



Lesson Overview



• Lesson Objective

Through creating their own stained glass windows, students will discover the role this art form played in the church lives of medieval people.

• Time Required

Two to three 45 to 60 minute sessions

• Materials Required

- White drawing paper
- Black construction paper
- Colored tissue paper or colored art cellophane
- White or light colored pencils
- Scissors
- Glue or glue stick
- Removable glass paints (optional)
- Samples of stained glass windows from photographs, resource books and the Internet
- Reproducibles:
 - “Creating Stained Glass Windows”
 - “Helpful Tips”

• Homework Hints

- Before the lesson, students may help gather examples of stained glass windows, including actual pieces, illustrations and photographs.
- After the lesson, students may complete the reproducible, “Daily Report” and journal prompts.



Past Ports Connection

While visiting medieval Europe’s grand cathedrals, students discover the beauty of the art of stained glass.

Background Information



Medieval Gothic cathedrals are seen as works of architectural beauty and wonder today, not only for their flying buttresses, but also for their stained glass. Stained glass was used, albeit to a lesser extent, in the Romanesque cathedrals of France and England.

Stained glass served both practical and symbolic purposes in the spiritual lives of the people of the Middle Ages. It let natural light seep into often-dark buildings. In the case of the walls of glass in some Gothic cathedrals, it illuminated the entire room. Priests of the time pointed to the metaphor of illumination; that if one followed the Catholic teachings, s/he would become illuminated with the wisdom of these teachings, just as the light from the windows illuminated the cathedral’s interior. The windows also served as a teaching tool. Because the majority of Europe’s population could not read, the Church needed another way to teach the congregation (church members) the stories of the Bible and about the saints for whom the various cathedrals and



Curriculum Connection

Art
Art History



Did You Know?

Some archaeologists believed that stained glass techniques might have developed in ancient Egypt. However, the ancient Egyptians did not use their stained glass for windows. They used it in jewelry making.

churches were dedicated. The windows became the Church's storybook, depicting important religious teachings.

To make stained glass, crafters first heated tree ash and sand to extreme temperatures at which these solids became liquefied. They added color to the glass with bits of ores and minerals. Formulas for creating the colors were trade secrets. In the early days of stained glass making, colors were limited to reds, greens, blues and some purples. Over time the coloring process became more refined, new colors were added and the colors had more vibrancy and clarity.

Next the glass was cooled back into a solid form. Today glass is formed into smooth, large sheets of a consistent thickness. However, the glass of the Middle Ages was very uneven in thickness and could only be made in small pieces. Glass workers cut the pieces into desired shapes by **scoring** the glass with a hot iron. They etched a line where the glass was to be cut. The hot iron removed some of the glass, making it weaker at the scoring line. The glass worker then broke the glass apart on the scoring line. Each piece was painstakingly cut in this way. Sections that did not break along the scoring line had to be cut again from new pieces.

Then the glass worker put the pieces together according to a pattern he'd created. Creating the images was like putting together a puzzle; perhaps several pieces were needed to create an animal or person. Pieces were held together with thin pieces of **lead**, a soft metal, shaped into little trenches for the glass to sit inside. The glass worker **soldered** the lead strips together to hold several pieces of glass together. Soldering is a process of heating metal so that it melts slightly and fuses with another piece of metal. Lastly, the glass worker put a frame, called an **armature**, usually made of wood, completely around the stained glass creation to help hold all the pieces together.

Early stained glass designs in the 11th and 12th centuries usually showed only one figure. However, by the 13th century, several figures might have been depicted in the same scene. Often medallion shapes, circles, and other geometric shapes surrounded these figures. Color themes were still mainly greens, blues, reds and purples, but white glass was also becoming more commonly used. Intricate glasswork was waning by the 14th century, replaced by single figures surrounded by solid colors.



Activities

1. Before the lesson gather examples of both medieval and contemporary stained glass. You may wish to enlist students' help in doing this. Consider gathering real examples, photographs and illustrations from books and on-line resources.
2. Either share the Background Information yourself or have a Troubadour Team share it.

3. Discuss the purposes of stained glass in medieval times and its impact on people's lives. Share examples of stained glass and discuss students' observations.
4. Tell students that they will be creating stained glass windows and, like the glass workers of the Middle Ages, their windows will also tell a story.
5. Brainstorm concept and story ideas that students could use for their windows. Jot these ideas onto chart paper or the blackboard for reference.
6. Working individually or in groups, students decide what story they'd like to tell through their stained glass window. They create a sketch of their design and construct the window according to the directions on the reproducible, "Creating Stained Glass Windows."
7. Share the reproducible, "Helpful Tips" with students before they begin their work. Consider copying the reproducible onto an overhead transparency for ease in sharing it with students during discussion.
8. When students' windows are completed, hang them on the classroom windows so that the natural light can shine through them.
9. Have students take each other on a tour of their windows, telling the story imbedded in the "glass."
10. Keep the windows hung up for display and for creating a medieval setting during the culminating event.

VARIATION: Use glass paints for creating stained glass windows. Be sure to use paints that can easily be removed.



Did You Know?

By the 14th century glass workers started using a technique called **grisaille**, using a single color, often gray. Grisaille paintings and stained glass windows were often created to represent statues.

Extensions



- Invite someone who works with stained glass to do a demonstration with students. Find out if students can be involved in making a small project.
- Create a flow chart showing the steps involved in creating a piece of stained glass.
- Research to learn how stained glass is created today. Create a chart showing the similarities and differences in the processes during the Middle Ages and today.
- Make a self-portrait stained glass window. Include illustrations of things that are important to you.

Journal Prompts and Processing Questions



- Do you think that creating pictures in stained glass was an effective way to teach lessons about the Bible and saints to the common people of the Middle Ages? Explain your thinking.
- Not all people attended cathedrals. Some went to smaller castle chapels and later, as towns developed, others went to small churches



in the towns. Many of these smaller churches could not afford stained glass windows. How do you think religious ideas were taught in these circumstances? Explain your thinking.

- What elements or techniques were used in creating stained glass windows that you found most effective? Explain your thinking.
- Do you think you or your group clearly conveyed a story through your window's design? What elements did you think were most effective for doing this? What else could you have done to convey the story? Explain your thinking.



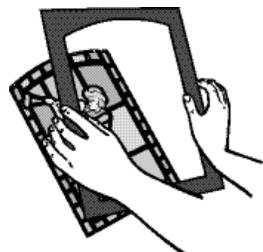
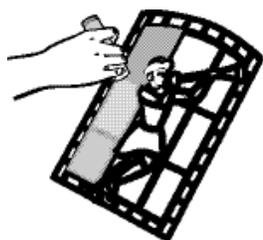
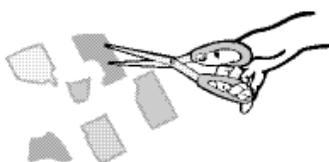
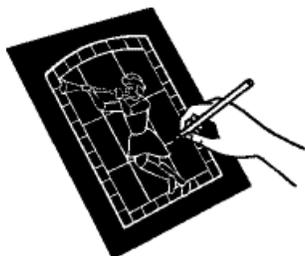
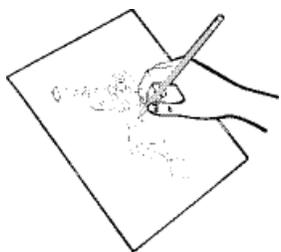
Evaluation

Content: Students' stained glass should tell a story and should use mosaic design elements.

Process: Observe students as they work and watch for cooperative decision-making and cooperative work skills if working as a group. Note care and creativity in window design.

Creating Stained Glass Windows

1. Choose a story idea for your window. Brainstorm ideas for how you could illustrate the story in clear, simple pictures.
2. Make sketches of design ideas for your window. Remember that stained glass is like a puzzle. Several smaller pieces are needed to create a whole object.
3. Discuss or evaluate the designs. Choose one to use for your window or combine ideas.
4. Using white or light-colored pencil, sketch your design onto black paper. The black paper is like the lead that holds all the glass pieces together. Your lead (black construction paper) should be thin so that it resembles the leading used in stain glasswork, but thick enough to be sturdy. About $\frac{1}{4}$ inch is a good width.
5. Cut out the spaces where you want the "glass" tissue paper or colored cellophane to go. Fold and snip to avoid cutting through your leading.
6. Cut pieces of tissue paper or colored cellophane just slightly larger than the open space you want to cover so that the edges overlap onto the black construction paper "lead."
7. Glue the edges of the tissue paper to the back side of your lead construction paper using a glue stick or thin layer of glue.
8. After adding tissue paper or cellophane to all of your open spaces, put a frame or armature about $\frac{3}{4}$ to 1 inch thick around the entire piece of stained glass.
9. Hang your stained glass piece on a window.



Helpful Hints

These are some tips that will help you create beautiful stained glass windows.

- ✓ Use good quality sharp scissors with a point. This will help you do interior cutting and get clean, crisp lines.
- ✓ After you cut out your design using the black paper, gently erase any white pencil lines that remain.
- ✓ If the thin “lead” lines (black construction paper) tear at any point, use a little extra glue in that place when you glue down your tissue paper or cellophane to help mend the tear.
- ✓ Use tissue paper if you want your window to have a translucent look similar to the stained glass windows of medieval times.
- ✓ Use colored cellophane if you want to have a transparent look similar to modern stained glass.
- ✓ Try to keep your gluing of tissue paper or cellophane smooth and neat to avoid a bulky-looking design.
- ✓ Do all gluing on the back side of your work so that the front looks clean and crisp.

