Ideas for Sources of Free Materials

There are all kinds of sources of materials, services, expertise, skills, resources and funding that can be found in the community. The cost of purchasing new plant and construction supplies can be reduced by finding out what discarded or unwanted materials might be available.

Outdoor classroom projects can be created inexpensively by scrounging and salvaging materials. Using discarded or unwanted materials helps keep them out of the waste stream and at the same time teaches children that it is not always necessary to purchase new items.

NEEDS	IDEAS
Trees, shrubs, and other plants	Plants can be saved from development sites, but there may be a cost involved if contractors assist with transporting or transplanting plants. Plants can also be obtained through, for example, local municipal parks departments, provincial ministries and federal departments of natural resources, local nurseries, and, in Ontario, Conservation Authorities and stewardship councils. When rescuing wildflowers and small shrubs, focus on preserving the integrity of as much soil as possible around the plant to protect the roots. Note the exposure and growing conditions and replicate them as closely as you can to reduce the transplanting shock. Except in the case of transplanting trees, cut straight down into the soil with a spade making the cut at least one foot square and one foot deep. This will help to protect roots and save seeds that are in the soil. When moving a large area of plants, lay out a grid of squares and number each square. The squares can then be laid out in the same order in a new location to duplicate as far as possible their original growing conditions and relationship to one another. You can also grow plants from seeds collected locally. Learn about how to gather seeds, and ask gardeners, farmers and people in the community for cuttings, seeds, leftover annuals and divisions of perennials. Super-markets will often support their community school by making plant donations. Plan to start growing bedding plants indoors for a spring sale to raise funds for the purchase of, for example, native species. As your gardens grow, plan a plant swap event to increase your plant diversity and give your project greater visibility in the community.
Seeds	Take the class on a seed-gathering expedition in the autumn with a naturalist or botanist, but it is vital to first find out when and how to harvest seeds. Some nurseries produce seeds from native plants may also be willing to help.

NEEDS	IDEAS
Sod removal	Avoid back-breaking digging and rototilling! Place corrugated cardboard or two layers of whole newspapers on the sod and cover them with soil and mulch. The cardboard or paper will kill the grass and decompose in about two years. You can plant through small holes cut into the cardboard or paper. This method makes fundraising for a rototiller unnecessary, uses no plug-in energy, allows students to do the entire job themselves, recycles waste paper products, and does not upset the ecology of the soil by churning up aerobic and anaerobic soil bacteria.
Tools	Borrow tools needed for short-term projects and ask local stores to donate some gardening tools for your project.
Digging	Local service clubs, public utilities and contractors can be asked to help with excavation work if the school board lacks the equipment. When you do the Skills Identification Survey, you may discover that you have construction workers in your own school community.
Pathways between plantings	Wood chips can often be obtained from landscaping and tree service companies or municipalities. Building suppliers may donate patio stones, bricks and tiles. Check the local weekly "penny saver" for second-hand materials. You can also post signs on signboards in supermarket and other stores, and send requests for unwanted materials home with the children.
Planter retaining walls	Rocks may be acquired from local quarries and construction and demolition sites. Municipal public works departments can connect you with their road construction contractors who may allow you to rescue rocks unearthed during excavation works. It is also worth asking contractors about leftover construction lumber. Rocks can also be used for seating and pathways.
Used tires	Large used tractor, snow plough and loader tires make good planters and seating for children at no cost. Children love them! They can be painted with colourful patterns using a good exterior latex primer and topcoat, although leaving them "as is" cuts down on maintaining the paint. They should be very firmly packed with soil whether you plan to use them as planters or seating. School boards often object to tires. The reasons given are "the metal bands that are embedded in the rubber are a safety consideration", "disintegrating tires are a health hazard", and "children can become trapped inside them". The metal bands are only a problem with unfilled, smaller or thinner vertically installed tires that are buried to a depth of half their height in the soil. Children crawl through these tires which gives rise to entrapment concerns. Children also climb and bounce on them and there is a concern that the regular flexing of the tires will cause the metal bands to gradually emerge and cause an injury.

NEEDS	IDEAS
Used tires (continued)	Where larger, thicker tires are placed flat on the ground and filled with soil or sand, no flexing can occur and children cannot crawl through them. The metal bands in the casing of thick tires with heavy tread are embedded to a depth of 4-8 inches. The material the tire is made of is inert and used tires dumped into the environment last for many years without showing signs of decay. Tires wear down and release toxic substances such as heavy metals into the atmosphere while vehicles are being driven; tires lying flat on the ground and packed with soil are not going anywhere, and not releasing anything. Other materials used for play equipment deteriorate faster and require more maintenance: wood rots and splinters, plastic becomes brittle and cracks, and metal rusts. It would appear that the real reason for objections to tires involves the cost to school boards of removing them from schoolyards and shipping them to a recycling depot at some future date. Encourage your school board to be more creative! Ask them to allow you to put money into a specially-created account so that they know you can pay for the removal of the tires should it be necessary. Check with your local tire centre to find out the disposal charge per tire. Try to access loader tires in good condition with a diameter of about 4-5 feet. Tires of this size weigh approximately 1,500 to 2,000 lbs each. They can be fairly easily obtained from tire repair centres who will deliver them to the school yard on a truck with a crane. You save them the cost of disposing of the tires and you get free seating and planters. Make sure you know exactly where you want them because their weight makes them almost impossible to move without a crane. Some tires are 14 feet in diameter and weigh 6,000 lbs! The advantages of using tires for school grounds furniture are: they do not have edges or corners where children can hurt themselves; unlike wood, they do not splinter, rot, sprout fungi or need to be treated with preservatives; their one-piece construction means that they do not need to be maintained as regularly as play structures and benches with bolted parts; they do not have to be anchored to the ground due to their weight; they save trees being cut for wooden structures; and they show children how they can use discarded items creatively to help conserve resources. Tires also last a long time. A structure built of several tires bolted together in a school in Ontario outlived two typical multi-level play structures.
Toilets, sinks and bathtubs	These make great planters! They are free and have good drainage. They show children how unwanted items can be reused. The ceramic surfaces can be covered with a mixture of concrete, plant fibre and stain to create a more-natural, stone-like appearance.
Wood	Wood leftovers from do-it-yourself projects can be rescued from basements, sheds and cottages, and by contacting carpenters, builders and local lumber yards. By approaching local government, you may be able to access new wood off-cuts from construction sites, which are often stored separately in municipal landfills. Abandoned hard or soft wood skids are good for building composters and planters.

Did you know about FreeCycle?

For free "stuff" – equipment, plants, building supplies, etc., be sure to try www.freecycle.org.

100,000 freecyclers in 234 Canadian communities give away huge amounts of unwanted new and used stuff every day.

Find and join your local Freecycle chapter in Canada at: http://snipurl.com/Freecycle_Canada

Post a "WANTED" message for your school project. You'll be amazed at your community's responsiveness and generosity!

NEEDS	IDEAS
Compost bins	Save waste going to the landfill and save money by making your own fertilizer at school with yard and lunchtime organic waste. Three-bay composters can be made of new wood off-cuts from construction sites or wooden skids. Plastic olive barrels and other similar containers can also be used for composting. Drill holes in the bottom of plastic containers and all over the sides to permit proper aeration, otherwise your compost will be too wet and smell bad.
Concrete	At the end of the day, companies that pour concrete foundations for buildings have leftover mixed concrete which is regularly discarded. This waste concrete could be used for planter edges, steps, stepping stones and setting upright posts in the ground, or for shapes such as giant toadstools for children to sit on. When accessing mixed concrete in this way, you would have to have the site or mould prepared ahead of time for pouring the concrete into and someone standing by to direct the driver.
Bat boxes, bird feeders and nesting boxes	Contact local conservation and nature groups for guidelines on how to build nesting and roosting boxes for different species. Elementary schools can ask high school design and technology teachers and students for help in building them. For bats, information can be found on the Bat Conservation International website.
Painted pavement markings	For mazes and other painted designs on asphalt play spaces, ask parents to send in their unwanted leftover household paint, ask local paint stores for miss-mixes and advertise in community newspapers. A latex primer and top coat should be used (see the Types of Projects chapter, Pavement and Wall Markings, for instructions).
Straw bale maze and straw bale planters	Ask a local farmer to donate straw bales to make a maze for play in winter. When the bales fall apart in the spring, the straw can be used to mulch around plants to help keep down invasive weeds and prevent the soil from drying out. Lay down the maze design in the autumn and just before freeze-up soak the bales with water from a garden hose to make them freeze hard. Try asking the local fire department to soak the bales for you. Straw bales can also be made into planters by scooping out some of the straw, adding soil, and planting directly into the top of bales. Potatoes grow very well in straw bale planters.
Ceramics for murals, etc.	Contact local arts and crafts groups, community centres, art schools, etc., and enquire about procuring kiln time and help with making ceramic murals, tiles, mosaics and plant identification tags. If you have a local Freecycle group, try posting a “wanted” advertisement. To find out if your area has a freecycling group, go to: http://snipurl.com/Freecycle_Canada. Also, ask businesses that sell tiles if they could save their broken tiles for you.

Ideas for Sources of Help and Expertise

You can find much of the expertise and many of the skills you need to help with planning, implementing, using and maintaining school grounds greening projects in your community, and a lot of the grounds greening work can be done with school and community volunteers. Many people do not immediately see how they can help with school grounds greening and outdoor classroom projects, and their use and maintenance unless they have an interest in gardening. Go on the assumption that everyone has a valuable skill to contribute. You will need to show people how their skills can fit in with the project.

Some skills and areas of expertise required for school grounds projects are assumed whereas others are less obvious but equally important. You can find out what expertise and skills your school community has by having students organize a Skills Identification Survey.

NEEDS	HELP AND EXPERTISE
Artists	Ceramists, painters, sculptors, and designers are often willing to donate time to their local school. Some provinces have "artist in residence" programmes which could be accessed for art in the school grounds projects.
Biologists	Local biologists can help you identify and learn about wildlife in the schoolyard.
Bird-watchers	Bird-watchers can help familiarize children with the habits and needs of birds that are attracted to your plantings, feeders, baths and nesting boxes. Interesting fact: Bird watching has become a major industry in North America (Canada, the United States and Mexico). It generates USD $25 billion a year. It employs over 60,000 people. It rivals the combined economies of the chemical and steel industries. Bird watching depends upon the protection of wildlands and wilderness habitat. It thrives and grows on the protection of biodiversity. There is huge job-creation potential in environmentally-friendly jobs related to bird watching.
Botanists	Botanists can help you teach children about plant life above and below the ground, and identify the plants that move into school grounds habitat through various methods of seed dispersal.
Composting experts	Staff at your municipal waste management branch may have a list of local master composters who can teach children about what happens to the food and yard waste in worm bins and outdoor composters. Children can then start to make their own compost at school, and use it to improve the soil for their plants.

NEEDS	HELP AND EXPERTISE
Conservation experts	People with conservation expertise can help with the management of both existing and newly-created wildlife habitat.
Ecologists	Ecologists can assist schools in improving the ecology of their grounds and teach about how to enhance local biodiversity through grounds greening projects.
Entomo-logists	You may be able to find a retired entomologist to help you identify insects on the grounds and create insect habitat for class studies.
Field naturalists	Field naturalist clubs may be willing to help establish a nature club in your school and help with planning your wildlife habitat.
Farmers	Farmers can help by donating materials such as trees and other plants, straw bales, and well-rotted manure to start building healthier soil, advise on plant growth, soil, soil nutrients, etc.
First Nations	First Nations people may be willing to speak to children about their traditional way of life and how they use and value the natural world.
Foresters	Foresters can give assistance with choosing the right tree for the right site, explain how trees are affected by different environmental conditions, and advise on tree care and maintenance.
Garden care	Gardeners in your school may be able to spare some time during the summer to help with maintenance jobs such as weeding and watering. This will send a strong message to the community about the importance of the grounds to the school.
Gardeners	In today's multi-cultural schools, there are families with considerable agricultural and horticultural expertise who, since leaving their own countries, often no longer have access to a garden. They need to be approached in person and invited to help because they are often shy about volunteering. Gardening is one of the fastest growing pastimes in Canada, so you should be able to find lots of help.
Geographers	Geographers can help add geography to the political maps of Canada that some schools have painted on the asphalt. Children say they would rather see vegetation zones and their names, cities and towns, major rivers and lakes, glaciers, islands, and mountains than empty patches of colour showing the provinces and territories.
Horti-culturists	Lots of towns have horticultural societies and Communities in Bloom groups. Members may be willing to help you plan and maintain your gardens.

NEEDS	HELP AND EXPERTISE
Hydrologist	A hydrologist may be able to help if you have drainage problems.
Landscape architect	You should be able to find a local landscape architect or a landscape architecture student to draw up the final plans for the grounds (should this be required by the school board) after you have completed the surveys and drafted the preliminary plans.
Meteor-ologist	Meteorologists can help set up a weather monitoring station so that children can learn to record and track daily wind speed, wind direction, precipitation, the pH of rainwater and snow, and seasonal weather patterns.
Organic growers	Organic growers may be able to help you develop organic edible gardens to produce herbs, vegetables and fruit.
Outdoor educators	Outdoor educators in your school board can help teachers integrate your outdoor spaces into the curriculum.
Parks planners	Municipal parks planners are often willing to help schools with projects and can provide useful information on what resources are available in the community.
Permaculture designers	Permaculturists can help you plan and plant self-sustaining plantings.
Researchers	People to help research all aspects of project planning and development, and to find out about schools that are involved in similar grounds greening activities.
Scientists	Scientists to advise and help with hands-on science activities on the school grounds.
Soil analysts	Soil analysts can involve children in determining the pH of the soils in different locations in the schoolyard to help identify the right plants for the site.
Surveying and consulting	People to assist with organizing and conducting the people and site surveys and to help with comparing and analyzing data collected annually on biodiversity, shade, and changes in student behaviour resulting from greening the grounds.
Treasurer	Someone who handles the accounts can track donations, in-kind services and other revenues, expenses, receipts, etc., and report to funders.