



Murals and Mosaics

Creating murals and mosaics on school grounds is a great way to express your school's identity, beauty and pride. They add diversity to the school environment and engage students in creative and expressive forms of art, both by working together and with local artists. Murals can also be used to announce and share details about your school ground project.

Design details

1 Murals

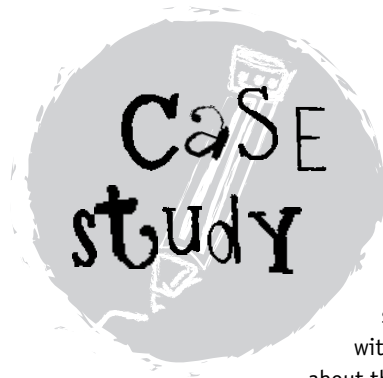
Murals can be created on interior or exterior walls, tool sheds, windows, doors and asphalt. Or, material and wood banners can be mounted on a wall. Murals can be created based on school curriculum themes, naturalization themes, cultural or social themes or any expression of what the students and teachers imagine. Murals can instill pride as students show others the section of mural they painted.



Humber Valley Junior Middle School

Tips for Creating Your Mural

- Survey the school and determine where a mural could be created to enliven an underused or barren space or to share a story with the school community.
- Determine if your mural should be a permanent feature on a wall or door or if it should be created on sheets of plywood so it can be moved or repaired, if needed.
- Work with different classes to determine themes for your mural.
- Consult a local artist, if available, to help prepare the mural site and provide instruction for techniques and materials.
- Build partnerships with local high schools and art colleges to help in the design and construction.
- Make sure you prepare your wood panels before painting your mural. Prime the boards on both sides with two coats of exterior high adhesive primer.
- Use good quality, exterior latex paint. Ask paint stores for mis-tints and leftovers to keep project costs low.
- Use a water-based urethane or spar varnish to coat your mural if vandalism is a threat. The protective finish allows the mural to be washed if needed. Keep in mind that urethane cracks and discolours in the hot sun. It may be just as easy to keep a supply of paint on hand and repaint the sections that are vandalized.

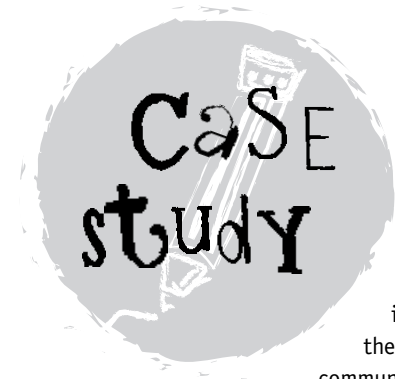


École Elementaire le Trillium, Vanier, Ontario

École Elementaire le Trillium developed a program to enrich the relationship students develop with their everyday space. Workshops were conducted with a musician during which songs about the environment were composed and a large mural was created with the help of a local artist. Each class had a chance to draw an environmental theme, then a composition was done by the artist from these drawings. Each student then had a turn at painting his or her own drawing on the mural. After this outside mural experience, an inside wall of the school was painted, where each student painted their own square. The link between the two murals was done in an effort to bring the outside environment inside and better integrate the two environments.



École Elementaire le Trillium



Southlands Salmon Wall, Southlands Elementary School, Vancouver, British Columbia

The Southlands Salmon Wall was created to foster understanding between the Musqueam and Southlands communities, and to encourage respect for the Musqueam people and their traditions in the non-Native community. The project was initiated by artist Alison Diesvelt who, together with the Southlands School principal, invited Musqueam artist Debra Sparrow into the project. Out of community consultations and workshops, a mural was created with colours and patterns drawn from Musqueam visual traditions. Many community members participated in painting the school salmon wall, which is in a prominent location near the main entrance of the school. Once the mural was completed, a salmon barbecue was held to celebrate.



Southlands Elementary School

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Mosaics

Mosaics provide a visually stimulating addition to the school environment. Working with mosaics helps children develop skills in using colour and pattern and often provides children who think they may not be artistic with the discovery of unexpected skills and greater confidence. But the true value of creating mosaics may simply be the delight children have when working with the colourful, tactile pieces. Children of all ages will enjoy the fun and benefits of creating mosaics, however, children under eight will need more assistance and guidance.

Tips for Creating Your Mosaic

- Use stepping stones to accent a walkway, or to form markers to an entrance into a building or a garden.
- Use a grouping of mosaics to create a large centrepiece for your garden or gathering place.
- Use pebble mosaics in planned walkways to augment the paving. Areas can be left void in concrete, asphalt or bricks and filled later with a pebble design.
- Use tile, shells, brass, stainless steel or copper pieces as well as pebbles to create a variety of pebble mosaics. It is also possible to cast multiple objects in clear resin or polyurethane amber to create visible time capsules or wall inserts (these are not advised in high traffic areas).
- Try creating game boards using either pebble or tile mosaics.
- Turn pebble, rock and tile collection into a field trip to local beaches, gravel yards or glass shops.

Types of Mosaics

a) Tile Mosaics

Tile mosaics can be applied directly to a wall or installed on a piece of plywood and then mounted on a wall. They can also be applied to smooth concrete surfaces such as walkways and store bought stepping stones.

Materials Needed

You may need some or all of the following materials depending on the method you chose to create your mosaic.

- Wire brush — to clean the sub-surface area.
- Plywood board — cut to the size of your mosaic.
- Bonding mixture, tile cement or thinset — to secure the tiles to your board or concrete slabs (Weldbond works fine for indoor mosaics on wood).
- Tiles — made from glass, ceramic or other colourful material that breaks easily.
- Hammer — for breaking the tile pieces.
- Containers — for storing and keeping separate the different colours of tiles.
- Work gloves and goggles - for protection when breaking the glass or tile.
- Bucket — to mix the grout and the bonding mixture.
- Pointing trowel, palette knife, spatula or butter knife – to spread the bonding mixture.
- Water — to mix the grout.
- Grout — to fill between tiles.
- Colour dyes or water-based paint — if desired to add colour to clear glass tiles.
- Rubber gloves — to wear while mixing and working with the grout and bonding mixture.
- Sponge — to wash the excess grout off of the tiles.
- Kraft paper and wallpaper paste — to attach to your tiles.



Armada Public School



Creating Your Tile Mosaic

Once you have a plan for your tile mosaic, collect tiles, such as glass, mirror, shells, stones and hard plastic. Make sure the tiles are frost proof for outdoor pieces. Have a round up day and collect unused or unwanted materials from home, local companies or stores. Then you are ready for 'tile breaking day'. Wear protective goggles and gloves and smash the tiles with a mallet or hammer one piece at a time into one to two-inch wide shards. Use tile snips or cutters if you require more precise shapes for your pattern. This step is best done with teachers and a few students instead of a large group. Place the broken tiles, by colour, into containers. Now you are ready to create your masterpiece!

There are two ways to create your tile mosaic — with or without grout. The method you choose will be based on the resources, time and expertise available.

1. No Grout Method

This is the easiest method for creating tile mosaics.

- ✎ Create your design on paper and place your tiles on the paper without adhesive. Use the same thickness of tiles when possible so the Kraft paper lies evenly on top.
- ✎ Press 60 pound Kraft paper that has been glued with wallpaper paste to your tile design and let dry.
- ✎ Place the Kraft paper (with tiles attached) onto your concrete stone, wall or piece of walkway with thinset, a standard outdoor tile setting material. Grouting is optional for wall pieces.

2. Grouting Method

The following section provides detailed steps involved in creating tile mosaics with grout. It is advised that a skilled artisan lead the creation of a tile mosaic when grouting is involved to make sure your mosaic sets properly and stands the test of time.

Preparing the Surface

- ✎ Scrub wall or floor surfaces with a wire brush, ensuring there isn't any loose mortar or debris.
- ✎ Prepare plywood surfaces by coating with a bonding mixture (e.g. tile cement).
- ✎ Draw your design on the wall with chalk or paint, or on the board with pencil.

Fixing the Tiles

- ✎ Mix tile adhesive following the instructions on the bag. Pay attention to health and safety precautions and wear a dustmask if required. Remember to wash the cement bucket and tools between mixes.
- ✎ Apply the cement over small areas, following your design, using a pointing trowel, palette knife, spatula or butter knife.
- ✎ Apply tiles. Start with outlines and then fill in larger areas. For instance, you may want to make your tile shapes to follow the contours of the drawing.
- ✎ Keep gaps as tight as possible using very small tile pieces as fillers.
- ✎ Continue this process across the entire mosaic. Remember sharp tile edges will still be exposed at this stage and some tiles may fall off and need to be re-stuck. Be patient!
- ✎ Allow to set for two hours.

Grouting

- ✎ Wear rubber gloves when grouting.
- ✎ Use wide-joint grout. This will enable you to fill gaps of up to 15-millimetres and apply around the edge of the plywood, if used, for extra protection.
- ✎ Select coloured grout if desired, or mix grout with dyes or pigments to add a variety of colour throughout the mosaic.
- ✎ Apply grout with a squeegee if your tiles are the same thickness, or use a three-inch brush to work in uneven areas.
- ✎ Make sure all gaps and holes are completely filled.
- ✎ Wipe off excess grout with a damp sponge, rinsing the sponge frequently.

Once your tile mosaic is complete you will need to polish off the dried residue (from washing the grout off of the tiles) with a dry clean cloth.



Armada Public School

b) Pebble Mosaics

Pebble mosaics are a great medium for rendering aspects of the natural world from insects to animals, birds and fish, as well as for creating more abstract designs. It is also a great way for students to integrate natural materials into long lasting pieces of artwork while studying the pebbles themselves: how they came to be, different types and geological conditions. You can create stepping stones for the garden, tablets with images that tell a story, a centre piece or a mosaic pathway.

It is best to work in teams of two or three students for each 16-inch diameter stepping stone, tablet or design of choice. Sketch out a simple design on paper. Consider a border and plan rock colours, remembering to use contrast between light and dark. Spend at least three hours executing the design before it is cast as a permanent piece.



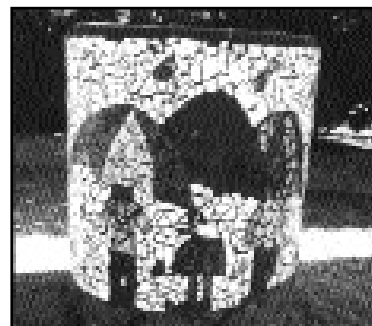
Materials

- ✦ A form — in which to cast the mosaic. Create a circular form using a seven-centimetre (three-inch) section of a bucket or drum, a square form using wood or build an odd shape out of five-centimetre (two-inch) thick cut styrofoam or bent metal roof flashing.
- ✦ Plywood or chipboard — 5/8-inches thick, and large enough so you have a few inches extra around the outside of the form.
- ✦ Screws and duct tape — to secure the form onto the plywood or chipboard and prevent leakage.
- ✦ Sand — to fill in the base of the mold. Use beach, river or builder's sand.
- ✦ Pebbles — 1/2-inches to three-inches long. Use beach or river pebbles or landscape pebbles. Bagged gravel or "stucco rock" can also be used as background filler.
- ✦ Expanding grout — that can be mixed by hand in a bucket with a strong garden trowel.
- ✦ Buckets — for mixing and cleaning.
- ✦ Water sprayer — to spritz and set the sand around the pebbles.
- ✦ Wirebrush and a hose — for cleaning.
- ✦ Rubber gloves and dustmasks — enough for everyone when working with the grout.
- ✦ Trays — for viewing, displaying and storing colour sorted pebbles. Annual trays from garden centres work great for this.

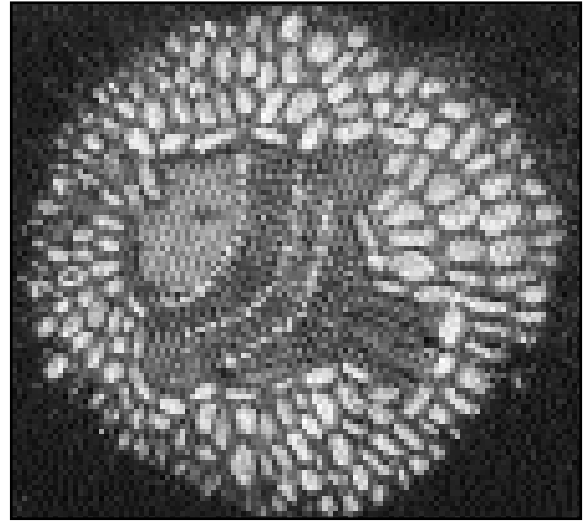
Creating Your Pebble Mosaic

This is a reverse cast or "upside-down cake" method.

- ✦ Place duct tape on the inside of the form to seal it and ensure the grout will not stick to the form.
- ✦ Secure the form onto the plywood or chipboard with screws.
- ✦ Pour sand into the form up to 3/16-inch deep (less if using small stones) and spread evenly. Sand forms the relief for your tablets once they are turned out of the molds. Sand also adds support for upright stones.
- ✦ Transfer your design from the sketch you made to the sand.
- ✦ Place pebbles into the sand following your design and push or twist each stone right down to the plywood or chipboard surface to ensure a level surface when finished, making sure they are not buried more than half way in the sand. You only need enough sand to hold the stones in place so remove some sand if needed. Place stones tightly together inside the form since any areas where sand is showing will become concrete. Stones can be placed flat or upright to create the line work of your design. Remember to place the correct side of the pebble facing down. And remember any text will need to be reversed so it can be read when the cast is turned over.
- ✦ Once all stones are tight in the sand, add extra sand with a spoon and move it around with a small paintbrush, or remove sand in areas where there is too much so that no less than half of the height of the stone is exposed.
- ✦ Mix the expanding grout to a slightly fluid (just pourable) consistency by adding water first to the bucket and then adding the grout and stirring until the consistency is achieved. Keep in mind one 50-pound bag covers four square feet at two inches thick. So, for a stepping stone that is five to seven centimetres (two to three inches) thick and one metre (three feet) square you'll need half of a bag of expanding grout.
- ✦ Spritz with water to set the sand.
- ✦ Re-stir the grout and gently spoon onto the pebbles, surrounding the tall ones first. Coat entirely with grout to a depth of five centimetres (two inches). You can add a layer of Readimix (bagged) concrete on top of the grout to thicken the stone another 2.5 to five centimetres (one to two inches) if vandalism is a threat. Remember to put in your galvanized anchor bolts after pouring the grout if you are planning on placing your tablet into a fresh paved walkway.



- Let sit for 15 minutes.
- Cover with plastic and let sit for two days.
- Remove the form (using a rubber hammer if needed) and clean off any grout that may have leaked through the sand and settled on the surface of your pebbles. Add a clear coat of acrylic or lacquer patio sealer, if desired, to help bring out the shine and colour of your pebbles.
- Re-wrap in plastic and let sit for at least 28 days. This time will allow your mosaic to cure slowly, creating a stronger more durable stone.
- Place your stones or medallions in the grass, in your garden or set in a fresh concrete walkway.



Trout Lake Community Centre

Maintaining Your Pebble Mosaic

When set in grass areas, pebble mosaics will need to be maintained so the grass does not take over and cover up your creation. Typically, after one year grass will encroach. This makes it difficult for anyone to remove the stone, and it makes it difficult to see. Keep these tools on hand: a small trowel, bristle or wire brush, big scissors, soft broom, screw driver, disposable 1-1/2 inch paintbrush or sponge fragment, exterior lacquer and gloves, and visit your pebble mosaic every now and again to perform these maintenance duties.

- Chop (with a trowel) or cut (with scissors) any areas of grass that are growing over the edge of the mosaic.
- Use the brush to scrub away all debris that is stuck to the surface between the pebbles. Sweep it away.
- Apply exterior lacquer to the clean surface of the mosaic with the sponge or paintbrush. Shelter from wind and blowing dust until the lacquer is dry — approximately half an hour.
- Re-coat with lacquer after pebbles are dry for extra protection.

Codes and Safety Standards

Pebble mosaics are long lasting, all weather and virtually slip proof, but check with maintenance staff regarding surface concerns and suitable placement. When placing tablets in grass areas, take into consideration lawn cutting heights. There is normally not a safety concern for tablets set in walkways as long as the pebbles are set properly in the mold to ensure they create a level surface when upside down.



Where to *go* from here?

Sources for this fact sheet

McNaught, John. "Art in the School Grounds." *E-scape*, Issue 20, Summer 1999.

Vancouver Board of Parks and Recreation. *Guide to Some of Vancouver's Community Based Art*. A brochure. 1999.

Organizations and Web sites

Mosaic Planet. Glen Anderson, 816 Jackson Avenue, Vancouver, BC, V6A 3C1, Phone (604) 215-2189

Example projects

Murals

École Elementaire le Trillium, Vanier, Ontario: (613) 239-5057

Humber Valley Junior Middle School, Mississauga, Ontario: (905) 394-7860

Southlands Elementary School, Vancouver, British Columbia: (604) 713-5414

Mosaics

Queen Mary Elementary School, Vancouver, British Columbia: (604) 228-1184