is an equal opportunity educator and employer.

BLOCK PRINTING



OUTLINE:

I. Set-up (15 min.)

II. Introduction (5 min.)

- Greeting/Grabber
- Learn Names
- Behavior Guidelines
- Class Overview
- Assess Learner Level

III. History & Craftsmanship (15 min.)

IV. The Process (1 hr 20 min.)

- A. Brainstorming
- B. Drawing the Design
- C. Carving the Design
- D. Printing the Design
- E. Finishing the Process

V. Conclusion (10 min.)

- A. Stewardship
- B. Review

VI. Clean-up (15 min.)

VII. Appendices

- Equipment
- References
- Glossary



CONCEPTS:

1. The natural environment has many obvious and subtle impacts upon human history and culture.
2. Art is an expression of human thoughts and feelings.
3. Craftsmanship is important in producing quality products.



OUTCOMES:

Upon completion of the Block Printing class students will be able to:

1. List, explain, and give examples of the four types of printing.
2. Create a print from a block cut.
3. Describe the natural history experience that inspired their creation.



MN GRADUATION STANDARDS:

Wolf Ridge has aligned the Center's entire curriculum to Minnesota Department of Education Academic Standards. The Center maintains a curriculum standards matrix for the following subject areas:

- Science
- History and Social Studies
- Language Arts
- Mathematics
- Arts

The Matrices are organized by grade level and subject area, listing Strand, Sub-Strand, Standards, and Benchmarks. Every class addressing a benchmark is also noted. As the primary student audience at Wolf Ridge is from 4th-12th grade, the matrices address these grade levels. Teachers may request that their students focus upon a specific benchmark while attending Wolf Ridge.

Copies of our matrices are available on the Wolf Ridge web site at www.wolf-ridge.org, found under the "Education" menu. If you cannot access the matrices via the website, request a printed copy by calling 218-353-7414 or e-mailing us at "mail@wolf-ridge.org".

Revised May 2008

*TEACHER NOTE:
Students can use the paper
they made in Paper Mak-
ing Class if they had that
class.*

I. Classroom Set-up (15 min.)

Set up tables with chairs so each student has a work station. Each student should start with only a pencil, a piece of scrap paper, and a carving block at their place. Cutting tools (V-gouges) will be passed out later. Ink trays, brayers (rollers), ink, knives, and printing paper should be readied for the printing process. Sample posters should be hung around the room. If you are teaching in a room without a sink, fill the extra tub with water for clean-up. Sponges and cloth towels should be available and ready for the clean-up process.

II. Introduction (5 min.)

Greeting/Grabber

Greet the students as they enter the classroom. The sample posters should interest the students as well as the readied equipment.

Learn Students' Names

Take a few minutes to learn the names of your students and welcome them individually to the class. Repeat their names and strive to use them in every communication.

Set Behavior Guidelines

Discuss clearly and specifically which behaviors you expect from your students during the next two hours. Explain the need for respect; for you, for each other, for the equipment, and for the environment.

Overview of Class

Use the class description, instructional sequence, and class concepts to give the students an idea of how things will run. Students will be more comfortable and agreeable if they are aware of the plan. The instructor will briefly describe the history of block printing and introduce the theme for the students print - a natural history event inspired by their Wolf Ridge experience. The group will brainstorm ideas and the entire process will be explained. Students will create their block prints and at the end of class exhibit their prints to their peers.

Assess Learner Level

Ask the students if they know how books are made today. How were they made 100 years ago? 200 years ago? 500 years ago? 1000 years ago? Have they ever used rubber stamps or made prints from potatoes, etc.?

III. History and Craftsmanship (15 min.)

Printing started in China in the 8th century. It wasn't until the 15th century that the invention of printing arrived in Europe. It is the oldest and still most important medium for mass communication. Before the advent of printing, any written matter had to be laboriously copied by hand. Only the very wealthy could afford books. As printing techniques advanced even the common person could own a book or two. Some of the first items that were printed during the Middle Ages were pictures of saints, or holy cards, that were obtained in religious pilgrimages. Playing cards were another early popular item that could easily be reproduced through mass printings.

Printing is simply the transferring of ink from a carved surface to paper by means of pressure. The four basic types of printing are relief, intaglio, lithography and screen, in order of invention. **Relief printing** is the oldest form of printing and that is the method we are going to use in class today. In relief printing, ink is applied to a raised surface and then pressed onto another surface leaving behind an imprint. Examples of this would include wood cuts, potato prints and rubber stamps. With **intaglio printing**, a surface is etched, then covered with ink. The ink on the surface is removed; the ink in the cracks is pressed onto paper. Money is produced through intaglio printing. **Lithography printing** involves the use of greasy inks that repel one another. A picture is drawn with one substance and then washed over with an ink. The ink only adheres where there is no repelling substance and the plate is then pressed to paper. Newspapers and the Wolf Ridge Almanac are made through a lithographic process. **Screen printing** involves forcing ink through unsealed areas of a fine material to leave an image. Many t-shirts are produced by a method of screen printing called silk screening.

The work of two people went into the earliest block prints. An artist drew the design and then a skilled woodcutter carved the picture into the block and printed it. Today we are going to be both the artist who creates the design and the crafts-person who carves the picture and prints it. By definition, craft means to produce something with care, skill, and ingenuity. Each of us has a varying level of skill and ingenuity. If the students use care, are patient, take their time, and are neat in the process, the end product will be very satisfactory. Remind the students to keep the design to their level of ability and their results will be much more rewarding.

IV. The Process (1 hr. 20 min.)

A. Brainstorming

The theme for the block prints is natural history. As a group, brainstorm about things in nature that they may have seen, heard, smelled, touched, or tasted in classes at Wolf Ridge so far. Even classes like adventure ropes and rock climbing can inspire memories of natural experiences. Examples might include: wind in face, branches, cold rocks, mosquitoes, snowflakes, etc. Fill the chalkboard with this list of ideas. As the instructor, take a few minutes to draw one idea out several different ways on the chalkboard. This list should give the students some good ideas for their block print.

B. Drawing the Design

For best results, encourage the students to keep their design simple. Each student has a pencil and a half sheet of scrap paper. Have the students trace the size of the cutting block twice onto the paper (3 in x 3 in block). The students can now draw two prototypes/ designs on the paper. Remind the students that most artists make many sketches before creating a final product.

Once the students have drawn two sample pictures, they can transfer the image onto the block. There are three methods to do this.

- One way is to simply redraw the picture on the block. **If words are used they must be spelled out backwards** (from right to left with the letters backwards).
- The second method is to use lots of lead on your original drawing, then press the paper against the block and rub the paper to transfer the illustration onto the block. Words can be drawn on the sketch normally using this method.

*TEACHER NOTE:
Remind the students that imitation is the highest form of flattery. Even though students may have used the same ideas from the list each person's work will be unique.*

**WOLF
RIDGE**

*TEACHER NOTE:
Remember to print and carve words backwards onto your block.*

- The third way is to turn the original drawing over, cover the back of the paper solidly with pencil lead, then place the drawing over the block and firmly retrace the drawing. **If words are used they must be spelled out backwards** (from right to left with letters backwards).

C. Carving the Design

Before cutting, feel the block and decide which side is the "bumpy" side and which side is the smooth side. **Cutting will be done on the smooth side!** Then decide whether you want your print to be a white line or black line print. Whatever is cut away will not show on the print, therefore if you cut away the lines you drew on the block than you will get a white line print because the lines don't show. If you carve away everything but the lines you drew, you get a black line print because the lines will print.

Now that the design is transferred to the block, carving may begin. The most important rule is to remember to **keep your non-carving hand behind the blade**. Hold the V-gouge like a pencil and place it firmly but gently where you wish to cut. Students will quickly get a feel for the correct cutting pressure. It is better to start with a softer touch.

Once the students have completed carving their design, have them gently brush it with their hand or a toothbrush to remove any carving crumbs. They should then wipe or brush the crumbs from their work area into the trash can.

D. Printing the Design

Students may select two pieces of 11 x 17 paper. Using the "card key," have the students figure out where they will need to place their block on the paper to get cards that fold the right way. Depending on which way they drew their design on the block, they will either get horizontal or vertical cards.

Taking one of the pieces of paper, have them go to an ink station. Each ink station will have ink, a knife, a brayer/roller, and an ink tray. Using the knife, place **NO MORE THAN A PEA-SIZED AMOUNT OF INK** at a time on the tray. Using the brayer, roll the ink over the tray until there is an even coat of ink on the brayer. It should sound like a car tire on wet pavement when properly inked. Too much ink is bad. It will obscure the print. If there is too much ink, scrape it off with the knife and back into the ink tub. When the brayer is inked, roll it over the block. The students may have to roll the brayer over the ink tray again and roll the block a second time.

Then have the students take the block and place it in the correct position, carefully laying it on the paper. Using the palm of their hand, very gently press the block onto the paper. Too much pressure will cause the print to smear.

After printing one print, they may decide it needs some touch up carving. Have the students wash off their blocks in the water tub or sink, dry them with a cloth towel and then do any more carving that needs to be done. The block should be inked each time a print is made unless it had too much ink on it initially. The students should wash and dry their blocks between each color.

Have each student print his/her block on one of the (three or four) group sheets for demos for the next group.

*TEACHER NOTE:
Tell your students to keep their non-carving hand behind the blade*

*TEACHER NOTE:
Students can also use the other side of their block to carve a second pattern. The edges of the block can also be used to make border patterns.*

*TEACHER NOTE:
Label a file folder with school and group. When prints are dry, they can be collected and handed out to the students back at school for cutting into cards.*

After all the prints are made, the students should wash and dry their block one final time. They may then take the permanent marker in the kit and write their name on the block. Each student may keep their block and use it at home with water-based markers.

Assessment (Outcome 2): Create a block print.

E. Finishing the Process

Once artists are finished printing their works, they sign and number each piece. The signature goes in the lower right hand corner with the number. They should be numbered in the order in which they were printed. A title for the piece can go in the lower left hand corner. All pieces from the same block have the same title. A signed and numbered set of prints is called an edition.

Be sure to sign and number each print in the lower right hand corner, adding a title if desired. It's best to sign on a non-inked part of the print, or wait a few minutes for the ink to dry.

Prints can then be spread out for final drying at each student's work space. It takes about an hour to dry. Later they can be placed in a folder and brought back to school to be cut into cards.

V. Conclusion (10 min.)

A. Review

Review what they learned about the history of printing. Have the students name the four styles of printing, explain what the styles are and give examples of each. What style of printing did they use today? Discuss the steps and techniques of relief printing used today in class. What things did they do to get the best print possible?

Assessment (Outcome 1): - List, explain, and give examples of the four types of printing.

B. Stewardship

Have the students exhibit their prints and tell the natural history story that inspired their creation. Have the students brainstorm what they can personally do to help ensure that students who visit Wolf Ridge 20 years from now can have the same nature-inspired experiences.

Assessment (Outcome 3): - Describe the natural history experience that inspired your creation.

VI. Clean-up (15 min.)

Firmly screw caps back onto ink containers. Wash up brayers, ink trays, knives, and tables. Dry and return to kit. Collect pencils and gouges and put in kit. Return kit to kit room. Stack chairs along the walls in stacks of five. Return tables to appropriate positions. Erase boards.

CONCEPTS:

1. *The natural environment has many obvious and subtle impacts upon human history and culture.*
2. *Art is an expression of human thoughts and feeling.*
3. *Craftsmanship is important in producing quality products.*

VII. Appendices

A. Equipment

- printing paper, 2 pieces per student
- 6 brayers
- 6 ink trays
- 6 knives
- 20 V-gouges
- 5 specialty blades
- 20 pencils
- scrap paper
- 1 cutting block for each student to keep
- towels and sponges
- posters
- Betsy Bowen's book
- card layout demo
- bulletin board with samples from last class
- black permanent marker
- file folders
- 3 toothbrushes
- demo block

Sources:

- Dick Blick Art Materials , PO Box 1267, Galesburg, IL 61402-1267, 800-447-8192 (all materials)

B. References

- How to do Linoleum Block Printing, Mary E. Hicks, Walter T. Foster Inc.
- The Complete Manual of Relief Print Making, Katie Clemson and Rosemary Simmons, Alfred A. Knopf Inc. 1988.
- The Story of Printing, Irving B. Simon, Harvey House Inc. 1965.

C. Glossary

black line print - a print in which everything but the lines were carved away.

brayer - a tool used to roll print on a printing block.

intaglio - a surface is etched, ink is applied over everything, ink is removed from surface, ink remaining in scratches is pressed on paper.

lithography - a drawing is made with one substance and washed over with another substance that is repelled by the first substance, the plate with the remaining ink is pressed to the paper.

relief printing - ink is applied to a raised surface and pressed onto another surface leaving behind an imprint.

screen printing - a method of printing involving forcing ink through unsealed areas in a fine material to leave an image.

white line print - a print in which the lines were carved away.