

Arts & Lifestyle



Trash to Treasure



Reference Book
&
Activity Guide



Saskatchewan

4-H MOTTO

Learn to do by doing.

4-H PLEDGE

I pledge
My HEAD to clearer thinking,
My HEART to greater loyalty,
My HANDS to larger service,
My HEALTH to better living,
For my club, my community and my country.



4-H GRACE

(Tune of Auld Lang Syne)

We thank thee, Lord, for blessings great
On this, our own fair land.
Teach us to serve thee joyfully,
With head, heart, health and hand.

This project was developed through funds provided by the Canadian Agricultural Adaptation Program (CAAP). No portion of this manual may be reproduced without written permission from the Saskatchewan 4-H Council, phone 306-933-7727, email: info@4-h.sk.ca. Developed: September 2013.

Writer: Kristal Kennett, BSc Hon, MRM



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada



AGRICULTURE COUNCIL
OF SASKATCHEWAN INC.

Table of Contents

Introduction

Objectives	1
Achievement Day Requirements of this Project	1
Getting the Most from this Project	1
Resources for Learning	1
Before We Get Started	2
The Basics	4
Materials and Supplies	7
Materials and Supplies Worksheet	16
Tools and Equipment	18
Tools and Equipment Worksheet	23

Unit 1: Paper Perfect	25
Paper Making	26
Activity 1 – Paper Making Mould	27
Making Paper	29
Activity 2 – Floral Bookmark	31
Activity 3 – Plantable Gift Tag	35
Papier Mâché	38
Strip Papier Mâché	38
Activity 4 – Making Strip Papier Mâché Paste	40
Activity 5 – Strip Papier Mâché Hand Mirror	42
Pulp Papier Mâché	45
Activity 6 – Making Papier Mâché Pulp	46
Activity 7 – Pulp Papier Mâché Bowl	48
Folding Fun	51
Activity 8 – Envelopes	51
Activity 9 – Gift Bags	54
Activity 10 – Cereal Box Basket	57
Activity 11 – Lidded Box	60
Colourful Coiling	63
Activity 12 – Coiled Paper Pendant	63

Unit 2: Groovy Glass	69
Activity 13 – Tissue Paper Candle Votive	70
Activity 14 – Wrapped Bottle	72
Activity 15 – Snow Globe	75
Activity 16 – Tinted Glass Jars	78
Activity 17 – Sewing Kit in Mason Jar	80
Unit 3: Marvelous Metal	84
Activity 18 – Tin Can Luminaries	86
Activity 19 – Decorator Can with Lid	89
Activity 20 – Fancy Foil Mobile	93
Activity 21 – Magnetic Memo Board	96
Activity 22 – Bottle Cap Magnets	99
Unit 4: Pretty Plastic	102
Creative Cutting	105
Activity 23 – Vase	105
Activity 24 – Pop Bottle Flowers	107
Activity 25 – Cuff Bracelet	111
Hot Heating	113
Activity 26 – Shrink Plastic Pendant	113
Activity 27 – Fused Bubble Wrap Earrings	117
Clever Carving	121
Activity 28 – Foam Tray Stamped Card	121
Unit 5: Cool Clothing	124
Crazy Cutting	125
Activity 29 – Fringe Beach Cover-Up	125
Activity 30 – Halter Top	129
Activity 31 – Fitted T-shirt	132
Activity 32 – T-shirt Scarf	135
Activity 33 – Rosette Headband	138
Activity 34 – T-shirt Beach Bag	141
Simple Sewing	144
Activity 35 – Dress Shirt Pillow	144
Activity 36 – Denim Tote	147
Fabulous Felting	150
Activity 37 – Felted Glasses Case	151

Unit 7: Heavenly Household Items	154
Activity 38 – Mosaic Frame	155
Classy Crockery	160
Activity 39 – Teacup Bird Feeder	160
Activity 40 – China Jewellery Holder	164
Activity 41 – Sharpie Painting	166
Beautiful Books	168
Activity 42 – Book Box	168
Frames	172
Activity 43 – Earring Hanger	172
Concluding Remarks	175
Bibliography	176

Introduction

Objectives

In this project, we will be making crafts by reusing or recycling items that may have been sent to the recycle centre, garbage dump or landfill. We will be utilizing a variety of techniques to transform these materials into useful or attractive items.

The point of this project is to create treasure out of trash, to repurpose or up-cycle our garbage. In doing so, we learn to be creative with everyday items that are considered waste.

Although you are not required to do all the activities, completion of them will give you more exposure to ideas and more practice of techniques. This will lead to more skill and ability in making a wide variety of crafts.

Achievement Day Requirements of this Project

- Completed record book
- At least two craft items from each of the major sections of paper, glass, metal, clothing and household items for a total of 10.

Getting the Most from this Project

- Attend club and project activities regularly.
- Listen and ask questions. You will learn from each other as well as your leader.
- Do as many activities and techniques as possible so that you can 'learn to do by doing'.

Resources for Learning

- People – members of our communities and beyond can have craft skills that they will be willing to share.

- Websites – the Internet is a good source of information and inspiration, including videos on websites like youtube. Be sure to check out Etsy the online craft store for inspiration.
- Books and magazines – libraries are often a good source for inspiration as well as a reference on techniques.
- Craft stores – sales people can be helpful and many stores stock project sheets or offer lessons in using various tools and equipment.

Before We Get Started

Organization of Project

This project is organized by materials and then the techniques that can be used to make treasure of the trash. In keeping with the 4-H motto, you will learn to do by doing, and as such, activities are integrated with the resource information. The more activities you do, the more opportunities you will have to work with the materials and tools and the more you will master the techniques.

Activities are supported by:

- Description of the activity objective.
- Hints and tips, if any, to assist you in the technique.
- Time required to complete item the first time; as you master the technique, the time needed will be less and less.
- List of materials and tools.
- Activity instructions.
- Online resources with links to web pages or videos.
- Post-activity questions where you can document your experience of using that material or technique.
- Listing of other ideas and internet resources utilizing similar technique or material.

In the lists of materials required, both metric and imperial measurements are given. In many cases, these are not direct conversions as that level of accuracy is not required. Instead, they are practical measurements specifying amount of materials. For example, it is much easier to measure two inches than 1.96 inches, which is equal to five centimetres.

Finally, before you start an activity, read through the description, materials and tools, and instructions to gain an understanding of the task at hand. Find a work area with good light and a hard, flat surface. Be sure to gather ALL your materials and tools before you start.

Internet Activity

The Internet is a great resource for information, ideas and instructions. You can gain inspiration from the many clever and creative people who post their ideas and projects on the Internet. Try searching under 'repurposed crafts' or 'recycled crafts'. Also, you could join social networking-based website such as Pinterest or StumbleUpon.

Caution: Both searching for ideas and making the crafts can be habit forming!

If you are using the Internet, follow these guidelines:

- If you post online, NEVER attach any personal information such as names, addresses, phone numbers, date of birth, what school you attend, etc.
- ALWAYS remember the person you are communicating with may not be the person they claim to be.
- When using social media sites like Facebook, set your online profile to private. That way, only people who will be able to see your profile will be those that you approve.
- Do not give your passwords to anyone but your parent or guardian.
- Never meet anyone in person that you just met on social media sites.
- If anything happens online that makes you feel scared or uncomfortable, ALWAYS tell your parent or guardian. Report any inappropriate comments or messages if they violate the terms of service for that site.

Safety First

As well as being careful on the Internet, we need to be cautious when using tools and some materials. Here are some tips on how to be safe:

- Cutting – many of the activities in this project involve using some sort of cutting instrument. Be careful with any sharp or pointed blade, and always be conscious of where you put it down after using it. You may need adult help when first using a craft knife.
- Paints and sprays – the gases that are released when using some paints, sealers and sprays can have harmful fumes that cause head-aches, throat and nose irritation and nausea. Ensure you have good ventilation when using these items.
- Glues – be careful using fast bonding glues like Superglue to avoid gluing your fingers together. Also ensure you have good ventilation while using the stronger adhesives.
- Glass and metal – when working with glass, be careful as it can break. With metal, be careful of any sharp edges. Some can openers do not leave a sharp edge but most do.
- Wire – when working with wire, it is a good idea to always wear safety goggles or glasses, particularly when cutting wire. Do what you can to protect your eyes and vision from sharp flying wire.
- Appliances and power tools – in some activities, you will be using a hot glue gun, an oven, or a pressing iron. Use caution to keep yourself and others safe. If you are unsure how to use a piece of equipment, ask. Or, have an adult help you.

The Basics

This project is based not only on crafting ideas and techniques but on a basic philosophy of recycling and repurposing some of our waste.

Waste is really just the material that is left over, rejected or thrown away from anything we do be it working, playing or eating. Quite simply, it is material that is not wanted by its producer. To many people, waste is known as trash, rubbish, or garbage.

Managing waste has always been a problem, but particularly since the Industrial Revolution in the 1800s which marked the introduction of power-drive machinery and the manufacture of consumer goods on a large scale. For a long time, wastes were dumped wherever it was convenient, released directly into waterways, or freely emitted into the air. Fortunately, we have come a long way since then; we now take steps to control, collect and manage our wastes and have cleaned up streams and land that had been polluted by past waste dumping.

Today, the bulk of our household waste or garbage goes to garbage dumps or **landfills** which are large sites that are designed to isolate the garbage from the surrounding area. Each day, the landfills are covered with soil and compacted with big machines in order to keep garbage blowing around



communities. However, garbage needs sunlight, air, temperature and water to break down. By their nature, landfills do not allow that. The daily application of soil on the collected garbage cuts off sunlight and air and water is sealed off. As a result, items in a land fill decompose at a much slower rate. Also organic waste that decomposes in an anaerobic or airless situation like a landfill produces a gas which is composed primarily of methane. Methane is one of the greenhouse gases contributing to global climate change. For every kilogram of solid waste that goes into a landfill, two kilograms of greenhouse gases are produced.

Did You Know...?

In 1973, an archaeologist named William Rathje undertook the Garbage Project and dug through landfills in Arizona looking for clues to consumer behaviours. In landfills from the 1950s he found whole hot dogs and bags of leaves that looked like they had been thrown away yesterday!

Did You Know...?

How long some items take to break down in a landfill:

- Apple core – from a couple of months to years
 - Newspaper – between 2 or 4 months or sometimes years
 - Cigarette butt – at least one to five years (not including the toxic substances in the filter!)
 - Plastic bottles made of polyethylene terephthalate (PET – a petroleum-based product) – up to 500 years
 - Styrofoam (expanded polystyrene) cup – does not show any sign of breaking down!
-

Canadians produce approximately 31 million tonnes of garbage a year, 70 per cent of which goes to one of over 10,000 landfill sites. Only about 30 per cent of this waste is diverted by composting, reusing, or recycling. Statistics Canada estimates that between 50-60 per cent of the waste that goes to the landfills could be recycled, reused or composted. According to the Recycling Council of BC, each person in Canada creates approximately 2.7 kg of garbage each day, which adds up to 985.5 kg per year. This is almost the weight of a small car!

The sheer volume of waste means that many existing landfill sites are almost full, and few people want new sites built near their communities. What can we do?

Waste Management – The Three R's

What does the phrase “The Three R's” mean to you? Your grandparents might know that as “reading, ‘riting, and ‘rithmetic”; others might know it as “Reduce, Reuse, Recycle”. Since this catchy phrase was first taught to school children a few decades ago, it has become the slogan for the environmental movement to deal with our wastes.

‘Reduce, reuse, recycle’ has been expanded to ‘rethink, refuse, reduce, reuse, repair, recycle’. These words are interconnected in terms of reducing waste, but they are all different. They are also hierarchical or in order of importance. This means we should start at ‘rethink’, not at ‘recycle’. This means we should consider our purchases based on need or reusability instead of perceived recyclability. What is recyclable in one community is not in another, and many municipalities are finding that recycling is costing too much. What you put in your recycling box may still end up in the dump after a brief detour.



The 'R'	Description	Rationale
Rethink	Way of thinking before we purchase – how was it produced? What were the impacts? What kind of impacts will I have when I dispose of this item once I'm done with it?	Rethink encourages us to look at material goods and realize that we can get trapped in a cycle of working longer and harder to buy and maintain possessions while we are poorer in time and have little opportunity to enjoy them. A good question to ask ourselves is "do I really need this _____?" Not only is this good for the environment but it can save us money and may improve our lifestyle too.
Refuse	Decline to buy it initially.	We can refuse to buy products that are environmentally or socially unsustainable. We can refuse items that are over-packaged, that are made in poor working conditions, or that are cheaply-made things which often become garbage quickly.
Reduce	To make smaller in size, amount, or number	We can minimize the amount of material and energy used by: cutting back on unnecessary purchases : reducing our driving by combining trips, carpooling, walking, biking or taking public transportation; taking shorter showers; watering the lawn less; replacing less efficient appliances with energy efficient appliances.
Reuse	Broad term that combines using items that have reusable qualities and reusing materials.	We can invest in products that can be reused – a thermal coffee mug, a reusable water bottle and reusable shopping bag. Or, we can donate or sell articles that we no longer use or need but someone might. Or, we can repurpose – take an existing product that has become waste and use the material and parts without processing for another purpose.
Repair	When an item breaks down or does not function properly, we fix it rather than throwing it out. This also includes 'restoring'.	Many products are thrown away when all they need is a bit of attention or a bit of paint. Just like we would not throw our bikes away because the tire is flat, we should try to repair the jacket with a broken zipper or restore the chair with scuffed legs. If you do not have the skills to repair or restore something, may be a family member or a friend does.
Recycle	Process in which an item or its components are used to create something new. It is the 'r' of last resort. Rethink first, then refuse, then reduce, then reuse, then repair, and finally recycle.	Technically a form of reusing, recycling is the reprocessing of waste into raw materials for use in making a new product. It keeps usable materials out of the landfill, reduces the need for landfills and incineration, saves energy, decreases emissions of greenhouse gases that contribute to global climate change, and conserves natural resources such as timber, water, and minerals. However, it does consume energy and creates its own waste issues. <i>Up-cycling</i> converts waste materials into new materials or products of better quality or a high environmental value like plastic bottles made into benches. <i>Down-cycling</i> , on the other hand, converts materials and products into new materials of lesser quality, like newspaper into egg cartons.

In this project, we are focused on **reuse** and **repurpose**. Our primary objective is to up-cycle, which can be defined as the repurposing of disposable or disposed materials to create new products that are useful, beautiful or both. Up-cycled pieces retain and often enhance the look and feel of the original discarded materials and are generally used for purposes other

than those for which they were originally intended. Sometimes the end result is far better than the item's intended purpose. The opportunities are endless from making a bird feeder from a grapefruit peel to making a pair of earrings from a computer motherboard to transforming a pallet to a coffee table.

Creating Treasure from Trash

To become a whiz at repurposing, you need to be creative, resourceful and innovative. The key question to ask yourself is: "what can I make out of this?" You may be able to come up with many ideas by thinking about things differently. You may find that you will come up with many more after doing the activities in this project and exploring other ideas. Before we start, here are some things to think about:

- Does an object's shape remind you of something else? What happens when you turn it upside down? Does it look different? Does it remind you of something else?
- What if you covered it with paper or cloth? How would it look if you painted it?
- Can you put anything in it? On top of it? Under it? Through it?
- Can you hang it up? Or hang something from it?
- Does it come apart? Can you use the separate parts?
- Would it make attractive jewelry?
- Could you use it to make clothing?
- Does it make a noise?

Internet Resources

Recycled Crafts <http://www.craftbits.com/recycled-crafts>

CRAFT www.craftzine.com

Craftster www.craftster.org

GetCrafty www.getcrafty.com

SuperNaturale www.supernaturale.com

Etsy www.etsy.com

Pinterest www.pinterest.com

StumbleUpon www.stumbleupon.com

Materials and Supplies

To do the activities, we will need the items that we will be repurposing – the trash we will be making into treasure. Also we will need support materials that we will use up as we make our items. These are sometimes referred to as 'consumables'.

Below is a description of the various key and support materials you will need. A worksheet is included to help you gather materials for this project. To keep the costs to a minimum, you can use this worksheet to identify items that you need to purchase, and then purchase them

as a group. Try to repurpose as many of your materials as possible. You may be able to gather them at home or find them at a thrift store. A description of the tools and other equipment follows in the next section.

Paper Perfect

Paper is the first category of waste material that we will be using to create treasure. Generally paper is available in a wide range of types, textures, shapes, sizes, designs and colours. Waste paper also comes in a wide variety – from newspapers to gift wrap to glossy magazines to junk mail.

In selecting the right type of paper, we will need to consider the end use. Sometimes we will need to use 'new' paper in our activities as well as repurposing waste paper. Below are some of the different types of paper and their characteristics:

- Newspaper or newsprint – inexpensive, low quality paper made from wood pulp. It is absorbent, easy to tear, readily available.
- Printer or photocopy paper – known as text-weight paper and much of the junk mail we receive is this type of paper. Available in a rainbow of colours.
- Decorative paper – any type of paper that has a design on it including tissue paper, wrapping paper, wallpaper or scrapbook paper. Can be used for weaving, folding, cutting and collage projects.
- Glossy paper – coated with a compound to add certain qualities like weight, surface gloss, and smoothness. It is used in magazines and catalogues and is colourful and bright.
- Cardstock or overweight paper – bulkier than paper used for printing or photocopying. Feels a little like lightweight cardboard. Folds well so is great for making boxes, and of course, perfect for making cards.
- Boxboard or carton board – Thin, generally smooth on one side, fairly rigid but easy to cut and lies flat. Used for packaging. Good for making patterns for tracing.
- Corrugated cardboard – Made with three pieces of boxboard with middle layer having been pressed into s-curves or corrugations. Sturdy. Good to use for a form or base.

**Discussion point: What other types of paper products can you think of?
What are some of the common papers that you and your family recycle
or throw away?**

Groovy Glass

In a normal recycling bin, we would find glass bottles and jars of all shapes and sizes. Baby food jars, sauce jars, wine bottles, jam jars are examples of glass that we will be using in this project. In one activity, we will need a jar with a tight fitting lid; in another activity, we will be using a small mason jar. A mason jar is a moulded glass jar used in preserving foods; it has metal band that serves to screw down a separate stamped steel disc to create a seal.

Discussion point: What type of glass do you and your family recycle or throw away?

Marvelous Metal

The metals that we will be repurposing are varied, and are commonly found in recycling bins. Here are some of the types of metals we will be using: tin cans like soup or vegetable cans; large metal cans like coffee cans or bigger fruit cans; aluminium pie plates or take-out containers; and bottle caps. If you cannot find caps that have not been bent, you can purchase them in some hardware stores, beer supplies stores or craft stores.



Discussion point: What types of metal do you and your family recycle or throw away?

Pretty Plastic

Plastics are common and widely used in our day-to-day lives. However, they are also widely variable. Here are some of the plastics that we will be using in this project:

- Plastic pop bottle – like a disposable PET drink bottle. Look for the number 1 recycling symbol when selecting your bottles and try to gather a variety of colours.
- No. 6 plastic take-out trays – Look for the number 6 recycling symbol on the bottom.
- Bubble wrap – used for protective wrapping of breakables.
- Smooth foam tray – commonly used to package food items.



Discussion point: What type of plastic do you and your family recycle or throw away?

Cool Clothing

Many of our activities will focus on oversized T-shirts – that is, T-shirts that are too large for you to wear normally. We will also be using men's dress shirts that have collars and buttons down the front, old blue jeans and old wool (or mostly wool) sweaters.

Discussion point: What do you and your family do with your clothes that do not fit anymore or that are old?

Heavenly Household Items

We will be using a wide selection of household items in our last unit. You will need to gather the following:

- A selection of old china or tiles that will be broken. Look for cracked or chipped china and tiles that are left over from projects or that have been removed as a result of renovations.
- Tea cup or coffee mug
- China side plate, saucer and candlestick or vase
- Plain-coloured coffee mug
- Hard-backed book
- Picture frame

Discussion point: What do you and your family do with household items that you do not use anymore?

Paper

Although this project emphasizes reusing paper, we may need to use new paper. Here is some that you might need:

Cardstock – paper stock that is thicker and more durable than normal writing or printing paper, but thinner and more flexible than other forms of paperboard. Available at stationary and craft store.

Decorative paper – paper with a design like scrapbook, wallpaper, gift wrap. Available from many sources.

Tissue paper – thin, soft paper typically used for wrapping or protecting fragile or delicate items. Need red, orange, green and blue. Available wherever gift wrap is sold.



Black paper – like black construction paper which is a heavy paper produced in a variety of colours and used in artwork especially for making folded or cutout designs. Available where craft supplies are sold.

Parchment paper – a waterproof and grease-resistant paper if brown paper bag is not available. Available at grocery stores.

Paint

A wide variety of paint is available. The type that is chosen will depend on the material that is being painted and its purpose.

Poster paint – opaque, fast drying, water-based, bright coloured paint that is suitable for use on posters. Usually packaged in jars. Available where craft supplies are sold.

Acrylic paint – fast drying colourful paint that can be diluted with water. Becomes water-resistant when dry. Available at craft, department and hardware stores.



Spray paint – paint in an aerosol container for spraying onto surfaces. Available at hardware, paint and craft stores. Given problems with graffiti, access to spray paint is restricted in some stores; you may need to have an adult present to purchase.

Primer paint – or *undercoat* which is a preparatory coating put on materials before painting. Priming ensures better adhesion of paint to the surface, increases paint durability, and provides additional protection for the material being painted. Available at hardware and paint stores.

Glues

Glues and adhesives chemically attach two or more surfaces together. The success of this depends on using the right glue, and an amazing range of glues is available. Try this handy website to help you make decisions on what glues to use: www.thistothat.com. Below is some of the glues that you will using in this project.

Paper Adhesives – For use on paper.

- *Glue stick* – white craft glue in a tube. Good for gluing pieces of paper together as glue is easy to spread evenly over the entire surface. Easy to use and dries clear. Ideal for school projects, papers and photographs. Available wherever school supplies are sold.
- **White Glues** – Best for gluing paper and cardboard. Sometimes known as PVA glue; mostly water soluble. It dries clear and quickly; perfect for working with paper. Use it to hold paper, fabric cardboard, small pieces of plastic, metal and glass together.
- **Elmer's Glue** – Thin, non-toxic, all-purpose. Dries fast to a clear strong finish. Available wherever school supplies are sold.



- Tacky Glue – Suitable for fabrics, paper and jewels. Available at craft and fabric stores.
- Designer/Decorator Tacky Glue – Super thick tacky glue that can be used in place of hot glue. Available at craft and fabric stores.

Wood Glue – Super strong resin glue. Fast setting. Leaves a natural stainable or paintable colour. Available in hardware and craft stores.

Extra Strong Adhesives – Often have industrial uses. Many require good ventilation. Available in hardware, department and craft stores.

- *Contact Cement* – Instant permanent water resistant bond; use on tile, wood, metals, leather and rubber.
- *Superglue* – Forms clear permanent bond in seconds. Use on non-porous material like metal, rubber and plastic acrylic. Other brands – Krazy and Instant Glue.
- *E-6000* – Thick permanent adhesive. Tough and flexible. Highly versatile. Requires time to cure.
- *Goop Adhesive Glue* – Strong waterproof adhesive and sealant. For use on rhinestones, ribbons, buttons, clothing, ceramics and fabric.
- *Epoxy resin glue* – Waterproof bonding of porous materials such as wood, ceramic, pottery, china, rubber, leather, fabric and plastic. Takes several hours to cure completely. Often sold as two parts that need to be mixed.



Hot glue – Cures instantly. Bonds porous materials like fabric, fibre, wood, ceramic and pottery. Does not stick to hard plastic and smooth or laminate surfaces. Widely available.

Specialty Adhesives

Découpage mediums – Water-based adhesive designed for decoupage paper or fabric to many surfaces. Available in gloss or matte finish. Brands – Mod Podge, Aleene's 'Collage Pauge'. Available at craft stores. Make your own with 2/3 cup of white craft glue with 1/3 cup of water.



Tile adhesive – adhesives for the installation of ceramic tiles. Available at flooring or hardware stores.

Tapes

Cellophane tape – transparent or semitransparent adhesive tape used for sealing or attaching or mending. Known as Scotch tape or Sellotape.

Masking tape – made of a thin and easy-to-tear paper that is easily released. Used mainly in painting, to mask off areas that should not be painted.



Duct tape – adhesive tape made of cloth mesh coated with a waterproof material. Used in plumbing and home repair. Is usually silver in colour but is also available in many colours and designs.

Sealers

Sealing can protect and enhance our creations. Some sealers can increase durability and help make your items waterproof. Here are some for you to consider.

Varnish, shellac – Forms a transparent, hard, protective finish or film primarily used on wood but also other materials. Glossy, semi-gloss or satin finishes. Protects from moisture but can yellow. Can be purchased as spray. Has fumes; requires ventilation and solvent for clean-up. Found in most hardware or paint stores.

Clear acrylic paint – Generally spray. Protects and seals. Quick drying. Glossy and satin finishes. Water clean-up. Found in most hardware or paint stores.

White glue – Diluted, can be used as a sealer but some may dissolve when wet and crack over time. Widely available.

Clear nail polish – Lacquer or enamel generally applied to the fingernails or toenails to make them shiny. Not as durable as varnish or acrylic. Commonly available.

Specialty sealers – Water based adhesive that also seals and finishes. Brands – Mod Podge and Aleene's 'Collage Pauge'. Available at craft stores.

Jewelry Findings

Findings are the component parts or materials used in making a piece of jewelry. Found at craft stores. In this project, you will need the following:

Eye pins – Round wire post similar to head pins but have looped circular ends (the eye) instead of a flattened end. Beads are threaded onto eye pin before a second eye is made and attached to other components on both sides. Available at craft or jewellery supply stores.



Jump rings – open small round or oval wire rings that are used to link components. We will be using open jump rings that have a split allowing them to be opened so they can be attached directly to other components. Various sizes and thicknesses. They are available at craft or jewellery supply stores.

Support Materials

These are materials to help undertake and complete our activities.

Dried flowers – gather from garden and press until dry. May be available at craft stores.

J-cloths or synthetic cloths – light, absorbent, reusable clothes used for wiping household surfaces; made of synthetic material. Available at most grocery stores.

Ribbon – woven strip or band of fine material as silk or rayon, varying in width and finished off at edges. Wide range of types and widths. Used for tying, trimming and finishing. Available at craft, fabric or department stores.

Flower seeds – collect from annual plants like poppies; or use seeds sent in the mail to raise funds. Can be purchased from garden centres.

Tea lights – a small, squat candle in a metal case, used for decoration. Available at craft, department and gift stores.

Cord, string, twine or yarn – long thin flexible material consisting of threads of cotton, hemp, or other material twisted together to form a thin length. Used for fastening, tying, lacing, knitting or weaving. Available at craft, hardware, department or knitting stores. Also thrift stores.

Glycerin – non-toxic liquid that can be bought in most drug stores and pharmacies.

Wire – pliable metallic strand or rod. Available at craft and hardware stores.

Fibrefill – synthetic material used for padding and insulation in garments, cushions etc. Available where sewing supplies are sold.

Felt markers – a pen with a writing tip made of felt. Porcelain or oil based. Available where stationary items are sold.

Fishing line – a long nylon thread used to catch fish in conjunction with baited hook, sinker and float. Available wherever fishing gear is sold and craft stores.

Dowel – Smooth round wooden sticks that is available in various thicknesses. Can be purchased from hardware stores.

Googly eyes – small plastic craft supplies used to imitate eyeballs. Available wherever craft supplies are sold.

Nuts – a small metal block with internal screw thread to be fitted onto a bolt. Usually square or hexagonal. Or you could use washers. Available at hardware stores.

Magnets – heavy duty ones deliver super powerful pull and strength to hold medium to heavy weight projects. Found at hardware and craft stores.

Grout – a mortar or paste for filling crevices, especially the gaps between wall or floor tiles. Available at hardware or flooring stores.

Suet – the hard fatty tissue about the loins and kidneys of beef and sheep. Used in cooking or processed to yield tallow. Available from butchers.

Bird seed – available at hardware, home improvement and general stores.

Miscellaneous

Water – the most widely used of all solvents. Widely available.

Flour – available in most kitchens.

Petroleum jelly – translucent jelly used as a lubricant or ointment. Available at pharmacies and grocery stores.

Paper towel – an absorbent textile made from paper instead of cloth. Unlike cloth towels, paper towels are disposable and intended to be used only once. Available from grocery stores.

Plastic drinking straws – short plastic tubes intended for transferring a beverage from its container to the mouth of the drinker. Available from grocery stores.

Chopsticks – slender sticks held between thumb and fingers and used chiefly in Asian countries to lift food to the mouth. Available from Chinese restaurants, some grocery stores.

Pure soap flakes – contain no bleaches, phosphates, enzymes and perfumes and are used with water for washing and cleaning. Available from grocery stores.

Materials and Supplies Worksheet

Material	Activity	Amount	Comment	✓
Recycled Materials				
Old net or mesh curtain	1	1		
Frame	1, 38, 43	3		
Junk mail	2, 3, 11*			
Newspaper	2, 3, 5, 6, 7, 16, 18* 35			
Corrugated Cardboard	5, 38			
Used envelope	8	1		
Calendar	8, 9* 11*			
Boxboard – light weight	10		Boxes from cereal, pop or tissues	
Magazine pages	11* 12, 22*			
Decorative paper	9* 11* 19, 21, 22* 42		Gift wrap, scrapbook paper	
Glass jar	13, 16	2		
Glass bottle	14	1		
Coloured yarn or string	14			
Glass jar with tight fitting lid	15	1		
Plastic/ceramic figurine	15	1		
Mason jar	17	1		
Fabric	17, 25			
Tin can	18	3		
Metal can	19	1	With smooth edge if possible	
Boxboard – medium weight	19			
Aluminium pie plates or take-out containers	20	3+	Number depends on size of cut out	
Metal tray	21	1	Cookie sheet or serving tray	
Bottle caps	22	6		
Plastic pop bottle	23, 24, 25	4		
No 6 plastic take-out trays	26	1+		
Bubble wrap	27			
Smooth foam tray	28	1		
T-shirt	29, 30, 31, 32, 33, 34	6		
Men's dress shirt	35	1		
Pillow form	35	1	Reuse an old clean pillow	
Old blue jeans	36	1		
Wool sweater	37	1		
Old china and/or tiles	38			
Tea cup	39	1	Or coffee mug	
China side plates or saucer	40	2		
Candlestick or vase	40	1		
Plain mug	41	1		
Hard covered book	42	1		
Boxboard – heavy	42			
Paper				
Cardstock	2, 12, 28			
Tissue paper	13		Yellow, green, red and orange	
Black paper	13			

Paper for pattern	18, 20, 28, 37			
Brown paper	27		Brown paper bag or parchment paper would work	
Glues and tapes				
White glue	5, 6, 7, 10* 12, 13, 14, 16, (20) 21* 25, 38, 42, 43			
Glue stick	2, 8, 9, 19			
Industrial glue	21, 22, 39, 40, 42* 43		Like E-6000	
Découpage medium	10, 21* 22*		Like Mod Podge	
Hot glue	10, 12, 17, 33, 40		Or white glue	
3-D glaze	22		Or Mod Podge	
Fabric glue	17*, 33*, 36			
Masking tape	5, (9) 20, 25*			
Clear tape	14			
Duct tape	18, 25*			
Waterproof glue	15		Epoxy glue, silicon	
Tile Adhesive	38			
Paint				
Paint	5, 7, (28) 42* 43*			
Spray paint	(14) (18) (21) (22) (23) 43			
Printing ink	(28)		Could use paint	
Sealers				
Decoupage medium	7		Mod Podge or diluted white glue	
Polyurethane	12, 26, 38			
Findings and Beads				
Eye pin	12	1		
Jump ring – split	12, 26, 27	4		
Large bead	19	1		
Earring hooks	27	2		
Pony beads	(29)	40 +		
Support Materials				
J-clothes	2, 3			
Dried flowers	2			
Ribbon	2 (9) 21, 39, 43			
Flower seeds	3			
Small mirror	5			
Tea lights	13			
Glitter	15			
Glycerin	15			
Distilled water	15			
Food colouring	16			
Fibrefill	17			
Wire	18			
Cord or string	19			
Permanent markers	20, 24			
Googly eyes	(20)			
Fishing line	20			
Dowel – 6 mm (1/4 inch)	20, 39*			
Chopsticks	20* 39			

Nuts	20	6	Or washers	
Toothpick	22			
Heavy duty magnets	22	6		
Grout	38			
Suet	39			
Birdseed	(39)			
Oil based marker	41		Or porcelain pen	
Plastic canvas	43			
Miscellaneous				
Water	2, 3, 4, 6, 7, (16) 18, 38			
Flour	4	250 ml		
Plastic food wrap	5			
Petroleum jelly	7			
Paper towels	7			
Plastic drinking straws	20		Or chopsticks	
Aluminium foil	26			
Pure soap flakes	37			

* Alternative available

() Optional

Tools and Equipment

Different techniques and materials require different tools. Here are a few common ones that you will be using. You can borrow, purchase or share them. A worksheet is provided so you take an inventory of the tools and equipment you have, can borrow or share.

Protection and Safety Equipment

As mentioned in the introduction, we all need to take precautions and use particular equipment to protect ourselves and avoid injury, and to protect our work surfaces. Here is some of the protective equipment that you will need:

- *Plastic sheets* – For covering and protecting your work surface. This is an opportunity to reuse an old shower curtain.
- *Safety goggles or glasses* – Use when working with wire or power tools that might flick some into your eye. Your vision is important. Please look after it.
- *Nose and mouth mask* – To cover nose and mouth and protect airways when working for fine dust like grout.
- *Heavy gloves* – Use when breaking china or glass to protect from cuts.
- *Rubber or latex gloves* – Use when working with grout to protect your hands.
- *Oven mitts* – Use to place items and remove them from a hot oven.

Cutting and Piercing Tools

Throughout this project, you will be using an array of cutting tools, including those to punch holes. Some you will need include the following:

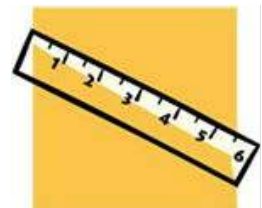
- *Scissors* – For cutting paper, fabric and thread ends. Keep one sharp pair for cutting fabric and another for paper as cutting paper blunts scissors. Do not use these to cut wire. Decorative-edged scissors create funky edges when you cut with them and come in all different styles
- *Craft knives* – Type of utility knife that have small fixed-blades or retractable, snap-off blades. Good for cutting thin, lightweight materials with a high degree of precision and control, and for cutting in tight spaces. **These are very sharp so be careful. Never leave craft knives out where pets or younger kids might find them.**
- *Rubber mat or piece of heavy cardboard* – when using a craft knife, you will need to put something beneath your paper. This helps keep your cuts neater and your blades sharper and keeps you from cutting up your work surface. Rubber cutting mats are ideal because they ‘heal’ themselves which means you will not leave permanent slices in it.
- *Tile nippers* – especially made to cut glass and tile used in mosaic making. Tungsten-tipped cutting edge gives a clean cut.
- *Heavy needle* – to create holes.
- *Paper punch* – comes in all sorts of different styles from simple circles, to stars, hearts, and flowers. Use them to punch out shapes out of your project or use the punched out shapes themselves to decorate your project.
- *Single hole punch* – a common office tool that is used to create holes in sheets of paper.
- *Hammer and nails* – to pierce tin cans. Masonry nails work the best.
- *Bone Folder* – for scoring and folding paper. Can use a *butter knife*, *wooden spoon* or even you *finger nail*.



Measuring and Marking Devices

Many of our activities require measuring and/or transferring measurements. Here is some tools that will be useful.

- *Ruler* – for measuring and for drawing straight lines. Generally a metal one is better than a plastic. Use it to measure and tear paper. Very helpful if you are trying to cut a straight line with a craft knife.
- *Measuring tape* – long, flexible strip or ribbon of cloth or metal, marked with subdivisions of the foot or metre and used for measuring. Best for measuring around curves.



- *Compass* – instrument for drawing circles and arcs and measuring distances between points, consisting of two arms linked by a movable joint. Helps draw curved lines and circles. Could also use a *string* with a tack as a centre point or items like *plates, bowls* or *cups*.
- *Pencil* – essential for marking and measuring. Soft lead HB or 2B is good for tracing and drawing lines as it does not leave imprint and can be erased if needed. Keep your pencil sharp so you can make light lines that are easy to erase. *Chalk* is sometimes easier to use and see on clothing.

Hardware

In addition to some of the tools and durable equipment identified above, here are more:

- *Staple gun* – hand-held mechanical tool for driving staples into a hard surface. Useful for tightly and quickly securing items. Could also use hammer and tacks. Watch your fingers as a staple gun can have a lot of power.
- *Pliers* – pincers with parallel, flat, and typically serrated surfaces, used for gripping small objects or bending wire.
- *Wire cutters* – resemble pliers but have two metal blades to cut wire, pins and chains.

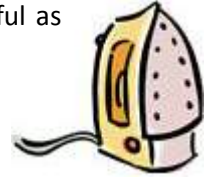
Appliances and Electrical Equipment

An appliance is a device designed to perform a specific function, especially an electrical device, for household use.

- *Hot glue gun* – uses a heating element to melt the plastic glue which is squeezed out of the heated nozzle. The glue is tacky when hot, and solidifies in a few seconds to one minute so does not require time to dry or cure. Caution: the glue is initially hot enough to burn and blister skin.
- *Electric blender* – electric mixing machine used in food preparation for liquefying, chopping, or puréeing. If you use your blender to create pulp, you should not use it again for food. Often you can find old blenders at thrift store or garage sales. This appliance can easily be shared.
- *Freezer* – a refrigerated compartment used for preserving food by freezing.
- *Stove* – relies on direct heat to cook and often includes an oven for baking.
- *Oven* – enclosed compartment for heating, baking, or roasting food.
- *Top loading washer* – washing machine where the machine lid is on the top and clothes are loaded into the machine from the top. These machines have an agitator that sticks up into the cavity of the machine, which makes felting in a top loader really easy because the machine helps rough up the knit fabric, which is one essential to effective felting.
- *Dryer* – removes moisture by heat.



- *Pressing iron* – to iron and press out wrinkles from fabric. Be careful as irons can get very hot; as well, the cord can be a tripping hazard.



Kitchen Equipment

In addition to some appliances, we will be using more kitchen items:

- *Rolling pin* – a cylinder of wood, usually with a short handle at each end, for rolling out dough.
- *Wooden spoon* – a utensil made of wood, used for stirring.
- *Cookie cutter* – a tool to cut out cookie/biscuit dough in a particular shape.
- *Saucepan* – a cooking pan, made of metal and with one long handle and usually a lid.
- *Whisk* – used in food preparation to blend ingredients smooth.
- *Bowl* – round, open-top container for holding food or liquids.
- *Sieve* – utensil of wire mesh used for straining liquids.
- *Skewer* – a long piece of wood used for holding pieces of food together during cooking.
- *Mixing container* – plastic bowl (or basin) to mix glue. Avoid using it to prepare food.
- *Aluminium foil* – thin, pliable sheet often used as a protective wrapping.



Paint Tools

To apply paint, we will need the following tools:

- *Paint brush* – Needed for painting and gluing. Small brushes 2.5 to 5 cm (1 to 2 inches) in width are best for the activities in this project. Foam brushes are easy to use, particularly for découpage. Make sure you clean any brush you use thoroughly so that you can use it again.
- *Foam brush* – inexpensive, disposable brush which has foam instead of bristles.
- *Brayer* – hand roller used in printmaking techniques to spread ink. Not necessary but does the best job in applying ink or paint to a stamp.

Sewing Tools

This project includes some sewing so we will need some sewing equipment:

- *Sewing machine* – used to stitch fabric and other materials together with thread.
- *Needle and thread* – Used for general hand sewing. The needle has a sharp point, a round eye, and are of medium length. Use a general purpose thread that can be used on a wide range of fabrics.



- *Safety pin* – a pin bent back on itself to form a spring, with a guard to cover the point. Commonly used to fasten pieces of fabric or clothing together such as cloth diapers or torn clothing.
- *Straight pins* – short, straight, stiff piece of wire with a blunt head and a sharp point, used especially for fastening.
- *Ironing board* – a flat padded cloth-covered surface used to iron clothes.

Miscellaneous

- *Basin/ dish pan* – wide open container, especially holding liquid. Should be able to hold at least two litres of water.
- *Sand* – small loose grains of worn rock.
- *Towel* – piece of thick absorbent cloth or paper used for drying.
- *Cloths and rags* – used for cleaning, washing, or dusting.
- *Fitted T-shirt* – to use as pattern.
- *Sunglasses* – to use as pattern.

Tools and Equipment Worksheet

Tool	Activity	Comment	Own	Borrow	Share	Buy
Protective and Safety						
Plastic sheets	2, 3, 16* 38	*Or plastic tray				
Oven mitts	26					
Safety goggles/glasses	38					
Nose and mouth mask	38					
Heavy gloves	38					
Rubber or latex gloves	38					
Cutting and Piercing						
Scissors	8, 9, 10, 11, 12, 13, 14, 17, 19, 20, 21, 22* 23, 24, 25, 26, 27, 28* 29, 30, 31, 32* 33, 34, 35, 36, 37, 42* 43	Reserve your sharp scissors just for fabrics.				
Craft knife	5, 28* 38, 42*	*Or scissors				
Decorative edged scissors	(9)					
Cutting board/mat	5	Or heavy cardboard				
Paper cutter	(10)					
Heavy needle	20, 24*	*Or hole punch				
1 inch paper punch	(22)					
Hole punch	2, (9) 24*, 26, 27	*Or heavy needle				
Bone folder	8, 10, 11, 12	Or wooden spoon, or fingernail				
Nail	18	Masonry nails work best				
Craft punch with shape	20, 27	Or cut out shape				
Measuring and Marking						
Ruler	5, 9, 10, 11, 19, 29* 30* 31* 32* 33* 34* 36*, 42, 43*	*Or use measuring tape				
Measuring Tape	19, 29* 30* 31* 32* 33* 34, 35, 36, 37, 43*	*Or use ruler				
Pencil	5, 8, 9, 10, 11, 17, 18, 19, 20, 28, 29* 30* 31* 32* 33* 35, 36, 37, 42	*Or use chalk				
Compass	19	Or use string and tack, or plate, bowl or cup				
Chalk	29, 30, 31, 32, 35	Or pencil				
Hardware						
Staple gun and staples	1	Or tacks and hammer				
Hot glue gun	12, 17, 40	Or use another glue				

Pliers	16, 18					
Wire cutters	16, 18					
Hammer	18, 38*	*Or use tile nippers				
Appliances and Key Equipment						
Electric blender	2, 3, 6	Or soak in boiling water				
Freezer	18					
Oven and stove	26, 41, 39					
Top loader washer	37					
Dryer	37					
Kitchen Equipment						
Rolling pin	2, 3					
Cookie cutter	3					
Wooden spoon	3, 4					
Bowl	4, 7					
Whisk	4					
Saucepan	4, 39					
Measuring cup	6, 15					
Sieve	6, 31*	*Or use cheesecloth				
Butter knife	7					
Skewer	12					
Mixing Container	6, 16, 38	Like yogurt container				
Aluminium foil	26					
Timer	41					
Painting tools						
Paint brush	5, 7, 22, (38) 42					
Foam brush	7, 10, 16, 28*	*Or brayer				
Sewing Tools						
Pressing iron	27, 35					
Ironing board	27	Heavy towel				
Straight pins	29, 30, 31, 32, 35					
Sewing machine	33* 35* 36					
Needle and thread	33* 35* 37					
Safety pin	34, 37					
Miscellaneous						
Basin	2, 3	Dish pan, tub				
Sandpaper	15					
Towel	18, 38					
Sand	18					
Mesh laundry bag	37					
Fitted T-Shirt	31	As a pattern				
Sunglasses/glasses	37	As a pattern				
Cloths, rags, sponge	38					

* Alternative available

() Optional

Unit 1: Paper Perfect

Paper is one of the oldest-man-made materials. Thousands of years ago Egyptians first made paper using papyrus, a plant found along the banks of the Nile River. To make papyrus paper, the bark was peeled off the stalks and the inside of the stem, the pith, was removed and cut into strips. Then these strips were layered in a criss-cross pattern, pounded, pressed and dried. These sheets were then smoothed out and glued together into long rolls, known as scrolls. This was a lengthy process, and as a result, paper was very valuable.

Over time, paper has been made from mulberry bark, hemp, cotton and linen rags, wheat and oat stalks and of course wood pulp. Some is made from recycled paper; almost all paper can be reused to make a variety of new paper products like cereal boxes, tissues, paperboard and newsprint.

Paper is a common item in our garbage. Statistics Canada estimates that we use six million tonnes of paper and paperboard annually. Only one-quarter of Canada's waste paper and paperboard is recycled and nine out of ten newspapers sold are thrown away instead of recycled! As many as 17 trees are required to make one ton of paper, but every ton of recycled paper saves almost 400 gallons of oil, three cubic yards of landfill and seventeen trees. It pays to recycle!

Paper is also a great material for making treasures. By the end of this unit, you will never look at discarded paper and cardboard in the same way again.

Discussion Point: How can you and your family or school use the 'r's of waste management (rethink, refuse, reduce, reuse, repair, recycle) in terms of managing paper waste?

1. Paper Making

Making paper is easy. All you need is a mould and source of pulp like junk mail or waste paper.

To create paper, you liquidize your waste paper to create a pulp and then scoop it into a mesh-covered frame or mould. Once you have an even amount of pulp on your mould, you can gently remove it, press it to remove excess water and lay it out to dry.

A mould is the rectangular frame with a piece of mesh stretched over it. You could also use a deckle, which is an open frame that is the same size as the mould and rests on top of it. However, for our activity in paper making, a deckle is not required. Moulds can be purchased in any craft store, but they are easily made.

Activity 1 – Paper Making Mould

To make our own mould for making paper from junk mail, we are going to use a recycled picture frame and some old sheer or net curtains. Both of these items are easily acquired from thrift stores.

Using a staple gun or hammer and tacks, we will stretch and fasten the curtain to the frame. It is important to get the curtain as tight as possible. As nylon stretches slightly when wet, we will dampen the curtain fabric to get it as tight as we can.

Time

Allow 30 minutes

Materials and Tools

- Sheer or net curtain or muslin
- Old wooden picture frame
- Staple gun, or hammer and tacks

Instructions

1. Take off any backing on your picture frame. Remove any glass or picture.
2. Dampen your curtain.
3. Turn over the picture frame and place the curtain over back.
4. Using staple gun or hammer and tacks, secure curtain over the back, stretching it tightly. To ensure tight tension, first staple the fabric to the middle of one of the outside edges, then to the middle of the opposite outside edge pulling as you staple. Then staple the middles of the two remaining edges pulling as you go. When all four sides are secured, begin working outwards to each corner, pulling the mesh tightly as you staple into the wood.
5. Voilà, a paper making mould!



(Source: Get Crafty, 1996)

Post-Activity Questions

Did you enjoy making your paper making mould?

Did you have any challenges?

What would you do differently?

What kind of paper project are you looking forward to making?

Making Paper

The characteristics of your finished product, or paper, will depend on type of waste paper that you use. If you use newspaper which is a poor quality paper, your end product will be a lower grade than if you had used a higher quality paper, like bond paper. Bond paper will also create a stronger more durable paper. Glossy magazines and plastic coated paper contain additives which are difficult to break down; thus, these types of pulp sources should be avoided. Any paper containing ink will discolour your pulp as the ink mixes with the pulp.

The texture of your end product will depend on the length of time you liquidize your pulp. A rough textured paper has a shorter pulping time than paper with a smoother finish. You can add decoration like leaves or dried flower petals to give your paper colour and texture.

Steps in Making Paper

Making paper is a multi-step process from making the pulp, to create the sheet of paper to pressing and drying it.

1. Step 1 – Making pulp

To make pulp, the waste paper is ripped into shreds and then into stamp-sized pieces, and is soaked in water overnight. Then some of it is added to a blender with equal parts water so that the blender is two-thirds full. It is blended in ten second intervals for 30 seconds spurts to create a slurry. Short bursts on the blender are best to prevent the motor from burning out.

This will need to be done about five times to get enough pulp to make a sheet of paper. Pulp can also be made by hand, by working the paper apart with your fingers. If you choose this approach, the paper will need to be boiled in water and then left to soak for another three hours. Once cool, work the paper into finer bits with your hands until it is all pulpy.

2. Step 2 – Collecting Pulp on Mould

As the pulp slurry is made, it should be poured into a deep container like a square dish pan or basin. Once all the slurry is in the basin, the mould and deckle (if using one) are submerged and moved around to collect some pulp that is evenly distributed over the mesh. In this project, we are only doing a couple of paper-making activities, so we are just going to use the mould.

Once the pulp is collected, the mould should be lifted and held over the basin to allow as much of the excess water as possible to drain off. If the pulp is not thick enough, the mould should be dipped again. Since we are not using a deckle, we need to form neat edges at this time, so by using your fingers, brush off the excess pulp while it is still on the frame.

3. Step 3 – Couching

The next step is a process called couching which is transferring the wet layer of pulp on the mould to couching cloth which is a clean, moist cloth. Smooth synthetic cloths like J-clothes are ideal for this. This cloth has been placed on absorbent material, like an old wool blanket, a wad of newspapers or a small pile of old towels. This is known as the 'couching mould'.

To transfer the pulp, the deckle is removed (if present) and the mould is turned over and pressed firmly onto the couching mound. As much water as possible should be sponged up from the back of the mould with an absorbent cloth or a wad of newspapers. Once as much of the water is soaked up as possible, one corner of the mould is gently lifted and the paper is peeled away.

If you are making a number of sheets of paper, simply covering the first one with a piece of the synthetic cloth and then adding the next piece of freshly made paper. More absorbent material can be added between synthetic cloths to soak up the water.

4. Step 4 – Pressing

Once all the paper sheets are made, it is important to get out as much of the water as possible. One method is to press it – each sheet of freshly made paper is placed between synthetic cloth and newspaper, placed between two fairly solid boards, and topped with more newspaper. Pressure is then applied by leaning or standing on the pile. Another method is to sandwich each individual paper with newspaper and roll it with a rolling pin. Repeat with more dry newspaper. Make sure you do this in an area where wetness does not matter, like outside or in a garage.

5. Step 5 – Drying

The paper is laid out to dry, one beside the other on a clean flat surface. Be warned – this can take up a lot of space!

6. Step 6 – Clean up

The pulp remaining in the basin should not be poured down the sink as it could cause a blockage. The water should be drained off using a sieve, and the pulp squeezed to get the water out in the pulp, put in an airtight container and saved for later use.

Activity 2 – Floral Bookmark

In this activity we are going to create pulp from junk mail and then use our mould to create a sheet of paper. Then, we will cut our paper and mount it on cardstock and add a ribbon to make a bookmark.

Hints and Tips

- If you have difficulty removing the dried paper, use a palette knife.
- Most handmade recycled paper is relatively coarse. If you want a smoother finish, simply iron over the paper while it is still slightly damp.



Time

The first step of preparing the paper will take about 1 hour and then left to sit overnight. Allow 1 hour to make paper from the pulp and another two hours or so to dry.

Materials and Tools

- Plastic sheets
- Junk mail – try to get mostly white with a bit of coloured to add speckles of colour
- Mould – from Activity 1
- Electric blender
- Basin, tub or dish pan – large enough to accommodate your mould
- Hot but not boiling water
- Newspaper
- Synthetic cloth like J-cloth
- Rolling pin
- Dried flowers
- Cardstock
- Hole punch
- Glue stick
- Ribbon

Instructions

Making Pulp

1. Protect your workspace from getting wet by laying down some plastic sheets.
2. Tear up old paper into strips and then into 5 cm (2 inch) squares. Make sure to remove any staples, plastic windows from envelopes and any other non-paper

materials. If you have access to a paper shredder, you can use that but make sure to rip the strips into smaller pieces. Soak in water overnight.

3. Put some torn wet paper into the blender. Half-fill blender with hot tap water. Put the lid on and blend in 10-second intervals for 30 seconds. If the blender sounds overstrained, take out some pulp and top up with water.
4. Pour the pulp slurry into your tub. Make 5 lots of pulp slurry with your blender. Ideally the pulp should be quite thin so that it flows like a liquid onto your mould.



(Source: Get Crafty, 1996)

Making Paper

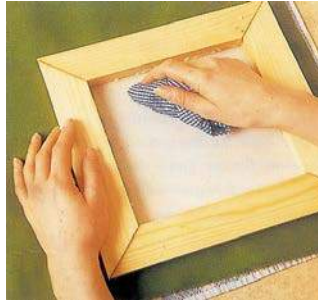
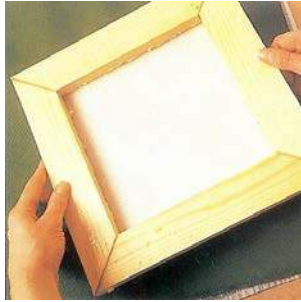
5. Before each sheet you make, stir the pulp, then place your mould in your basin. Scoop up some pulp by quickly moving the mould toward your body, making sure your mould is lying horizontally. Lift and let the water drain back into the tub. Gently shake the mould from side to side and back and forth to get an even distribution of pulp, getting rid of as much of the water as you can. If your sheet of paper is not satisfactory, place the mould upside down, wash off the pulp, and start again. Or, you could scoop some pulp onto your mould with a spoon.



6. As we are not using a deckle, brush off the excess pulp from the edges with your fingers.
7. Press some dried flowers on top of pulp.
8. Lay the mould face down on your couching cloth on your couching mound. Use another wad of newspaper to soak up the water from the top of the pulp. Continue to soak up excess water by replacing pads of newspaper; repeat until pulp is just damp.



9. Turn mould facedown onto cloth on top of a new pile of dry newspaper. If you got most of the water out, you may be able to tap the frame gently to release the pulp from the mould. If not, press your mould firmly onto cloth. Gently lift from one corner and holding the paper onto the cloth, peel it away from the mould.



10. Cover your newly-minted paper with newspaper and roll it with a rolling pin. Repeat with more dry newspaper.

11. Uncover pulp and let it dry completely in the air. It will get lighter in colour as it dries.

Making Bookmark

12. Once dry, cut paper into strips.

13. Using glue stick, stick strip of paper onto cardstock.

14. Cut backing card to shape; punch a hole at one end. Tie a ribbon through the hole – and ta-dah, a lovely bookmark!

Post-Activity Questions

Did you enjoy making your paper?

Did you have any challenges making paper?

Did you have any challenges making your bookmark?

What would you do differently?

What other things could you craft from the paper that you can make?

Activity 3 – Plantable Gift Tag

In this activity, we will be making recycled paper gift tags that the recipients can plant and receive another gift – flowers! In this case, the shape of the gifts tags will be determined by the cookie cutters we will use a deckle on top of our mould. This time, we will not be dipping the mould into the pulp but will spoon the pulp into the cookie cutter on top of our mould. We will also be adding flower seeds to give an interesting texture and so that your recipient can later plant the gift tag and grow flowers!

To add colour to your gift tags, choose coloured junk mail paper. For Christmas gift tags, look for red, green or yellow paper. For birthday presents, look for more pastel colours.



Source: DIY From Pulp Art – Plantable Paper.
Hillcity Bride. November 23, 2010.

<http://www.hillcitybride.com/2010/11/diy-from-pulp-art-plantable-paper/>

Time

Allow 1 hour plus drying time

Materials and Tools

- Plastic sheets
- Junk mail – look for colourful paper
- Seeds
- Electric blender
- Hot but not boiling water
- Mould – from Activity 1
- Cookie cutters
- Basin, tub or dish pan
- Wooden spoon
- Newspaper
- Synthetic cloth like J-Cloth
- Rolling pin

Instructions

1. Cover your work area with plastic sheet.
2. Make pulp by following directions of Activity 2 for steps 2 and 3. Be sure to use paper that is the colour you would like your tag to be. Once you are happy with the

consistency of your pulp, add a handful of seeds to the blender, and give it a quick pulse to blend the seeds throughout.

3. Set a cookie cutter onto your mould and set your mould over a tub.
4. Using wooden spoon, scoop pulp out of tub and pour into cookie cutter. Push pulp down onto mould, being careful not to move the cookie cutter.
5. Carefully lift the cookie cutter and turn the mould onto your couching cloth. Soak up as much water as you can.
6. Follow steps 8 to 11 from Activity 2.
7. Once you are practiced you can make a number of tags on your mould before you transfer the shaped pulp to the couching cloth.
8. Once dry, punch a hole and thread through a ribbon. Voilà, a gift tag that keeps giving. Be sure to let your recipient know that the tag can be torn up and planted!



Source: Make Decorative Paper. Lowe's. 2013.

<http://www.lowes.com/creative-ideas/decorate-and-entertain/make-decorative-paper/project#noop>

Post-Activity Questions

Did you enjoy making your gift tags?

Did you have any challenges?

What would you do differently?

What other things could you make with your newly-acquired paper making skills?

Other Paper Making Ideas

- To incorporate dried leaves, petals or metallic thread into your paper, make a basic sheet of paper like Activity 1. While the paper is still on the frame, sprinkle leaves, petals or whatever over the surface of your paper. Pour a thin layer of pulp over the top of the pieces to hold them in place. Turn the paper out as before and allow to dry before peeling away from the couching cloth.
- For Christmas cards, add a layer of gold leaf scraps or other decoration to the paper on the frame and seal with another layer of pulp.

2. Papier Mâché

Papier mâché is a French phrase meaning ‘chewed paper’. It is the process of using paper and glue to make a strong, stiff material. It is easy to do, and is another way to reuse paper. Papier mâché can be made in two ways – one in which paper is torn in strips pasted in layers and the other where the paper is mashed to a pulp and mixed with paste. Strip papier mâché is used to cover an existing surface, making hollow and flat pieces like piñatas and masks. Pulp papier mâché, on the other hand, is most often used to create moulded or sculpted pieces. In some cases, this papier mâché is applied to armature or form made out of wire, aluminium foil or cardboard, or it is casted or moulded to make decorations and sculptures.

Newspaper or newsprint is the ideal material for both techniques. It is abundant, readily available and easy to tear. As most papier mâché projects are painted, colour of the paper used does not matter.

We will be making both types of papier mâché. Although they are both made of paper and glue, they are quite different to create. However once the paper has been applied and your object has been made, the subsequent stages of completing your project is the same:

- *Drying* – Key to any papier mâché project is drying. Place the projects on plastic food wrap on a flat surface and let them dry naturally in even heat.
- *Priming* – Papier mâché projects look rather boring before they are decorated. The first step is to prime. If your project is going to be light coloured, paint with an undercoat or primer; if dark, mix two parts of white glue to one part water.
- *Painting* – Use craft paints, like acrylic or poster paints. If you use poster paints, mix in a little white glue with them. This will help to keep them from smearing when you seal them.
- *Sealing* – Varnishing or sealing will seal and protect your project, giving it a shiny top layer that will make it look rich and glowing. You can use polyurethane or make your own by mixing white glue with a little water. When you first apply it, the white mix will look cloudy but will dry clear. Regardless of which sealer you use, let it dry between layers. More layers will make for a harder, shinier finish that can be wiped clean with a damp cloth. NOTE: If you are using polyurethane, make sure that you have good ventilation as polyurethane has toxic fumes.

A. Strip Papier Mâché

Strip papier mâché involves layering strips or small pieces of paper over an existing surface, like a piece of cardboard cut to a desired shape. It can also be used to mould simple shapes, like a bowl. In this case, the strips are applied to the base, or bowl. When the papier mâché is dry, the base is removed and the result is a strong light paper mâché shell which is the shape of the base.

Hints and Tips

- The lighter and smoother the paper you use, the smoother your finished objects will be.
- Tearing the paper gives a smoother finish than paper cut in strips.
- Wash your hands after tearing up newspaper – you will be surprised how much ink comes off the paper!
- Use small pieces of paper over curved parts.
- Use paper strips on flat areas.
- Complete one layer at a time.

Process

1. Cut or tear paper into strips about 50 mm long x 25 mm wide (2 x 1 inches). These pieces can be smaller for items with fine detail and bigger for large areas.
2. Brush paste evenly and sparingly onto the strips of paper.
3. Apply paper to base, overlapping pieces slightly and smoothing with your fingers to remove any air bubbles.
4. Complete one layer at a time. Note that most projects need five layers.
5. When applying more layers, make sure to push out any air bubbles that might be trapped between the layers.
6. Let your object dry naturally in an even heat.

Activity 4 – Making Strip Papier Mâché Paste

Like cooking, making the paste for this type of papier mâché relies on a recipe. This is just one recipe of many options and it requires ingredients and equipment commonly found in most kitchens. As this activity requires the use of a stove, please be careful of the hot element and of the hot paste.

This recipe makes about 375 ml (1.5 cups). If you want to make a larger quantity, just remember you need one part flour to three parts water. Make sure to get out all the lumps!

Hints and Tips

- If you want a thinner, runnier paste, add a little more water.
- DO NOT use wallpaper paste for papier mâché as it contains toxic fungicides.
- Instead of using flour and cooking your paste, make a paste from one part white glue and three parts water.

Time

Allow 30 minutes plus cooling time

Materials and Tools

- 250 ml (1 cup) flour
- 750 ml (3 cups) water
- Bowl
- Whisk
- Saucepan
- Wooden spoon

Instructions

1. In a bowl, whisk one cup of flour with one cup of water. Add two more cups of water and mix well to get rid of any lumps.
2. Put the mixture into a saucepan and bring to a boil, stirring constantly. Cook until the mixture is consistency of thin sauce.
3. Allow to cool completely. Once cooled it is ready to use. You can store it in the fridge if you do not use it right away. Cover tightly with plastic food wrap and it will last for several days.

Post-Activity Questions

Did you enjoy making your paste?

Did you have any challenges?

What would you do differently?

What other things are you looking forward to making with papier mâché?

Activity 5 – Strip Papier Mâché Hand Mirror

In this activity, we are going to create a hand mirror using a small mirror, cardboard, our papier mâché paste and strips of paper. We will use cardboard as our base and by cutting and covering it with strips of papier mâché transformed it into a hand mirror!

Hints and Tips

- Alternate layers of newsprint with bond paper to make it easier to keep track of how many layers have been applied.
- For a smooth finish, add a layer of tissue paper.

Time

Allow 4 hours plus drying time between layers and for paint. This will be a good activity to spread over a couple of days.

Materials and Tools

- Small mirror
- Corrugated cardboard
- Pencil
- Ruler
- Craft knife
- Cutting mat, cutting board or cardboard
- Newspaper
- Papier mâché paste – from Activity 4
- Plastic tray or piece of heavy plastic
- Small paint brush
- Plastic food wrap
- Paint primer or undercoat
- Poster or acrylic paints
- white glue, diluted
- Masking tape

Instructions

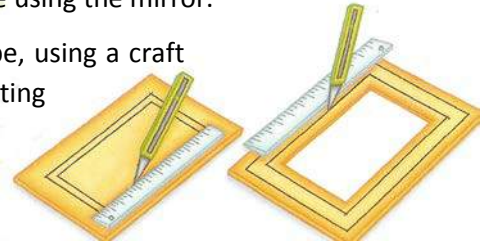
1. Place your mirror in the middle of the cardboard and trace around it. Draw a second line 5 mm (1/4 inch) inside the first line. This is maximum opening you can have for your mirror.
2. Within your maximum opening, draw a shape that will surround your mirror. It can be an oval, a square, a circle, a funky squiggly line or any shape you would



Source: Gibson, 1995

like around your mirror. Use cups, plates or food cans to draw curves and a ruler to draw straight lines.

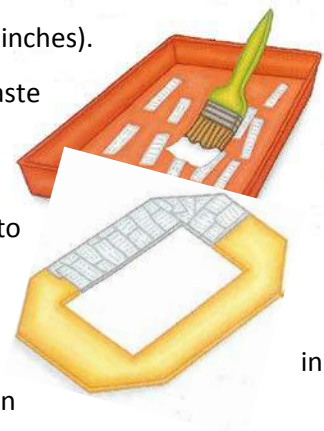
3. Draw the outside shape or frame of your hand mirror. Most hand mirrors have a handle so you can pick it up and hold it while using the mirror.
4. Cut out the frame and then the inside shape, using a craft knife. Make sure you use a cutting mat, cutting board or another piece of cardboard to protect your working surface. This will be the front of your hand mirror.



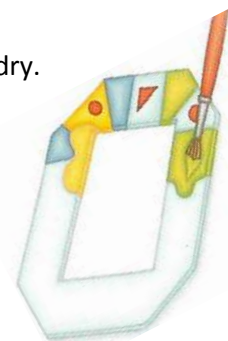
5. Trace around the outside of your frame onto another piece cardboard and cut it out. This will be the back of your hand mirror.
6. Tear up strips of paper 4 cm wide x 7 cm long ($1\frac{3}{4} \times 2\frac{3}{4}$ inches).
7. Lay paper strips on the tray or plastic and spread on paste with a brush.

8. Apply strips onto one side of front cardboard frame and the back frame, overlapping them slightly. Make sure to apply strips over the edges.

To cover corners neatly, paste a strip across the corner to hang over edge. Tear the overhanging part half as far as the edge of the frame. Bend and stick down separately onto the back of frame. Allow to dry.

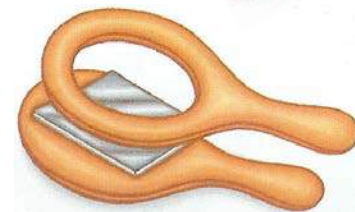


9. Do three more layers of strips. Allow to dry in between.
10. When dry, paint both pieces using primer or undercoat. Allow to dry.
11. Decorate with paint.
12. Seal with diluted white glue.
13. When dry, install the mirror. The easiest way is to turn the frame face-down and tape the mirror face-down over the hole with masking tape. Alternatively, you can secure the mirror to



the back.

14. Glue the front onto the back to finish your new hand mirror!



Post-Activity Questions

Did you enjoy making this paper of papier mâché?

Did you have any challenges doing this type of papier mâché?

Did you have any challenges making your mirror?

What would you do differently?

What other things could you make using this technique?

Other Ideas for Frames

- Create a frame for a photo or picture. Hang with string or ribbon.
- Cut the outside frame into a fish or dinosaur or other animal. Paint it brightly or do realistic markings.

B. Pulp Papier Mâché

Pulp is wet paper mashed with paste or glue until it feels like soft clay. You can use it to create shapes, modelling it with your fingers or with tools. Like the strip paper mâché, pulp paper mâché is used in thin layers, dried each time. Make sure that each layer is dried thoroughly because thick layers may be dry on outside but if not completely dried right through, your object can rot if it is sealed.

Process

1. If you are using a base shape, smear it with petroleum jelly first, which will make it easier to pull the shell off the base.
2. Roll and flatten small balls of pulp in your hands. Press all over surface.
3. Make sure there are no gaps. Smooth places where the balls join with your fingers.
4. Let your object dry naturally in even heat. Place on plastic food wrap on a flat surface.

Activity 6 – Making Papier Mâché Pulp

To make paper mâché pulp, we need paper, glue and the paste that we used in Activity 4. If we use just paste in our pulp, our end product will not be very strong and if we make a glue-only pulp, it is harder to model.

Time

Allow 30 minutes if using blender; allow 3-1/2 hours if using the soaking method.

Materials and Tools

- Newspaper
- Measuring cup
- 15 ml (1 tablespoon) of white glue
- 15 ml (1 tablespoon) of paste – see Activity 4 for recipe
- Electric blender
- Water
- Cup or container to mix glue and paste
- Bowl
- Sieve

Instructions

1. Cut or tear several sheets of newspaper into 3.5 cm (1.5 inch) squares tightly filling a measuring cup.
2. Put the paper into blender with warm water and blend with lots of short bursts. Or, soak the paper in hot water for 3 hours; then knead with your fingers to make a pulp.
3. Squeeze water from the pulp in a sieve.
4. Mix the glue and paste together in cup or container.
5. Put the pulp into a bowl. Add a tablespoon of glue/paste mix.
6. Knead it together well. Add more glue mix until it feels like squashy clay.
7. Use or store in an airtight bag in a refrigerator.

Hints and Tips

- If your stored pulp gets too wet, squeeze some of the moisture out and add glue.

Post-Activity Questions

Did you enjoy making your pulp?

Did you have any challenges?

What would you do differently?

What other things are you looking forward to making with this type of papier mâché?

Activity 7 – Pulp Papier Mâché Bowl

We will create a bowl using our paper mâché pulp. We will be pressing our pulp into a large bowl that will serve as our form; in order to be able to separate our pulp bowl from our form, we must use a barrier like petroleum jelly. Otherwise, our pulp will fuse permanently onto our form!

In this type of paper mâché, drying times are lengthy and are generally measured in days. Do not be tempted to speed up the drying process as it will weaken the pulp. Once dry to touch, the paper mâché bowl can be removed from the form. Try to wipe off as much as the petroleum jelly as possible; otherwise the paint used to decorate the paper mâché bowl will not stick!

Time

Allow more than 4 days drying time; allow two separate days to complete activity.

Materials and Supplies

- Newspaper and water to make 1 ½ to 2 quantities of pulp (based on recipe in Activity 6)
- Extra paste – from Activity 4
- Bowl
- Petroleum jelly
- Butter knife
- Paper towels
- white glue
- Water
- Foam brush
- Paint brush
- Paint
- Sealer

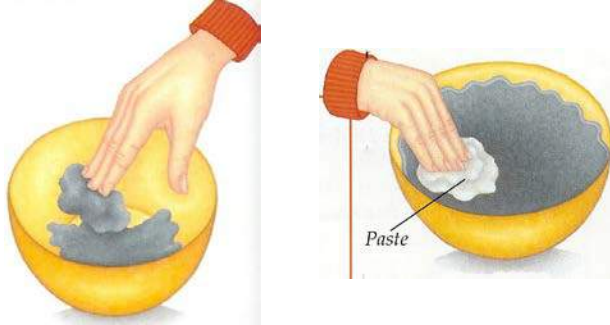
Instructions

1. Make 1 1/2 to 2 times of pulp recipe in Activity 6.
2. Smear the inside of bowl completely with layer of petroleum jelly.
3. Take walnut-sized dollops of pulp, roll them in your palms and flatten between your hands to about 5 mm (1/4 inch) thick.



Source:
Gibson, 1995

4. Press flattened pulp all over bowl. Start from bottom and work up the side. Smooth it with your fingers as you go.
5. Keep smoothing over the joins. At the end, dip your fingers in paste and smooth all over. You can leave the top edge wavy, or make a smooth even edge.



6. Leave the bowl to dry naturally in even heat. This may take up to four days so be patient. It should feel dry to touch.
7. When completely dry, run an old blunt knife between the original bowl and your pulp bowl. Ease the pulp bowl out.
8. Carefully wipe all the petroleum jelly off the pulp bowl with a paper towel.
9. Prime the papier mâché by painting all over with 1 part water to 2 parts white glue.



10. Paint and seal.

Post-Activity Questions

Did you enjoy making your bowl?

Did you have any challenges?

What would you do differently?

What other things would you like to make using this technique?

3. Folding Fun

Activity 8 – Envelopes

Many times, we have calendars and gift wrapping that is just too pretty to throw away, or even recycle. What can we do? How about making envelopes? Using an existing envelope as a pattern, we can repurpose pretty paper into envelopes that are custom made for our own purposes. Keep in mind that if you are going to post your envelope, you might need to create a plain label to fix to the front so the intended recipient and their address can be read clearly.

Time

Allow 30 minutes

Materials and Tools

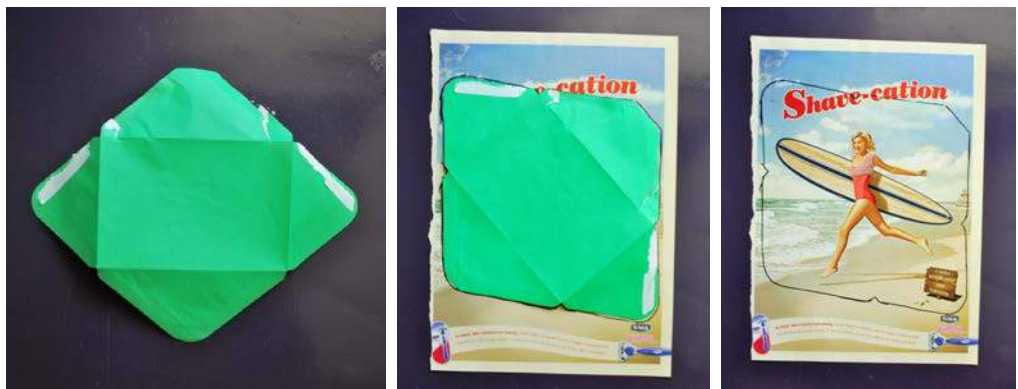
- Used envelope
- Used paper – gift wrap, calendar
- Pencil
- Scissors
- Bone folder or wooden spoon (optional)
- Glue stick
- Blank paper (optional)

Instructions

1. Carefully pull apart all the flaps of your used envelope making it into a pattern.
2. Place your pattern onto your used paper and trace around it.



Source: The DIY: Magazine Envelopes.
Oh So Pretty: The Diaries. August 21, 2012.
<http://www.ohsoprettythediaries.com/2012/08/the-diy-magazine-envelopes.html>



3. Cut out the tracing.
4. Looking at your pattern as a guide, fold the flaps of the paper you just cut. Start with the sides, and then the bottom. Run your fingernail along the fold to make a crisp edge. Or, you can use a wooden spoon or a bone folder.
5. With your glue stick, glue the overlapping edge of the bottom flap to the side flaps, leaving the top flap free.



6. Once you have inserted a letter, glue the top flap in place to seal your envelope and attach an address label if needed.

Post-Activity Questions

Did you enjoy making your envelopes?

Did you have any challenges?

What would you do differently?

What other types of envelopes could you make this way?

Other Ideas for Envelopes

- Use maps or glossy magazines to make your envelope.
- Try different templates, or now that you know how to make it, try making your own template.

Activity 9 – Gift Bags



Source: Newspaper Gift Bag.
Cut Out and Keep. 2009.
http://www.cutoutandkeep.net/projects/newspaper_gift_bag

One way to reduce the amount of paper we use is by using gift bags instead of wrapping presents. These gift bags can be reused a number of times before they become garbage. At the same time, you can make custom sizes with custom designs suitable for the gift and the gift's recipient.

To make a custom sized gift bag, measuring is important. Although there are easier ways to make a gift bag, this method will give you exactly what you need for the size of gift you want to give.

Something to keep in mind while doing this project is when making a fold, you want to crease it really well. If you do not have fingernails for this, keep a bone folder or wooden spoon handy.

Time

Allow 1 hour

Materials and Tools

- Paper – gift wrap, calendar
- Ruler
- Pencil
- Scissors
- Glue stick
- Decorative-edged scissors (optional)
- Hole punch and ribbon for handles (optional)

Instructions

1. Determine how high, wide and deep you want your bag to be. For the purposes of this activity, we will make a bag that is 20 cm high, 15 cm wide and 8 cm deep (8 x 6 x 3 inches) for a gift that is slightly smaller, say 18 cm high, 12 cm wide and 6 cm deep.
2. Calculate the amount of paper you will need using the following:
 - a. Take your height measurement, add the depth measurement plus an amount to make an overlap; we will use 1 cm (0.4 inches). In this case, we would need 20 cm plus 8 cm plus 1 cm which totals 29 cm.
 - b. Take your width measurement, add your depth measurement, and double it. Add an amount for overlap. For this activity, that would be 15 cm plus 8 cm which totals 23 cm, then multiplied by two is 46 cm. Add one centimetre for overlap, for total of 47 cm.

3. According to above calculations, you will need a piece of paper 29 cm by 47 cm. Do not worry if you do not have a piece of paper that long as you can glue some together.
4. Lay your paper on a flat clean surface.
5. Fold one edge of your paper over 1 cm (0.4 inch). Crease it well. This is your first overlap.
6. Measure from the folded edge your depth measurement, which is 8 cm (3 inches). Mark in at least three places, draw a line to join the marks and fold along line creasing well.
7. Now measure your width from the second folded edge. In this case, measure 15 cm (6 inches). Mark and fold.
8. From the third folded edge, measure and mark your next depth measurement of 8 cm (3 inches). Fold. You should be left with exactly your last width measurement.
9. Glue the 1 cm overlap to the rest of the paper to make a square tube. Let dry.
10. Once your glue is dry, fold the narrower sides of your tube inward and in half so that the wider sides meet. Crease. This is called a valley fold.
11. Select one end to be your bottom. If you have a directional design, this will be important. If you do not, then it does not matter which end is your bottom.
12. Taking one of the corners, fold it in on itself like you were wrapping a box. Do this to both sides.
13. Fold the top down and the bottom up so they overlap. Glue one side of the overlap onto the other. Let dry. You now have a bag!
14. You can cut the top end with scalloped craft scissors, and punch two holes on each side for ribbon handle to create a lovely gift bag.



Post-Activity Questions

Did you enjoy this?

Did you have any challenges making your gift bag?

What would you do differently?

How can you further customize gift bags using this technique?

Other Ideas for Gift Bags

- If your present is heavy and you add handles to your gift bag, you will need to reinforce the top. Just fold the top part down just far enough to add strength and to keep the edges from showing. Punch holes for your handles or glue your handles on. Remember to add the fold-over measurement to your calculations to determine how much paper you need.

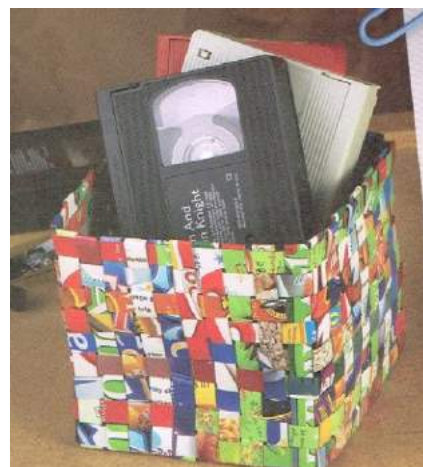
Activity 10 – Cereal Box Basket

Have you noticed how colourful our cereal boxes are? In this activity, we are going to take advantage of the bright colours and create a basket made of strips of light boxboard that make up cereal boxes and other packaging.

We will be cutting the packaging into strips, gluing them end to end so we have longer strips and then line them up and weaving them together. Try to get an assortment of colours and types of packing. You can also use cracker, pop can and other types of lightweight boxboard.

Hints and Tips

- If you have access to a paper cutter, making the strips will be a lot faster and easier.
- Using a hot glue gun will make this activity so faster as well. Otherwise, you need to let the glue dry at each step.



Source: Boyd, 2009

Materials and Tools

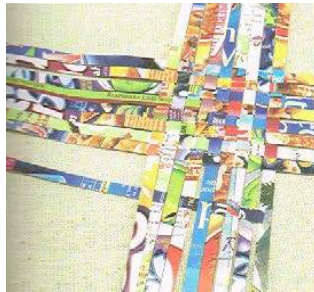
- Cereal boxes or other types of boxboard
- Scissors
- Paper cutter (or ruler and pencil)
- Hot glue gun and glue sticks, or white glue
- Bone folder or wooden spoon (optional)
- Découpage medium – Mod Podge
- Foam brush

Instructions

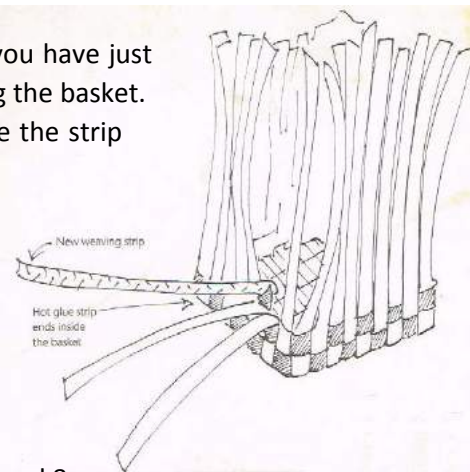
1. Use the scissors to cut open the boxes. Remove the sides, bottom and top flaps so that you have just the front and back of the box.
2. If you have a paper cutter, place the flat pieces in the paper cutter and cut the box into 6 mm (1/4 inch) strips. If you do not, use your ruler and pencil to mark 6 mm strips and cut with your scissors. Try to cut a straight line as possible.



3. Connect two strips together by adding a dab of glue onto one strip and overlap the second piece by 3 mm (1/8 inch). Let dry. Make 26 of these.
4. Line up nine strips with the right side up, mixing up colours and designs. Weave another 9 strips horizontally over and under the centre of the vertical strips. Try to ensure that the areas where you have glued are either over or under another piece. This will allow for a tight weave.
5. Turn your weaving over. At the first horizontal piece from the bottom, fold over the strips up and over the woven section. Make sure that the fold in the strips line up to make straight line. Crease with your fingers or with a wooden spoon or bone folder.



6. Repeat Step 5 for the remaining three sides. Note that your woven section will now be the base of your basket.
7. Weave a strip in and out of the sides that you have just created. As you weave, you will be encircling the basket. When you reach a corner, be sure to crease the strip and make a sharp edge.
8. Once you have encircled the basket, trim and glue the ends together. Slide the connected strip down as close to the base as possible. You might want to add a bit of glue in the bottom corners to help anchor it in place.
9. Weave another 7 strips as outline in Steps 7 and 8.



10. Trim the vertical strips so that they are 20 mm (3/4 inch) from the top of the last woven horizontal strip. Fold down each end into the basket and glue it in place.
11. With your remaining strip, glue it in the inside to cover the base of the glued strip ends to conceal them.



12. If wanted, seal the inside and outside with a découpage medium.

Post-Activity Questions

Did you enjoy weaving your box?

Did you have any challenges?

What would you do differently?

What other recycled paper products could you weave?

Activity 11 – Lidded Box

This folded box is a great way to store items like earrings and rings, or to give as a gift box. It is made of two boxes, one slightly smaller than the other so that it will fit inside. Lightweight card stock or similar heavy weight paper works the best. Try reusing pages from glossy magazines or old cards like Christmas cards.



Source: Rhatigan and Newcombe, 2006

Hints and Tips

- Make your creases crisp by using a bone folder, or your fingernail. You could also use a wooden spoon.
- Stick down flaps with glue stick to make an extra strong box.

Time

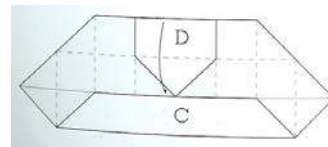
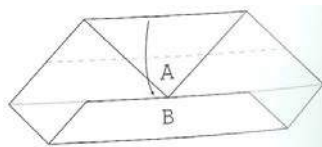
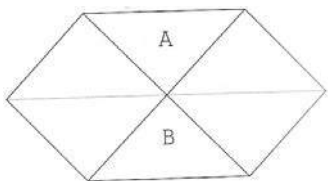
Allow 1 hour

Materials and Tools

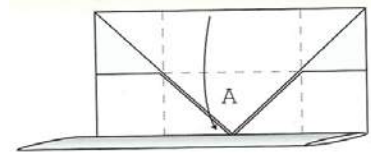
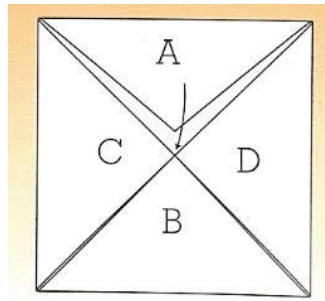
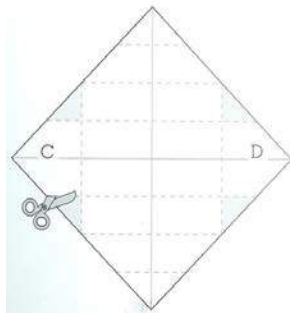
- Heavy paper or card stock – two pieces of 22 cm x 28 cm (8-1/2 x 11 inch)
- Ruler
- Pencil
- Scissors
- Bone folder (optional)

Instructions

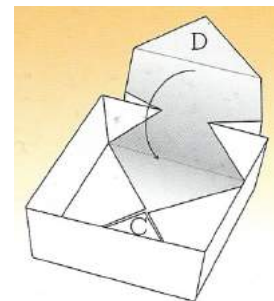
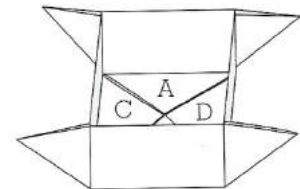
1. Using your ruler and pencil, measure and mark a 20-cm (8 inch) square from the paper you would like to be the lid of the box. Cut out.
2. With your ruler and pencil, mark the centre of the square on the backside of the paper.
3. Fold two corners opposite to one another to the centre, to the mark you just made. Crease. These two corners are now triangles A and B.
4. Fold the two corners you just folded (A and B) into the centre again, with the flat edges of the fold meeting. Crease.
5. Open up the last fold you made, then fold the other two corners (triangles C and D) into the centre and crease them.



6. Unfold the paper so that it is a 20-cm (8-inch) square again. Look carefully at the fold lines. Find the four small triangles formed by the fold lines. With the scissors, carefully cut them out.
7. Fold triangles C and D into centre, and again so that the folded edges meet. Crease those folds well and open them up all the way.
8. Fold triangles A and B into the centre, and again so that their flat edges meet in the centre. Open them up halfway, keeping the points of the triangle in the centre. These are the first two sides of your box.



9. Fold triangles C and D so that their points meet in the centre of the box, and they are forming sides.
10. Reverse the folds of the four triangles that are sticking out. Do this by pulling up triangle C and fold in the two triangles sticking out. Repeat on the other side with triangle D.
11. For the bottom of the box, cut a slightly smaller square from your paper, 19.5 cm (7-3/4 inches) and repeat the instructions from Step 2.
12. When you are done that box, the lid should slide down over it perfectly!



Post-Activity Questions

Did you enjoy making your lidded box?

Did you have any challenges?

What would you do differently?

What other things would you like to learn how to make by folding paper?

4. Colourful Coiling

Creating coils by rolling folded paper is another way to reuse paper and create attractive and artistic items.

Activity 12 – Coiled Paper Pendant

We are going to fold colourful paper into strips and then roll or coil them and glue them into place to create a colourful pendant. You can use any type of glue; some people like using a low-temperature hot glue gun because it dries and hardens quickly. However, if you accidentally come into contact with the hot glue, you could burn your fingers. As an alternative, you can glue your coils with white craft glue, but you will have to hold the work in place for a few minutes to let the glue set.



Source: How to Recycle Magazines into Jewelry.
Craft Stylish. September 23, 2010.

<http://www.craftstylish.com/item/39212/how-to-recycle-magazines-into-jewelry/page/all>

Hints and Tips

- The best coils come from bold, brightly coloured pages. The pages with ads are often the best.
- Be sure to crease your edges well. Use a bone folder, your fingernail or a wooden spoon.
- As you coil, your paper might develop 'corners' or bends. Press out any of these with your bone folder, wooden spoon or on your work surface.
- Occasionally flatten your coil, using the bone folder or wooden spoon or on your work surface.



- Add only small amounts of glue at a time so that the glue does not ooze out as you coil.
- Wash your hands between coils; magazine print will often leave ink on your fingers that may dirty up your other coils!

Time

Allow 1 hour plus drying time for sealer.

Materials and Tools

- Colourful magazine pages
- Scissors
- Bone folder (optional)
- Wooden skewer
- Low-temperature glue gun or white craft glue
- Cardstock
- Eye pin
- Clear acrylic sealer
- Jump ring

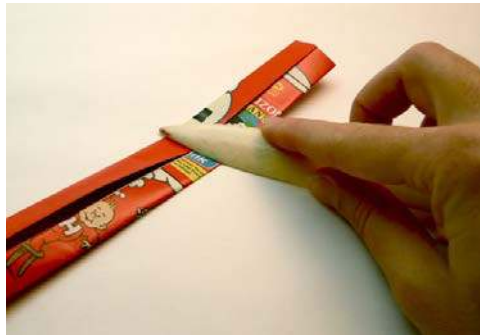
Instructions

1. Remove pages from magazine by tearing them out or cutting them. Make sure you get as much of the page as possible. And, if you're using a glue gun, start letting it heat up.
2. Fold your magazine page lengthwise down the centre. If one edge of your page is torn, just line up the most intact corner to make your fold. The torn edge will be completely hidden once we are finished folding.
3. Unfold the page and cut it in half along your fold line.

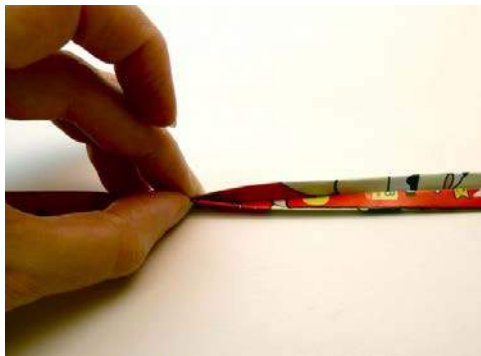


4. Fold the half page in half lengthwise.
5. By lining up the most intact corner (if applicable), fold this half page in half lengthwise.
6. Fold the piece in half lengthwise a second time, creasing your edges.
7. Unfold that second fold, and then fold the two edges in toward the centre. Crease these folds.

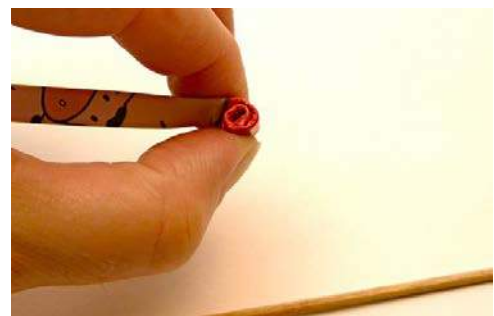
8. Repeat that step – fold the two edges in toward the centre again. Crease. Try to keep your folds and creases as exact as you can during this stage of the process – it makes a big difference in your finished coils.

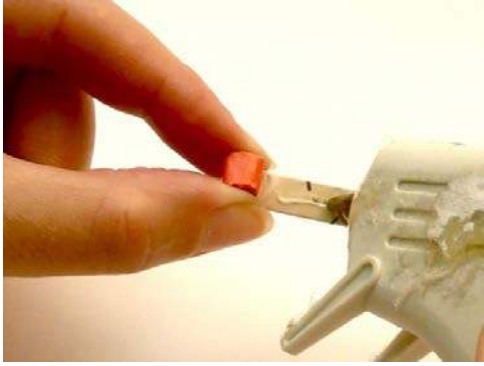


9. Lastly, fold the strip in half lengthwise, capturing all those folds inside.
10. To start your coil, wrap one end of your folded strip around a wooden skewer and roll it tightly for about three complete turns.



11. Remove the skewer and set it aside. The coil will relax a little, but that is okay.
12. Recoil this strip by hand, making sure there is no hole in the centre. Coil about two turns.
13. Apply a small amount of glue to the strip by holding the flat part of the coil in your left hand (if you are right handed) and adding glue with your right hand. If you are using hot glue, remember that it hardens very quickly, so apply a short thin strip of glue that is no longer than 1 cm (1/2 inch).





14. To add a new colour, placing the strips end to end and continue to coil with the new colour.
15. When your coil is the size you would like for a pendant, cut off the rest of the magazine strip and glue the end of the strip firmly down to the coil.
16. Trace outside edge of the coil onto a piece of cardstock. Cut inside your traced lines.



17. Flip the coil over to the back. Apply a generous amount of craft glue, and place an eye pin across the back of the coil, so that the loop sits at the top of the coil. You can add a few kinks for your eye pin so that it does not pull out easily.
18. Press the cardstock over the glue, and allow to dry.



19. Seal the pendant on the front and back with clear sealer.
Allow to dry.

20. Add a jump ring and add your favourite chain, neck wire,
or ribbon.



How to Open and Close a Jump Ring

- Using two sets of pliers, hold the jump ring on either side of its split. Swing the jump ring open by pulling one side of the ring toward you and pushing the other side away.
 - To close the ring, repeat the process in the opposite direction.
 - To close a gap in a jump ring, hold either side with pliers and gently move the sides back and forth while slowly pushing them together. This technique avoids distortion of the rings and allows you to close the ring securely.
-

Post-Activity Questions

Did you enjoy this?

Did you have any problems making your coils?

Did you have any problems making your pendant?

What would you do differently?

What other things could you craft using this technique of coiling?

Other Coiling Ideas

- Make a necklace using more than one coil.
- Make a coiled paper trivet or hot pad.
- Create a coiled Christmas tree decoration using red and green paper.



Source: <http://www.ggcaa.com/2010/01/garbage-can-made-from-garbage-how.html>
Source: <http://savedbylovecreations.com/2011/08/recycled-newspaper-coasters.html>

Unit 2: Groovy Glass

Glass dates back to the Bronze Age. In ancient times, the Romans perfected glass making and its use became wide-spread. Glass is quite simply sand, baking soda and limestone melted together to become a liquid. This liquid is shaped, cooled and left to harden. The resulting glass is hard, brittle, and stands up to the effects of wind, rain or sun. It has been used for various kinds of bottles and utensils, mirrors, windows and more.

Because of its weight and density, glass is a large part of household and industrial waste. The glass component in municipal waste is usually made up of bottles, broken glassware, light bulbs and other items. In the United States, glass makes up five per cent of garbage, which is a shame because glass lasts forever. Because of its enduring properties, it can be cleaned, refilled and reused but sadly is not (Platt and Rowe, 2002).

Glass is one of the easiest products to be recycled and is one man-made product that can be recycled indefinitely into new glass containers without losing any of its properties. Instead of one million years in a landfill, glass can be recycled in as little as 30 days. In fact, it has been found that recycling glass uses 40 per cent less energy than creating new glass. Recycled glass also creates about 20 per cent less air pollution and 50 per cent less water pollution, and saves landfill space and resources.

In Canada, 82 per cent of glass containers consumed every year are reused or recycled. According to the U.S. EPA, about 39 per cent of beer and soft drink bottles, 18 per cent of wine and liquor bottles and 18 per cent of food jars were recovered for recycling in 2009. In total, 31 per cent of all glass containers were recycled. Glass container manufacturers hope to achieve 50 per cent recycled content in the manufacture of new glass bottles by 2013. This achievement would save enough energy to power 21,978 homes for one year and while removing over 181 tons of waste from landfills on a monthly basis!

Discussion Point: How can you and your family or school use the 'r's of waste management (rethink, refuse, reduce, reuse, repair, recycle) when it comes to glass?

Activity 13 – Tissue Paper Candle Votive

In this activity, we are going to turn empty jars into pretty glowing decorations. This project requires few materials but produces great results.

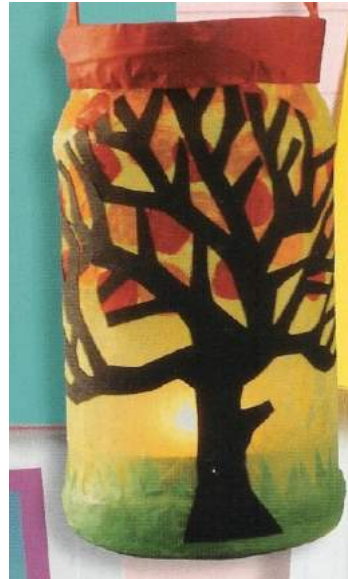
We will be creating a scene by cutting out shapes in different coloured and types of paper and glue onto our glass jar. This will be illuminated by the light of a candle that sits inside the jar. Please light with the supervision of an adult and be careful as the jars can get hot!

Time

Allow 1.5 hours

Materials and Tools

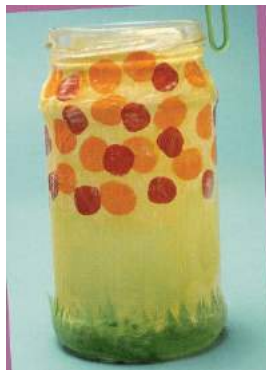
- Glass jar
- Black paper
- Coloured tissue paper – yellow, green, red and orange
- Scissors
- White glue
- Tea light candles



Source: Henry, Cook and Worms, 2011

Instructions

1. Coat the outside of a jar with white glue and wrap in yellow tissue paper.
2. Cut strip of spiky grass from green tissue and stick them around the base of the jar.
3. Cut red and orange circles in tissue paper and glue them around the top half of the jar.
4. Cut two trees out of black paper and stick them to the front and back of the jar so that they are opposite to each other.



5. Glue a strip of orange tissue to the lip of your jar to finish it off.
6. Place a tea light inside the jar and you are ready to light them!

Post-Activity Questions

Did you enjoy making your votive?

Did you have any challenges?

What would you do differently?

What other things could you use to make a colourful and attractive votive?

Other Ideas for Votives

- Cover the glass jar with glue and then with glitter – sparkly!
- For a winter look, try Epsom salts instead of glitter.
- Cover the glass jar with patterned tissue paper and wrap wire around the top to embellish.

Activity 14 – Wrapped Bottle

Most people have a lot of glass bottles in their recycle bin that can be repurposed. In this activity, we will wrap glass bottles with yarn or twine. These can be used as vases, grouped as a decorative feature. A pair can be filled with sand and topped with a cork for attractive bookends!

Hints and Tips

- Start wrapping your bottle at the top. This allows you to keep better tension as the bottle increases in girth. It is hard to get good tension if you go from the larger part of the bottle to the neck.
- Start wrapping your bottle either at the very top or just below the lip. The choice is yours.
- To create a smooth clean finish, carefully wind the yarn with each layer right next to the one before it. For a less symmetric, more organic look, let your yarn overlap and bunch up in various directions.
- Although fine yarn create a very clean and smooth finish, it is difficult to work with your first time. For your first project, use a heavy four-ply yarn, or even jute on a small bottle.



Source: Yarn-Wrapped Bottles.
Living Unbound: March 12, 2013.
<http://www.living-unbound.com/2013/03/yarn-wrapped-bottles.html>

Time

Allow 1 hour

Materials and Tools

- Glass bottle
- Yarn or twine
- Clear tape
- White glue
- Scissors

Instructions

1. Starting at the top of your bottle, tape the end of your yarn to the top of the bottle so that it is pointing down. Apply a thin layer of glue to the top end of the bottle to hold the yarn in place, and then start wrapping. As you wrap, you will hide the end.
2. Apply another thin layer of glue and continue wrapping. Try to wind each layer of yarn, close to each other, without any



room in between. Try playing with different tensions to see what works best.

3. When you get to the curve, you may need to ease up slightly on the tension. You may need slightly more glue to hold the yarn in place as the bottle curves outward.
4. Continue down the bottle until you are about 1 cm (0.4 inches) from the bottom.
5. Now turn the bottle over so it is upside down, add more glue and finish wrapping.



6. Once the glue has set, trim the end. Use your bottle to decorate your room or hold flowers.



Post-Activity Questions

Did you enjoy making your wrapped bottle?

Did you have any challenges?

What would you do differently?

What could you use this for?

Activity 15 – Snow Globe

Snow globes are a classic Christmas decoration and fun to have. It can be mesmerizing to watch the little specks of snow fall in the enclosed, magical Christmas wonderland. In this activity, we will create a winter wonderland in a jar.

We will be filling a wide mouth jar that has a tight fitting lid with distilled water, glycerin and glitter. A pickle, salsa or jelly jar will work well. You can paint the lid if you want to cover up the brand or change the colour. Distilled water is pure water, that is, water that has many of its impurities removed through distillation. By using distilled water, you will only have glitter falling, not speck of iron or other minerals as well!



Source: DIY Snow Globes for Christmas. PartyDQ. December 10, 2012.
<http://partydq.wordpress.com/2012/12/10/diy-snow-globes-for-christmas/>

Glycerin is a non-toxic liquid that can be bought in most drug stores and pharmacies. It is slightly thicker than the water so that your glitter falls more slowly when you shake your 'globe'.

To create the winter scene, we will be using waterproof glue to stick down a figurine to the lid. In choosing your figure, find one that is either plastic or ceramic and that half fills the jar. Finally we will be using the waterproof glue to secure the lid; this will help to create an extra seal to our jar and prevent leaks.

Time

Allow 2 hours; if you paint your lid and depending on the type of glue you use to secure your figure, you may need two days to do this activity.

Materials and Tools

- Glass container with a tight fitting lid
- Sandpaper
- Measuring cup
- Little figurine

- Distilled water
- Liquid glycerin
- Glitter
- Clear epoxy cement, or waterproof glue like Silicon II or E-6000
- Spray paint (optional)

Instructions

1. Make sure your jar is clean and all the labels have been removed.
2. Measure the liquid you will need to fill your jar. One way to do this to fill up your jar with tap water and then pour that water into a measuring cup
3. At the same time, test your jar for watertight lid. Do this by putting water in the jar, put the lid on tightly, and then turn it upside down to see if it leaks.
4. Clean and dry your jars totally.
5. Paint the lid of your jar (optional).
6. Sand the inside of the lid until the surface is slightly rough. With clear-drying epoxy (or other waterproof glue), adhere the figurine to the inside of the lid. Let dry.
7. Calculate the amount of glycerin you will need – use 5 ml (1 tsp) of glycerin for every 250 ml (1 cup) of to water.
8. Add the appropriate quantities of glycerin and distilled water.
9. Add a pinch of glitter. Too much glitter will stick to the bottom of the jar when you flip it over. You can add more later.
10. Screw the lid on firmly, give it a good shake and watch the snow fall.
11. At this stage, you can adjust the amount of glycerin or glitter. If you find the water too thick and chunky, reduce the amount of glycerin. Once you are satisfied with your scene, you can glue on your lid – dry your lid, put a thin strand of glue on the inside of the lid and screw it onto the jar. Let dry before shaking.
12. Congratulations! You have just made a homemade snow globe!

Post-Activity Questions

Did you enjoy making your snow globe?

Did you have any challenges?

What would you do differently?

What other things could you use in your snow globe?

Other Ideas for Globes

- Use multi-coloured glitter to make a party scene instead of the winter scene.

Activity 16 – Tinted Glass Jars

Tinted or painted glass looks cool and makes a great decorative accent. In this activity, we are going to use white glue and food colouring to colour an ordinary glass jar. You could also use Mod Podge and food colouring, or water-downed enamel paint. Be aware that items painted with white glue and Mod Podge are not water-resistant and can melt if exposed to water. If you apply it to the outside, you can use your jar to hold liquids, like a vase, just as long as you are very careful pouring the water both in and out the jar. Once you have coloured your jars, please do not use them to consume food or drink.



Source: Mason Blue Glass Canning Jar DIY. Craftberry Brush.
March 7, 2011. <http://www.craftberrybush.com/2011/03/mason-blue-glass-canning-jar-diy.html>

Hints and Tips

- The glue mix will dry quickly so if you need more time to apply, just add a few drops of water.
- The more food colouring, the darker your jar will be. The darker the shade you make, the more visible the streaks in the glue will be.

Time

Allow 1 hour

Materials and Tools

- Newspaper or plastic
- Glass jar
- Food colouring
- White glue
- Container for mixing 'dye' – something that you do not mind being stained like yogurt container.
- Foam brush
- Water (optional)

Instructions

1. Put down newspaper or plastic to protect your workspace.
2. Using container, mix your 'dye' by adding 5 ml (1 tsp.) of glue to 3 drops of food colouring to 7.5 ml (1 1/2 tsp.) of water. To make a turquoise shade, use 2 drops of blue and 1 drop of green; for lavender, use 2 drops of blue and 1 drop of red.



3. Take your foam brush and using even strokes, brush coloured glue onto jar from top to bottom. Be careful not to go over it too much or the glue will start to clump together. Generally the streaks you see when the mixture is wet will be almost invisible if done correctly, so be patient as you paint.
4. If your glue is drying too quickly, add a few drops of water.
5. Once painted, allow to dry. This will only take a few minutes.
6. If you like a real-vintage look, apply another coat on the neck and bottom of your jar. That way the colour will be deeper on the neck and bottom like it is on an old jar.
7. If it does not work out, you can just wash your jar and start over.

Post-Activity Questions

Did you enjoy dying your jar?

Did you have any challenges?

What would you do differently?

What other ways can you use dyed jars?

Activity 17– Sewing Kit in Mason Jar

In this activity we will be creating a sewing kit out of a mason jar. By using stuffing and fabric, we will transform the lid into a pincushion and then use the jar itself to store thread, needles, buttons and mini scissors. It is handy to have for your crafts or to give as a gift.

You can use any size jar but it needs to be a mason jar. That is, a jar that has a metal screw band top with a glass or metal lid that seals onto the jar.



Source: Mason Jar Sewing Kit. Momtastic DIY.2011.
<http://www.momtastic.com/home-and-living/home/168161-diy-mason-jar-sewing-kit>

Time

Allow 1 hour

Materials and Tools

- Mason jar
- Fabric
- Pencil
- Scissors
- Fibrefill
- Hot glue and hot glue gun, or fabric glue
- Sewing kit materials like assorted needles, thread, mini scissors to fill jar.

Instructions

1. Using the metal or glass lid of the mason jar, draw a circle onto the fabric about 2.5 cm (1 inch) wider than the jar lid. Cut out the circle.
2. Turn the fabric circle right side down and place the lid bottom upside down onto the middle of the fabric. With your glue gun or fabric glue, place a line of glue along three-quarters of the outer rim of lid.
3. Fold the fabric onto glue, bunching as you go until you reach the unglued part. Let dry well.





4. Stuff batting inside the top of the lid to make a pin cushion. Add batting until it is poufy and even.
5. Glue the last section of the fabric to the lid.



6. Add a line of glue along the inside of the metal screw band.
7. Press the pin cushion lid inside the screw band and let dry.



8. Fill the inside of the jar with sewing essential such as pins, string, white and black thread, zipper, mini scissors. Then screw the lid on top – it will be harder to screw on with the fabric but should still fit.
9. Ta-dah, a sewing kit in a jar!

Post-Activity Questions

Did you enjoy making your sewing kit?

Did you have any challenges?

What would you do differently?

What else could you add to your sewing kit?

What other things could you craft from jars?

Other Ideas for Glass



Rikki Hibbert
PHOTOGRAPHY

- Make a photo frame. Cut a copy of a favourite photo to fit into a clean jar, slide it in upside down, and then turn the jar over so it is sitting on its opening. Voilà – a glass jar photo frame.

Source: Recycle Reuse & Repurpose – Glass Jar Photo Frames. Riki Hibbert Photography. July 16, 2010.
<http://www.rikkihibbert.co.za/2010/07/16/recycle-reuse-repurpose-glass-jar-photo-frames/>

- Use a nice shaped bottle as a bracelet holder.

Source: Problem Solved. Lucky Girl Finds. June 27, 2011.
<http://luckygirlfinds.com/2011/06/27/problem-solved/>



- Saving for something special? Create a savings jar – glue a symbol of your savings' objective (car, trip to Disneyland) to a lid of a large jar. Spray paint the lid and your symbol 'statute' and start saving!

Source: Disney Savings Jars + NEW Silhouette Promotion. Eighteen 25. Thursday, April 18, 2013.
<http://eighteen25.blogspot.co.nz/2013/04/disney-week-disney-savings-jars-new.html>

Unit 3: Marvelous Metal

Metals have been in use for a long time. In ancient Persia, the potters used a clay that contained aluminium to make strong pitchers and bowls. It was not until 1808 that aluminium ore separated from the soil and rock through a process called smelting. This involves heating the rock to extreme temperatures to get pure aluminium. Other metals like copper and tin are extracted by smelting as well. These metals can be blended to create new substances called alloys.

Metal	Description	Use
Aluminium	Silver-white metal, strong and lightweight	Making utensils, baking pans, doors and window frames, eaves troughs, airplane parts, pop cans
Copper	Reddish-brown, easily shaped	Wires, pipes, pots and pans, some coins
Tin	Shiny	Used as a tin coating or plating on other metals such as steel. Pots, pans, plates, tin boxes and cans
Metal Alloy	Description	Use
Brass	Yellowish copper and zinc mixture	Made into lamps, hardware (door knobs, hinges), musical instruments
Bronze	Copper and tin	First used to make tools
Pewter	Tin with a bit of lead, copper and other additives	Plates, mugs, trays, jewelry.
Steel	Iron with a small amount of carbon	Tools, machinery, automobiles, trains, ships.

Almost daily, we use metal – our vehicles, beverage cans and food tins are made of metals such as steel, tin and aluminium.

Aluminium is the most abundant metal on earth's crust and aluminium cans are the one of the most recyclable piece of 'garbage' we produce. Unfortunately, it cannot just be refilled; it needs to be recycled. That is, it needs to be melted down and reshaped. However, recycling an aluminium pop can saves 96 per cent of the energy used to make a can from ore, and produces 95 per cent less air pollution and 97 per cent less water pollution!

If an aluminium can goes to the landfill and is buried, it may take up to 500 years to break down. If we recycled an aluminium can, it would take only 60 days for that can to be collected, transported, melted down, formed into a new can and placed back on shelves. Because we have a deposit on aluminium cans, we have good incentive to recycle. In fact, Canadians recycle more than 2 billion aluminium cans per year. Unfortunately, some still end up in the garbage.

Cans made from tin and steel are widely used; Americans use 100 million cans a day! Left to natural process, a steel can would take about 100 years to break down. Like aluminium, it has an infinite lifespan when recycled. According to the Recycling Council of BC, using recycled steel saves 80 per cent of carbon dioxide emissions and 75 per cent of the energy needed to make steel from virgin materials.

In this unit, we will be transforming different types of waste metal into treasures.

Discussion Point: How can you and your family or school use the 'r's of waste management (rethink, refuse, reduce, reuse, repair, recycle) to deal with metals like cans and tins?

Activity 18 – Tin Can Luminaries

Here is an attractive way to repurpose tin cans into simple lanterns or luminaries. By punching holes, we are going to create a design that the light of a candle will shine through. We will also add a wire handle, so your lantern can be hung from a tree or a hanger.

In choosing a design for your luminary, select or draw a simple pattern. Detail is difficult to both show and do with this technique, so simple is better. A colouring book is a good source of simple designs. Keep in mind that the gap between holes needs to be at least as large as the diameter of each hole.

By filling the can with mostly sand then adding some water and freezing it, the can will be rigid and will not dent as you hammer the nail into it to make a design. If we used only water, the expansion of the water as it freezes often causes the bottom of the can to bulge out. Once you have pierced your can and the ice has melted, do not pour the sand down the sink as it can block the plumbing.

Trying to punch holes in a frozen can is a bit difficult because it tends to roll away. Try placing it on a towel that has both ends rolled up to support the can. Or you could fill a bag with sand and shape it to accommodate the can as it lies on its side.

As you work on your can, the water and sand mix will start to thaw. You may need to stop every 10 minutes or so and refreeze it. To make best use of your time, have three or four cans to pierce so you have one to work on while the others are refreezing.

Time

Requires time to freeze overnight and then about 1 hour to punch a design.

Materials and Tools

- Tin cans – 2 or 3
- Sand
- Water
- Freezer
- Paper pattern



Source: Making Lights: DIY Tin Can Lanterns.
CraftFoxes. March 31, 2013.
http://www.craftfoxes.com/how_to/making-lights-diy-tin-can-lanterns

- Duct tape
- Hammer
- Nail
- Towel or soft cloth
- Spray paint (optional)
- Newspaper (optional)
- Wire – 1.2 to 2 mm (12 to 16 gauge); 25 cm (10 inches)
- Pliers
- Wire cutters

Instructions

1. Remove the label and any blobs of glue from the can.
2. Pack the can with sand, top up with water, and freeze overnight or until solid.
3. Draw or trace a design on a piece of paper to fit the size of the can.
4. Using duct tape, secure your design in place on the frozen can. Be warned that the paper gets wet and tears easily.
5. Lay the can on a stable surface on a towel or soft cloth.
6. Using hammer and nails, punch holes through your pattern in the can. After 10 minutes of working on your can, return it to the freezer for about 30 minutes to ensure the can remains solid. If you are making several lanterns, work on them in rotation.
7. Once your design is complete, punch a pair of holes opposite each other about 1 cm (3/8 inch) below the top of the can for the handle.
8. Remove the sand, water and any ice that is left.
9. If you want, fill the can with newspaper and spray-paint it evenly. Make sure you work in a well-ventilated area or outside. Let dry.
10. To attach the handle, take 25 cm (10 inch) length of wire, push each end through the holes just below the top of the can. Bend each end of the wire to secure it to the can.
11. The lantern is now ready to place a candle in it. Several grouped together make a lovely night-time light!



Post-Activity Questions

Did you enjoy making your tin can lantern?

Did you have any challenges?

What would you do differently?

What other designs can you make?

Activity 19 – Decorator Can with Lid

By wrapping an ordinary tin can with bright coloured paper and creating a lid with a pull, we can make a lovely storage container for all sorts of stuff. If you can, use a tin can that has been open with one of those safety openers that does not leave a sharp edge. If you cannot, ensure that you cover the sharp edge with heavy paper or tape so you do not risk cutting yourself.

We will be using two circles of cardboard to make the lid. One will be the same size as the can opening and will be the visible part of the lid. The other will be slightly smaller and will be on the inside. It will cover the inside of the outer lid and help to keep the lid on the can.

We will use a cord or string and a large bead to create a pull for our lid. In choosing what you will use to make the pull, make sure that you can thread a loop of your cord or string through the bead.

Finally we will be covering the can itself. You can co-ordinate or match the paper you used to cover the lid. Try to reuse paper like gift wrap or leftover wall paper.



Source: DIY Cans With Lids. Kamomilla Vanilla.
May 26, 2011. <http://kamomilla-vanilla.blogspot.fr/2011/05/diy-daser-med-lag.html>

Time

Allow 30 minutes

Materials and Tools

- Large metal can
- Boxboard
- Paper
- Pencil
- Ruler
- Measuring tape
- Compass or string and tack
- Scissors
- Glue stick
- String or cord – 20 to 25 cm (8 to 10 inches)
- Large bead

Instructions

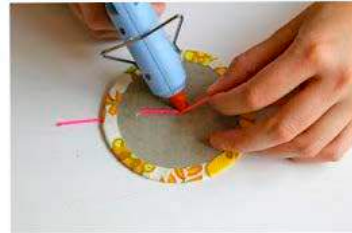
1. To create the outer part of your lid, trace around the outside edge of your can with pencil onto cardboard. Cut out.
2. To cover, cut a square piece of paper 5 cm (2 inches) larger than larger circle. Glue larger circle onto paper. Draw a circle 2.5 cm (1 inch) from edge. Cut out.



3. Cut notches approximately 1 cm (1/2 inch) apart. Glue down notches.



4. Measure the inside of your can. Using compass or string and tack to make a circle the same size as the inside. Cut out.
5. Glue smaller circle on paper. Cut out
6. Make hole directly in centre of your outer lid with small hole punch, or heavy needle. Make the hole large enough that you can thread your cord through it.
7. Fold your cord or string in half and thread the loop through hole. Thread large bead onto loop. Knot cord/string to secure bead.
8. On the side of the lid with the notches, glue down ends of cord.



9. Glue smaller circle of cardboard onto back of larger circle covering cord and notches flanges. Your lid is finished.



10. To cover can, measure height of can between two rims. Measure circumference and add 1 cm for overlap.
11. Transfer measurement to paper and cut out.
12. Using glue, cover can with paper.
13. If can has a sharp edge, cut out strip of paper and glue over end.
14. Place on lid – and you have a lidded storage container!

Post-Activity Questions

Did you enjoy making your lidded tin can?

Did you have any challenges?

What would you do differently?

What can you use this lidded can for?

Activity 20 – Fancy Foil Mobile

Aluminium pie plates and take-out containers provide a good material for repurposing as they are firm enough to hold a shape but soft enough to cut with scissors. You can trace and cut out shapes – stars, fish, butterflies or anything you like. Use the shapes to make a mobile, or even earrings or brooches.

For a pattern you can use a colouring book as a source of simple pictures that are easily traced, or draw your own. Or, you can use a craft punch to give you shapes to hang. To decorate your shapes, colour with permanent markers. You can even glue on googly eyes to give your creatures more character.



Source: Martin, 2003

Time

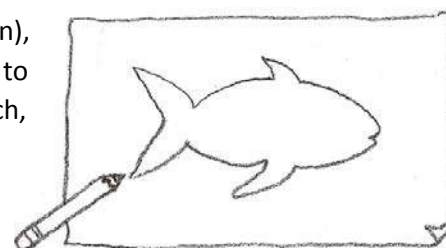
Allow 1.5 hours

Materials and Supplies

- Used aluminium pie pans or take-out containers
- Colouring book or scrap paper for drawing
- Pencil
- Scissors
- Craft punch (optional)
- Permanent coloured markers
- Googly eyes (optional)
- White glue (optional)
- Heavy needle
- Clear fishing line
- Wooden dowel – 6 mm (1/4 inch); 60 cm (24 inches)
- Plastic drinking straws or chopsticks – 3
- Nuts – 6

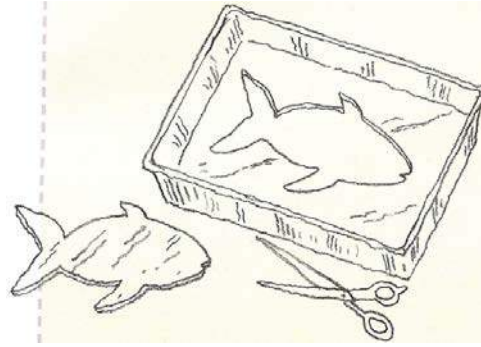
Instructions

1. Make sure your recycled aluminium containers are clean.
2. Using your colouring book (or sketch your own), trace shapes on paper and cut them out to make a pattern. If you are using a craft punch, you can skip this step.
3. Trace around the pattern with a pencil onto



the aluminium container. Cut out 8 to 10 shapes. Or, use your craft punch to punch out your shapes.

4. Colour your shapes with permanent coloured markers.
5. If you like, glue on googly eyes. Let dry completely.



6. Use needle to make small hole through the centre top of each shape. Make another hole through the bottom directly below the first hole.
7. Cut six pieces of fishing line approximately 45 cm (18 inches) long. String on one or more creatures, threading the line first through the bottom hole and then the top hole in each one. Create 6 strings, tying a nut on the bottom end of each one.
8. Cut another 45 cm (18 inches) of fishing line. Find the midpoint of your piece of dowel. Tie the fishing line onto dowel.
9. Cut another 3 pieces of fishing line 45 cm (18 inches) long. Find the midpoint of each drinking straw or chopstick and tie line onto it. Then tie each one onto dowel. Hang if possible.
10. Tie the string of creatures on the straws. Hang one string on each end and then in the middle if you have extra strings. Now you have a colourful mobile!

Post-Activity Questions

Did you enjoy making your mobile?

Did you have any challenges making your shapes?

Did you have any challenges making your mobile?

What would you do differently?

What other ways can you use aluminium take-out containers?

Activity 21 – Magnetic Memo Board

In this activity, we will be repurposing a metal tray into a magnetic memo board by decorating it with paper and adding a ribbon hanger. Then, in the following activity, we will be making magnets for our new board.

The metal tray can be a cookie sheet or a serving tray. Before you start, make sure that a magnet will stick to it. If you want to paint it, choose a metal tray that does not have a Teflon coat. You might want to co-ordinate your paint with your paper that you will be using. Reuse paper if you can. Depending on what kind of tray you use, you may want to tie the ribbon in a simple loop or for a more ornate tray, tie it like a large bow.



Source: Magnet Board CUTENESS!
Cinnaberry Suite. May 15, 2010.
<http://cinnaberry-suite.blogspot.co.nz/2010/05/magnet-board-cuteness.html>

Time

Allow 1 hour; if paint, at least 2 hours.

Materials and Tools

- Metal tray
- Spray paint (optional)
- Decorative paper – scrap book or gift wrap
- Scissors
- White glue or découpage medium
- Industrial glue – E-6000
- Ribbon – 100 cm (40 inches) of 3.5 cm (1-1/2 inch)

Instructions

1. If you like, paint edges and sides with craft paint of your choice. Allow to dry.
2. Cut paper to fit in the flat part of pan.
3. Apply white glue or découpage medium to back of paper and fix to tray. Apply pressure from the centre outward to edges to remove any air bubbles. Let dry.



4. Apply a coat of découpage medium onto top of paper. Let dry.
5. With your ribbon, make either a simple loop or tie a lovely bow, leaving at least 15 cm (6 inches) at the ends.
6. Turn tray over and glue two ends of the ribbon to the back of the tray with E-6000.



7. Turn over and voilà – a magnetic memo board!

Post-Activity Questions

Did you enjoy making your magnetic memo board?

Did you have any challenges?

What would you do differently?

What ways can you use magnetic board?

Other Ideas for Magnetic Memo Boards

- Apply embellishments like stickers, flowers, jewels.
- Punch or drill hole in handle of cookie sheet. Thread ribbon through holes and knot to create hanger.

Activity 22 – Bottle Cap Magnets

Bottle cap magnets are fun to make. You can decorate either side, but in this craft, we will be decorating the inside.

For this activity, try repurposing bottle caps by collecting the unbent ones from beverages consumed at home. Keep in mind that you can turn those caps into whatever colour you want by simply giving them a coat of spray paint. If you are unable to gather them, you can purchase bottle caps at a craft store, scrap book or even hardware or beer making stores.

We will be cutting out paper to découpage or glue inside the bottle cap. We will add a glossy finish by using a three-dimensional découpage medium; or you can use plain découpage medium. We will add a magnet on the back to finish it off. Try reusing paper; use magazines to find eye-catching pictures, letters, words or phrases. You can even match the paper you used on your magnetic board!

Time

Allow 1 hour

Materials and Tools

- Bottle caps
- Spray paint (optional)
- Scissors or 1 inch hole punch
- Paper
- White glue or découpage medium
- Foam brush
- Diamond glaze – 3-dimensional glaze
- Toothpick
- Heavy duty magnets
- Industrial glue – E-6000 glue



Source: Bottle Cap Magnets: A Tutorial.
Everyday Photography. June 8, 2011.
<http://everyday-lovely.blogspot.co.nz/2011/06/bottle-cap-magnets-tutorial.html>

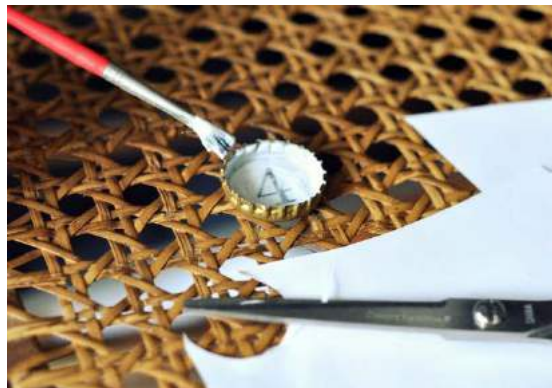
Instructions

1. Collect and clean six or so bottle caps.
2. Spray paint bottle caps if you like.
3. Either use paper punch or cut out rounds of paper to fit inside bottle caps.
4. Using brush, apply Mod Podge or white glue to the round of paper.



Place inside bottle cap. Put a top coat some glue or Mod Podge on paper. Let dry.

5. Apply 3-D glaze if so wish. Remove any bubbles by lightly pricking them with a toothpick or needle. Let dry.
6. Attach magnets to back of bottle cap with E-6000.
7. Let dry and your magnets are ready to use!



Post-Activity Questions

Did you enjoy making your bottle cap magnets?

Did you have any challenges?

What would you do differently?

What other ways can you use bottle caps?

Other Magnet Ideas

- Add glitter, sequins or other decorative items.
- Instead of magnets, use thumb tacks to use on a cork board.

Unit 4: Pretty Plastic

Plastic is a relatively new invention. In the early 1900s, a Belgian scientist Leo Baekeland was working on an invention to create a substitute for shellac as a coating to protect wood products and insulate wires. He created a substance that can be poured into moulds and when cooled, kept its shape. He invented plastic known as 'Bakelite'.

The invention of plastic was revolutionary. Because it is inexpensive, strong and long-lasting, countless products are made of plastic. We now have a wide range of plastics that are primarily known by their initials. For example, a pop bottle is made out of PET or polyethylene terephthalate or HDPE or high density polyethylene. Plastic take-out food containers are often made of polystyrene, more commonly known as Styrofoam. If you look on the bottom of your plastic container, you will see a recycle arrow symbol with a number



in the middle. The number in the middle represents the type of resin that makes up the plastic and it is generally one of seven types.

Plastic is made from oil or gas, which are non-renewable resources. This means that we will eventually run out of them and we cannot get any more. In addition, plastics are long-lasting which creates a waste disposal issue. However, because plastics are inexpensive to make, manufacturers keep producing them rather than using more costly materials that may be better for the environment.

There is good news and bad news. The good news is that plastics can be recycled to make new products. Styrofoam can be recycled into construction materials, picture frames, plastic keyboards and CD holders. Plastic bottles can be used to make polar fleece jackets, athletic shoes or even automobile parts.

Codes	Name	Products containing this type	Products made from recycling
PET or PETE	Polyethylene Terephthalate	Water bottles, pop bottles	Fleece jackets
HDPE	High Density Polyethylene	Garbage bags	Dog Houses
V	Polyvinyl Chloride (PVC/Vinyl)	Clear food packaging	Traffic cones
LDPE	Low Density Polyethylene	Squeezable bottles	Garbage cans
PP	Polypropylene	Yogurt containers	Signal lights
PS	Polystyrene	CD cases	Egg cartons
Other	Other Plastics	Citrus bottles	Plastic lumber

The bad news is that recycling plastics is difficult because different kinds of plastic have different properties. One cannot simply manufacture a new product by combining the different kinds. Most recycling programs only take packaging made from #1 (PET or PETE) and #2 (HDPE) resins. Some are even more restrictive – for example, only #2 containers with necks but not wide mouths because the two are formed differently and have different melting points. This is further complicated by increased use of multi-layer packaging, in which layers of different plastics are fused into one container. The wrong kind of plastic can "contaminate" the whole batch, turning it into garbage as far as the recycling company is concerned.

Separating or finding uses for mixed plastics are major recycling challenges. Unlike glass, plastic cannot be recycled indefinitely. Plastic containers are expensive to pick up and sort because they are lightweight; even the automatic sorting equipment can be expensive. Some resins are difficult to clean, and unfortunately, virgin resins can be cheaper to buy. In addition, each piece of recycled plastic represents a potential environmental threat. The process of melting down and recycling plastic produces VOC, or volatile organic compounds which are fumes that can harm plant and animal life near the industrial site. Plastic resin, which is part of the manufacturing and recycling process, can leech into foods stored in recycled plastic containers and can increase with the type of plastic used and the plastic's age. Consequently only a very small amount of recycled plastic, if any, is used for food containers and packaging.

Because of the potential health threats recycled plastic poses, much plastic recycling is actually down-cycled. This means that the plastic, instead of becoming another new container, becomes a different, less useful product. For example, a plastic water bottle may be down-cycled to become artificial turf or plastic furniture. After down-cycling, plastic is generally unfit for another round of recycling. This means that it ends up in a landfill.

Our best action could be to buy glass where available. If glass is not an option, then choose plastic made from #1 or #2.

Discussion Point: How can you and your family or school use the 'r's of waste management (rethink, refuse, reduce, reuse, repair, recycle) in terms of plastic?

Did You Know....?

- Less than 7 per cent of discarded plastic is currently recycled in the United States. In the UK, nearly three million tons of plastic waste is produced each year; more than half of this comes from packaging. Only 10 per cent is recycled.
- In 1960 packaging accounted for nearly 10 per cent of total plastic production in the United States. By 2008 that total was 34 per cent, and it is still growing.
- In 2006, Canadians consumed 2.1 billion litres of bottled water, Americans 31 billion litres. More than 17 million barrels of oil were needed to produce these plastic bottles. Their manufacture created more than 2.5 million tons of carbon dioxide and twice the amount of water in the bottle is required in the production process.

Above facts by Smith, 2008

- Americans use 2.5 million plastic bottles every hour! Only around 27 per cent of plastic bottles are recycled.
- Americans throw away 25,000,000,000 Styrofoam coffee cups every year.
- Plastic bags and other plastic garbage thrown into the ocean kill as many as 1,000,000 sea creatures a year!
- The Great Pacific Garbage Gyre is an island of waste plastic floating somewhere between San Francisco and Hawaii. It is twice the size of Texas and is estimated to weigh 3.5 million tons!

Above facts by MRC Polymers, 2013

1. Creative Cutting

Some plastics are easy to cut. Pop bottles, water bottles and juice containers are some that can be cut and used for many home and craft projects.

Activity 23 – Vase

In this activity, we are going to take an ordinary plastic pop bottle, cut off the top and cut vertical strips. By bending and folding these strips, we will create a decorative edge and transform our ordinary pop bottle into a vase.

With the different colours and sizes of pop bottles, you could make a whole array of vases. Keep the tops – you will be able to use them for the next activity.

Time

Allow 20 minutes

Materials and Tools

- Plastic pop bottle
- Scissors

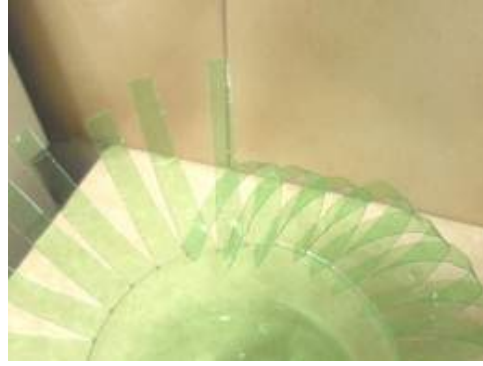
Instructions

1. Rinse your bottle making sure it is clean. Remove the label.
2. Cut off the top of the bottle about 7.5 cm (3 inches) from the top.
3. With a pair of scissors, make a straight cut from the open end to halfway down the bottle. Cut again 6 mm (1/4 inch) away to make a 6 mm (1/4 inch) strip.
4. Continue to cut making strips around the bottle.
5. Bend and fold each of the strips outwards until they are at right angles to the bottle.
6. Take one strip and bend it over the strip next to it and under the next two strips. This will make the lip of your vase. You might have to apply more pressure to make sure the strip stays under the other strips and does not come undone.



Source: Soda Bottle Crafts – Creative Ways to Recycle Empty Plastic Bottles. 2013.
<http://ladyrain.hubpages.com/hub/Soda-Bottle-Craft>





7. Continue to bend and fold strips until all the strips are tucked under the others.
8. When you are done, you have a lovely vase.

Post-Activity Questions

Did you enjoy making your vase?

Did you have any challenges with this craft?

What would you do differently?

What else could you make from a pop bottle?

Activity 24 – Pop Bottle Flowers

Have you noticed that the bottom of a pop bottle had lobes that resemble flowers? We are going to use these and the tops of pop bottles to create flowers. Each bottle has a unique shape and texture that will lend itself to differing flower designs. Have fun and experimenting with different bottles to get various designs.

Time

Allow 1 hour; if you are painting your flowers, allow 2 to 3 hours.

Materials and Tools

- Plastic pop bottles
- Scissors
- Spray paint (optional)
- Hole punch, or heavy needle
- Clear fishing line

Instructions

1. Rinse your bottles with water to make sure they are clean and remove as much of the label as you can. Make sure to hang onto your bottle cap.
2. With points of a pair of scissors, cut your bottle into three parts – the bottom, the middle and the top. The length you cut your top will determine how long your petals are. Save the middle piece for the next activity.



Source: Soda Bottle Flower Tutorial. Connect the Dots.
November 5, 2009.

<http://connectthedotscrafts.wordpress.com/2009/11/05/soda-bottle-flower-tutorial/>



Source: Recycling Plastic Bottles: Making Flowers.
Craft. May 12, 2011. <http://www.craft-craft.net/recycling-plastic-bottles-making-flowers.html>

Using the Bottom

1. For daisy-like flowers, take the bottom of your bottle and use your scissors to cut closer to the lobes defining the petals.



Source: Plastic Bottle Flower How To. Creative Jewish Mom. September 27, 2011.
<http://www.creativejewishmom.com/2011/09/plastic-bottle-flower-how-to.html>



Source: Eco Friendly Blossoms by Michelle Brand. DIY. April 2009.
<http://www.i-do-it-yourself.com/2009/04/eco-friendly-blossoms-by-michelle-brand/>

2. Paint if desired.
3. Use these to make a 'daisy chain' that you can use to decorate your bedroom. Punch a hole in one of the petals. Then thread fishing line through hole and secure with knot, thread on another flower until you have strand, or chain, of flowers.

Using the Top

1. To make flowers from the top of your bottle, determine the number of petals you would like to have. You can have as few as 4 or 5 or as many as 15-16.
2. Using your scissors, make cuts from the open end of the bottle to the neck.



Source: Soda Bottle Flower Tutorial. Connect the Dots. November 5, 2009.
<http://connectthedotscrafts.wordpress.com/2009/11/05/soda-bottle-flower-tutorial/>

3. Once you have cut all your petals, shape them by rounding corners adding points or cutting them in whatever shape your heart desires.
4. Pull back on each petal and flip them inside out. Crease each petal at its base.



5. Paint inside of flowers if desired. Let the flowers dry for about 30 minutes. You can use multiple colours of spray paint for a multi-colour effect or add embellishments with markers or acrylic paint.
6. To attach your flowers, drill a hole in the cap of the soda bottle. Use a thumbtack, screw or nail to secure the bottle cap to your wall, door, shed, or art project. Then screw on the flower to create a flower festival!

Post-Activity Questions

Did you enjoy making your plastic flowers?

Did you have any challenges with this?

What would you do differently?

What can you use these flowers for?

What other types of flowers can you make?

Other Plastic Ideas

- Use the body of the bottle to make butterflies or fish by cutting or punching out those shapes.

Activity 25 – Cuff Bracelet

This simple craft idea is a great way to put empty plastic pop bottles to good use, while creating a little flair to wear. You can use the middle of the bottles that were not used in the above activity. You can also use light weight plastic water bottles to make these.



By cutting open the middle of the bottle, we will be creating a flattish piece of plastic that can be cut into strips. These strips will be decorated and then shaped into a cuff bracelet. Easy-peasy!

Source: How to Turn an Empty Water Bottle Into a Stylish Cuff Bracelet. Canadian Family.
<http://www.canadianfamily.ca/activities/crafts/how-to-turn-an-empty-water-bottle-into-a-stylish-cuff-bracelet/>

Hints and Tips

- If the bracelet is too loose, wrap a rubber band around it and let it sit in the sun for a few hours.

Time

Allow 30 minutes to cut and decorate and another hour to regain its shape.

Materials and Tools

- Plastic pop bottle
- Scissors
- Duct tape or masking tape
- Fabric
- White glue

Instructions

1. Cut off the top and bottom of the water bottle and then cut the remaining tube so that you have one large smooth piece. Or, use the middle from the previous activity.
2. From your smooth piece, cut 3 strips.
3. With the curling side down, tape your strips to your working surface.
4. Cover the top of the strips with glue and apply colourful fabric to the cuff. Let dry.
5. Trim to 18 cm x 3 cm (7 x 1 inches) and round the edges.
6. Roll the bracelet up into a tight swirl and leave it for another hour to dry. After that time, unroll and wear!

Post-Activity Questions

Did you enjoy making your bracelet?

Did you have any challenges with this craft?

What would you do differently?

How else could you make bracelets from a pop bottle?

Other Bracelet Ideas

- Instead using fabric, decorate your cuff with felt markers.
- Cut a variety of widths to make different sized cuff bracelets.
- For a shiny finish, glue the fabric to the inside but facing out.

Hot Heating

Different plastics respond to heat differently. We can use this to make interesting items. Melting plastic bottles should be approached cautiously, as the gases released when some plastics melt are toxic.

Activity 26 – Shrink Plastic Pendant

Have you heard of 'shrink dinks – shrinkable plastic art'? Instead of purchasing expensive materials from a craft store, we will use #6 plastic from our recycle bins. These will generally be the clear deli takeout containers; just flip it over and look for the 6 inside the arrows.



Source: Tutorial: DIY Shrinky Dink (from plastic container!). C is for Craft. August 12, 2011.
<http://c-is-for-craft.blogspot.co.nz/2011/08/diy-shrinky-dink-from-plastic-container.html>

By decorating the plastic with permanent markers and heating it in an oven, we are going to make our own shrinky dinks pendants. The total image will shrink to about a third of its original size, and five or six times its original thickness. If you are starting with a large piece that is with a starting size of 12 to 15 cm (5 to 6 inches) it will take about three minutes to shrink. A small piece can shrink within 30 seconds, so keep an eye on it through the oven window. If you have had a long skinny piece, it may turn on its side and curl up; do not worry as you can flatten it out when it is done while it is still warm and flexible.

Hints and Tips

- Colours become more intense when shrunk. Dark colours will appear black after shrinking so use those sparingly if you want a colourful design.
- Not all plastic melts the same. So if you are making two of some shape for something like earrings, cut both pieces oriented in the same direction. For example, if you are cutting two rectangles, cut out one large rectangle and cut it in half to ensure your pieces are running the same way. If you're doing circles, mark the top of each one so the holes you punch are placed on the plastic similarly.
- Shrinking hides a multitude of sins, so your cutting and colouring do not have to be perfect.
- Because plastics and pens vary, you might start out with a test piece to see how much your plastic will shrink, and how your colours come out.
- Round off any corners because corners will get sharp when shrunk.
- Punch a fairly large hole; as the plastic shrinks, so will your hole.

- If you seal your pieces, to keep the colour bright, use a sealer than does not contain acetone. Acetone will cause the colours to lighten considerably.

Time

Allow 1 hour

Materials and Tools

- #6 plastic
- Permanent markers
- Scissors
- Hole punch
- Aluminium foil
- Oven
- Oven mitts
- Polyurethane (optional)
- Jump ring

Instructions

1. Wash your plastic tray in warm soapy water. Make sure to remove any stickers or sticky residue and dry thoroughly.
2. Cut any excess plastic away to make a flat sheet. Use both the top and the bottom.
3. Using permanent markers, draw or write your desired image or text on your plastic sheet.
4. Trim the corners to make rounded edges, and punch holes where you want.
5. Make sure the bottom rack of the oven is in the lowest position and pre-heat the oven to 180° C (350° F).
6. Create a tray out of the aluminium foil by bending up the sides. Although you could cover a cookie sheet with foil, the thinner surface of your 'foil tray' allows for more direct heat and quicker shrinking.
7. Place your plastic piece in the tray. Using oven mitts, place the tray on the bottom rack.
8. First your piece will curl up and then it will flatten. Once flattened, it is done shrinking and ready to come out. Remove the tray using oven mitts.



Source: How to Make Shrinky Dinks.
Curbly. August 8, 2007.
<http://www.curbly.com/users/chrisjob/posts/2252-how-to-make-diy-shrinky-dinks>



Source: Tutorial: DIY Shrinky Dink (from plastic container!). C is for Craft. August 12, 2011.
<http://c-is-for-craft.blogspot.co.nz/2011/08/diy-shrinky-dink-from-plastic-container.html>



Source: Recycle! DIY Shrinky Dink! Kara's Creative Place. December 22, 2010.
<http://karascreativeplace.blogspot.co.nz/2010/12/recycle-diy-shrinky-dink.html>

9. For the next few seconds, your piece will still be pliable. If you want to flatten it more, **immediately** press it down flat with a spatula or other flat kitchen utensil. Be careful as it will be hot. Depending on your plastic, your piece may not be quite the same proportions as you started with.
10. Let cool. Once cool, you can coat your piece with polyurethane to help protect it.
11. Add a jump ring and attach to a cord or chain. Voilà, a colourful pendant!

Post-Activity Questions

Did you enjoy making your pendant?

Did you have any challenges with this craft?

What would you do differently?

What else could you make from #6 plastic?

Other Shrinky Dink Ideas

- Make a luggage tag, key ring, guitar pick.

Activity 27 – Fused Bubble Wrap Earrings

In this activity we will be using a hot pressing iron to fuse layers of bubble wrap together to make a sheet of plastic that has a crackly look. The number of layers that are fused together will determine the weight of the plastic and therefore how well it holds its shape. We will be making a fairly stiff sheet and then cutting out shapes to make earrings.

Fusing plastic is easy – just put your plastic between two sheets of parchment or brown paper and iron! The paper will keep the plastic from sticking to the iron or the ironing board; just be watchful that your iron does not come into direct contact with the plastic. Be careful as the iron is hot! Make sure you set up your ironing board in a well-ventilated area.



Source: Icy Earrings From... Bubble Wrap?! Epbot.
June 11, 2012. <http://www.epbot.com/2012/06/icy-earrings-from-bubble-wrap.html>

Hints and Tips

- Pop all the bubbles in your bubble wrap first, otherwise it will not fuse properly.
- Iron one layer at a time.
- Check your plastic regularly. If it is not fusing, you might have to increase the temperature of your iron. If it is melting, reduce the temperature.

Time

Allow 1 hour

Materials and Tools

- Bubble wrap
- Ironing board or heavy towel
- Scissors
- Parchment or brown paper – 2 pieces
- Pressing iron
- Craft punch (optional)
- Hole punch
- Jump rings – 2
- Earring hooks – 2

Instructions

1. Set up your ironing surface – use an ironing board or put a heavy towel on your work surface.
2. Turn on pressing iron and set it to Rayon heat setting. Allow it to heat up.
3. Pop the bubbles in your bubble wrap.
4. Make a 'bubble wrap sandwich' by inserting your popped bubble wrap between your two pieces of paper.



5. Start ironing your 'sandwich'. Keep the iron moving constantly, making sure to get the edges. Do not let the iron sit in one place for very long or the plastic can overheat and melt.
6. After about 15 seconds, flip over your 'bubble wrap sandwich' and iron the opposite side for a few seconds. Then press down in the middle for about 6 seconds and gently but firmly move the iron out to the edges to remove any air bubbles.
7. Gently peel a corner of the paper back to see if the plastic is fused together. It should be fairly smooth. If the bubbles have not melted, increase the temperature of your iron slightly and iron again.
8. Once fused, let it cool.
9. Lift up your top paper and add another piece of popped bubble wrap and fuse, repeating steps 5 to 8. The two layers should fuse together as one sheet.
10. Fuse at least 5 layers. The more layers, the heavier your plastic sheet will be and the better it will hold its shape.
11. Cut out (or use a punch) shapes for earrings from your fused plastic.
12. Punch a small hole and add a jump ring.
13. Attach earring hooks to jump ring, and enjoy your earrings!



Post-Activity Questions

Did you enjoy making your fused bubble wrap?

Did you enjoy making your earrings?

Did you have any challenges making your fused bubble wrap?

Did you have any problems making your earrings?

What would you do differently?

What else could you make with this material?

Other Ideas for Fused Plastic

- Add cut out shapes of iridescent cellophane to add between two layers of bubble wrap. Make sure that the bubble wrap totally surrounds shapes and fuses for a colourful result.
- Fuse plastic grocery bags and use it to make grocery totes, wallets, floor cushions or coasters. The thin bags work best. Just cut off handles, turn the bag inside out if it has printing on it and fuse together 6 to 8 layers.

Clever Carving

Some plastics, particularly Styrofoam, can be carved to create a variety of crafts and decorations.

Activity 28 – Foam Tray Stamped Card

If you apply pressure to foam, it will compress. We are going to use this property to create a stamp to decorate a card. You can draw a design, transfer a picture, or trace around shapes that you might have around. A simple design works best.

You can use a pencil to draw in the foam or you could use a chop stick, tooth pick, pen or anything with a point. Keep in mind, you will be creating a negative item; that is, wherever you press down with your pencil will not be inked in the finished stamp, and wherever you do not press will be inked. You can add texture to your design by adding lines, cross hatching or dots.

Time

Allow 1 hour

Materials and Tools

- Smooth Styrofoam tray
- Artwork to be transferred or shapes to be traced
- Pencil or other pointed tool
- Scissors or craft knife
- Card stock – 2 pieces
- Paint or water-based printing ink
- Foam brush or brayer (optional)

Instructions

Making a Stamp

1. Ensure your Styrofoam trays are clean.
2. Place your artwork on tray and outline the design with some pressure. Take off and further define lines.
3. Cut out your design as this will be easier to work with smaller piece of Styrofoam. Congratulations you have just created a Styrofoam stamp!

Source: Styrofoam Block Printing. Go Make Something. August 3, 2008.
<http://gomakesomething.com/ht/stamping/styroprinting/>



Source: Easy Printing On Fabric. Alisa Burke: Redefine Creativity. May 19, 2011.
<http://alisaburke.blogspot.co.nz/2011/05/easy-printing-on-fabric.html>



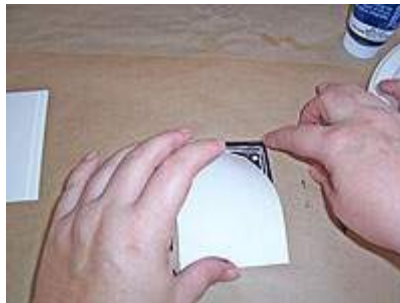
Stamping

1. Apply an even layer of paint or ink to your Styrofoam stamp, making sure that all raised areas are covered. You could use a foam brush or an acrylic brayer. When using a brayer, spread the paint evenly onto another Styrofoam tray and then to your design; spread it in one direction, then the other. The key is to use just a little bit of paint or ink, and spread it thinly. Once paint or ink is applied to your stamp, you will be able to see what your design will look like!



Source: Easy Printing On Fabric. Alisa Burke: Redefine Creativity.
May 19, 2011. <http://alisaburke.blogspot.co.nz/2011/05/easy-printing-on-fabric.html>

2. With your Styrofoam stamp facing up, take a piece of lightweight card stock, large enough to cover your design and press down, making sure you touch all parts of the design.
3. Slowly peel the cardstock and Styrofoam apart and set the wet print aside to dry.



4. For each print, repaint the design again to get a nice dark impression.
5. While prints are drying, use another piece of cardstock to create a card that is the right size to accommodate your print. Be sure to crease your edge well.
6. Trim your stamped design to size and glue to your card. A handcrafted card!

Post-Activity Questions

Did you enjoy making your stamp?

Did you enjoy making your card?

Did you have any challenges making your stamp?

Did you have any challenges making your card?

What would you do differently?

What else could you make with your Styrofoam stamps?

Other Ideas for Stamping

- Use your stamp to decorate brown paper to make wrapping paper.
- Use fabric paint and stamp a design on a T-shirt.
- Enhance your design by adding accents with paint.
- Add glitter to your design.

Unit 5: Cool Clothing

People first made clothing out of animal hides and thick large leaves. Over time, we learned to spin long threads from sheep wool, flax or cotton and then weave into cloth. Because cloth was labour-intensive to make and therefore very valuable, people did not have many clothes. Your great grandparents, or even grandparents, generally had two sets of clothes – one for school and church and the other for chores. Girls usually only received a new dress for a special holiday or their birthday. Even then, it might be made from a reused adult dress or a cloth flour sack. When clothing was outgrown or worn out, the scraps were reused to make other clothes or quilts.

Over time, particularly during the Industrial Revolution, machines like looms were developed to weave cloth quickly. In 1851, Isaac Singer developed the first practical sewing machine. These inventions lead people to make or purchase more and more clothes.

In the early 1900s, scientists discovered how to make cloth from chemicals. Rayon is an example; it was the first man-made fibre and it was made from wood pulp. After that came nylon, polyester, acrylic, spandex and more recently, Gore-Tex. Now, almost half the clothes we wear are made from these materials.

As a result of all the technological advances, clothes are more readily available and significantly cheaper even 20 year ago. As a result, we do not use and reuse them the way our grandparents did. In Canada, over \$30 billion is spent on new clothing each year, translating to approximately 1.13 billion garments (LeBlanc, 2013)! And this figure grows by 5 per cent each year. On average, each Canadian discards seven kilograms (over 15 pounds) of clothing each year. In fact, textiles make up five per cent of municipal solid waste by weight!

In this unit we are going to look at reworking clothes – existing old clothes, thrift store purchases or items from your father’s closet. Before you rework the clothes, be sure to get permission from your parents that it is okay to do so.

Discussion Point: How can you and your family or school use the ‘r’s of waste management (rethink, refuse, reduce, reuse, repair, recycle) to address clothes or other textiles that are no longer wanted?

1. Crazy Cutting

The following activities are based on reusing and up-cycling T-shirts. T-shirts, tee shirts, tees were originally worn by working men as a layer that they could strip off to when they got hot. The T-shirt's defining characteristic is the 'T' shape made with the body and sleeves. It is normally associated with short sleeves, a round neck line, and no collar. However, it may also include long sleeves, buttons, collars, or v-necks.

T-shirts are typically made of cotton fibres knitted together in a jersey stitch that gives a T-shirt its distinctive soft texture. This fabric does not fray, so does not need to be hemmed. Thus no – or little – sewing!

In this Unit, we are going to have a lot of fun playing designer by reworking old clothes to create interesting clothing and other items. Recycled T-shirts are going to be our focus and, for the most part, there is no sewing involved. If you can sew, you have many and varied options to rework clothes!

Activity 29 – Fringe Beach Cover-Up



Source: T-Shirt Recon (Fringes).
Cut Out and Keep. 2011.
<http://www.cutoutandkeep.net/projects/t-shirt-recon-fringes>

We are going to make a blast from the past – a fringe shirt. Using an existing T-shirt from your closet, we are going to make a fringe on the bottom of your T-shirt by cutting individual tassels. You can add beads if you like. Choose a T-shirt that is quite baggy for you; if you do not have one, you could raid your big brother's or dad's closet or visit a thrift store.

Hints and Tips

- The fringe should be at least four inches long.
- Try it on as you go.

Time

1 hour, or longer depending if beads are used.

Materials and Tools

- T-shirt
- Straight pins
- Pencil or chalk
- Scissors
- Ruler or measuring tape
- Pony beads (optional) – 40 to 60

Instructions

1. Lay your T-shirt out on a smooth, flat surface. Pin the front to the back to hold the back and front together and in place.
2. Cut the bottom hem off your T-shirt and the hem off your sleeves.
3. If your shirt is high-necked, consider cutting off the neck binding. This will give you an 'off-the-shoulder' shirt. If you want to cut off the binding, fold the T-shirt in half and then cut, following the path of the collar. By folding, you end up with a more symmetrical neckline.
4. Using your ruler and chalk, mark the width of your tassels of your fringe on the body of your T-shirt. This can range from 0.5 cm to 1 cm (1/4 inch to 1/2 inches). If you are going to use beads on your fringe, make your tassels narrow.
5. Using your ruler, measure how long you want your fringe to be, from 4 to 10 inches, and mark with chalk or pencil. Then using your ruler, line up your marks and draw a line with chalk or pencil to indicate where your fringe will end. If you do not know how long you would like it, start with a shorter fringe because you can always cut it longer.
6. Make your first cut in the middle of the shirt, cutting both the front and the back at the same time, and cut up to the line that marks the end of your tassel. Starting in the middle helps to keep the tassels straight. Do not worry if you cut some crooked as you will not be able to tell once you are done.
7. Cut along the hem until the entire shirt is fringed. When you are finished, gently pull and twist the tassels.



Source: DIY Fringe Shirt. Waves of Sunshine. June 28, 2012. <http://wavesosunshine.blogspot.co.nz/>



Source: Tuesday Tip: Fringe T-shirt DIY! Gem Fatale. June 29, 2010. <http://gemfatale.blogspot.co.nz/2010/06/tuesday-tip-fringe-t-shirt-diy.html>





Source: DIY Fringe T-Shirt. Angie and Keith.
March 16, 2012.
<http://keithandangiepoppe.blogspot.co.nz/2012/03/diy-fringe-t-shirt.html>



Source: Fashion Blog: Fringe, Festivals and an Easy DIY. Hercampus. August 4, 2011.
<http://www.hercampus.com/school/illinois/fashion-blog-fringe-festivals-and-easy-diy-0>

8. If you want, place beads on randomly selected tassels. Threading the beads will be easier if you roll up the tassel a bit before. Make a knot above the bead, and another below to hold the bead in place.
9. Repeat steps 4 to 7 for the sleeves. Put beads on the sleeves if you like; if you do, you may want to put only one on a tassel as opposed to three or more.

Post-Activity Questions

Did you enjoy making this beach cover-up?

Did you have any challenges?

How do you like your neckline?

How do you like your sleeves?

How do you like the length of your fringe?

What would you do differently?

What other revamps would you like to do?

Other Ideas for Fringe Shirts

- Make a crop top by cutting the fringe longer.
- Cut the fringe on an angle for a funky look.
- Cut the sleeves off and make a tank top.

Activity 30 – Halter Top

In this activity, we are going to make a halter top from a T-shirt by cutting off the sleeve and creating some straps. Once again, you will need to choose a T-shirt that is quite baggy for you.

Time

30 minutes

Materials and Tools

- T-shirt
- Straight pin
- Pencil or chalk
- Scissors
- Ruler or measuring tape

Instructions

1. Lay your T-shirt out on a smooth, flat surface. Pin the front to the back to hold the back and front together and in place.
2. On the front of your T-shirt, use the chalk to mark the cuts you need to do to make a v neckline and cut off the sleeves.
3. Turn over your T-shirt, and use your chalk to mark on the back the cuts you will need to make. You will be cutting away of the rest of the neckline and creating long front straps by removing the sleeves and cutting into the centre back. You will be left with a strap in the centre back.



Source: No Sew, Tee-Shirt Halter #3, DIY. Wobisobi. July 16, 2012.
<http://wobisobi.blogspot.co.nz/2012/07/no-sew-halter-3-diy.html>

4. Make your cuts front and back.
5. Cut your centre back strap down the middle to create two. You are almost there...



6. All that is left is a few knots. Take the front straps and tie them in a half knot so they cross over. Tie the ends of the front straps to the back straps. Adjust your knot as you like. You can trim off the extra, or use longer to be able to adjust the straps. If you keep them longer, tie them in a bow.



7. Enjoy your new top!

Post-Activity Questions

Did you enjoy making your halter top?

Did you have any challenges?

What would you do differently?

What other revamps would you like to do?

Activity 31 – Fitted T-shirt

In this activity, we will take a large, baggy T-shirt and revamp to a fitted shirt. The bonus is no sewing and you end up with a ruched shirt.

We will use a tight-fitting shirt from your closet as a pattern. Once we have traced it onto the bigger shirt, we will cut down the bigger shirt, leaving the shoulder seams intact. Instead of sewing new seams to join the pieces together, we will cut slits in the sides and thread a cord made of the cut-off fabric and lace it up!

Check out this internet resources to help you with this activity:

Video: How to How to Cut an Oversized Shirt to Fit

http://www.ehow.com/video_12231919_cut-oversized-shirt-fit.html#ixzz2UINCJZJe

Hints and Tips

- T-shirt fabric stretches more horizontally than it does vertically. When cutting the slits, cut them vertically and they will not stretch out as much.

Time

30 minutes

Materials and Tools

- T-shirt
- Straight pins
- Fitted T-shirt to use as pattern
- Ruler or measuring tape
- Pencil or chalk
- Scissors

Instructions

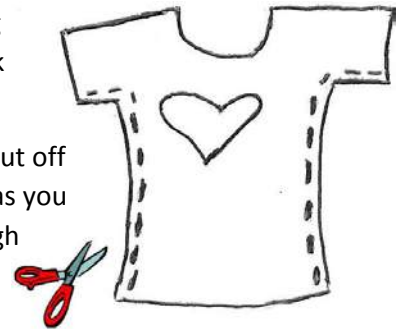
1. Lay your large T-shirt on a smooth flat surface. Pin the front to the back to hold the back and front together and in place.
2. Place your fitted T-shirt on top of the larger shirt, match up the shoulder seams.
3. Using your chalk or pencil, mark about a centimetre (1/2 inch) away from the side of your 'pattern shirt'; towards the bottom, mark 2 cm (1 inch) from side of your 'pattern' shirt.
4. Trace the sleeves of your 'pattern' shirt directly onto the larger shirt.



5. Take off your 'pattern' shirt and cut along the outline you have just created. Keep the fabric to use later.
6. Cut off the hem as well. Keep the fabric to use later.
7. With your T-shirt lying flat and starting at the armpit, make marks down the sides about 2.5 cm (1 inch) apart about 1.5 cm (0.5 inch) from the cut edge.



8. Repeat on the other side.
9. At each of the marks, cut vertical slits by folding the fabric and make a little cut on your mark through both layers of the T-shirt.
10. Take the fabric that you had cut off the sides, and cut off just the sewn part of the seam. Stretch it as much as you can. This is your cord that you will thread through the slits.



11. Starting at the top, thread your cord through your first slit so that half of the cord is on each side of the slit. Do this on both sides of your shirt.
12. Open up your shirt and thread the cord through the slits like you are lacing up a shoe. At the end, tie a knot. Stretch out the side so that it a normal length.
13. Repeat for the other side, lacing it up and tying a knot at the end. Stretch it out to normal length.
14. Try it on. You can make it tighter or looser by adjusting the cord. Cool shirt!



Post-Activity Questions

Did you enjoy making your fitted T-shirt?

Did you have any challenges?

What would you do differently?

Do you have any other ideas on how to use old T-shirts?

Other Ideas for Fitted T-shirts

Videos – Fashion & Cutting Shirts

http://www.ehow.com/videos-on_12231914_fashion-cutting-shirts.html

Activity 32 – T-shirt Scarf

In this activity, we will be making a scarf or a necklace from a T-shirt. We will be cutting our T-shirt into horizontal thin strips, and then stretching the strips to create tubes, much like we did on the fringe of our beach cover. By creating a number of these, twisting a number together, we can make an interesting scarf.

Hints and Tips

- The best T-shirts to use are extra-large with no side seams.

Time

30 minutes

Materials and Tools

- T-shirt
- Straight pins
- Measuring tape or ruler
- Pencil or chalk
- Scissors

Instructions

1. Lay your T-shirt on a smooth flat surface. Pin the front to the back to hold the back and front together and in place.
2. Cut off the hem.
3. With a measuring tape, mark off 3.5 cm (1.5 inches) interval with a pencil up to the sleeves.
4. Using sharp scissors, cut the strips from the T-shirt. Note that if you are using T-shirts without side seams, these are actually tubes of fabric. If you are using a T-shirt with side seams, cut off the seams and tie your pieces together. This will create an interesting design in your scarf.



Source: A Pinterest Inspired Craft –Wa hoo! My Third True Love.
December 28, 2011.

<http://mythirdtruelove.blogspot.co.nz/2011/12/pinterest-inspired-craft-woo-hoo.html?showComment=1325133261480#c6670366178732321654>





5. Take each strip/tube and stretch it, trying to stretch them the same amount. Note that when the fabric is stretched, it rolls into a thin tube like spaghetti.



Source of above: http://korrinewojcik.blogspot.jp/2011_09_01_archive.html

6. Once you have stretched them all, gather them together and twist.
7. Using the leftover fabric, cut a small strip of fabric approximately 15 cm x 2.5 cm (6 x 1 inch).
8. Wrap it around your twist of tubes, tie it as tight as you can and trim the ends. Make this the back of your scarf.



9. Slip it over your head and loop around – enjoy your beautiful scarf!

Post-Activity Questions

Did you enjoy making your scarf?

Did you have any challenges?

What would you do differently?

Do you have any other ideas on how to use old T-shirts?

Other Scarf Ideas

DYI Fringe Scarf – <http://www.lakelandlocal.com/2011/08/diy-fringe-scarf/>

Video: Studio 5 DIY Infinity Scarf

http://studio5.ksl.com/index.php?nid=61&sid=14428842&s_cid=E0002

Activity 33 – Rosette Headband

In this activity, we will use T-shirt to make a headband and then make a decorative rosette to add to the headband. Once again, we will be cutting strips of fabric from our T-shirts. However, you can use the fabric that is left over the previous activities.



Sharing is Pretty.... Craft Snob. February 15, 2011. <http://craftsnob.com/2011/02/t-shirt-headband/>

Time

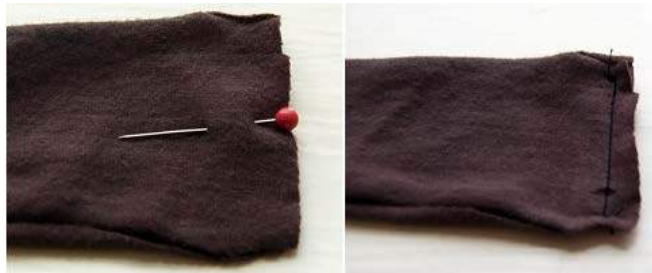
30 minutes

Materials and Tools

- T-shirt
- Straight pins
- Measuring tape or ruler
- Pencil or chalk
- Scissors
- Fabric glue or hot glue
- Needle and thread (optional)

Instructions

1. Lay your T-shirt on a smooth flat surface. Pin the front to the back to hold the back and front together and in place.
2. Cut off the hem.
3. With a measuring tape or ruler, mark off 3.5 cm (1.5 inches) and cut off strip from bottom of shirt.
4. Measure the circumference, or size, of your head using a measuring tape. Subtract 5 cm (2 inches) to help keep the band tight.
5. Fold your T-shirt strip in half lengthwise with right sides together and pin in place. Sew or glue along the short edge and cut away any excess material.



6. Turn your headband right side out.

7. To make your rosette, cut a strip of fabric that is 7.5 x 60 cm (3 x 24 inches) from your T-shirt.

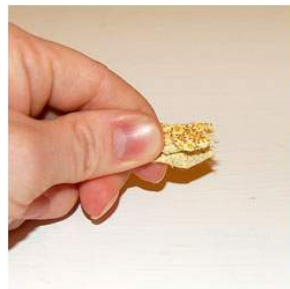


8. Twist your strip tight; then fold it in half. Your strip should twist together on its own.



Source: Make Fabric Flowers. Craft Snob December 10 2010.
<http://craftsnob.com/2010/12/make-fabric-flowers-part-5/>

9. Add a dab of glue to the unfolded end, and start wrapping it around itself to create the rosette. Continue wrapping and gluing periodically until you get to the folded end.



10. Either glue or stitch your finished rosette over the seam of your headband. Pretty!

Post-Activity Questions

Did you enjoy making your headband?

Did you enjoy making your rosette?

Did you have any challenges making your headband?

Did you have any challenges making your rosette?

What would you do differently?

Do you have any other ideas on how to use old T-shirts?

Other Headband Ideas

Make it Love it: Re-purposing: Tshirts into 5-strand-braided-headbands

<http://www.makeit-loveit.com/2011/06/repurposing-tshirts-into-5-strand-braided-headbands.html>

Activity 34 – T-shirt Beach Bag

This is yet another project which recycles an old T-shirt. Here we cut off the neck binding and then the sleeves to create handles. By using the existing hem and strips of the cut-off pieces, we can make a drawstring closing on the bottom of the T-shirt to make a bag.

Time

15 minutes

Materials and Tools

- T-shirt
- Scissors
- Safety pin

Instructions

1. Lay your T-shirt on a smooth flat surface. Pin the front to the back to hold the back and front together and in place
2. Fold the T-shirt in half, cut off the sleeves and neckline.
3. From the sleeves, cut a strip about 1.3 cm (1/2 inch) wide. Pull the ends of the strip to stretch it out and make it curl in.
4. Nip a slit in the bottom hem of your T-shirt.
5. Stick a safety pin through the end of your strip, insert it in your slit and pull it through the hem to gather the bottom of your T-shirt together.

Source: Ten Minute No-Sew Recycled T-shirt Bag!
Do Stuff! Leethal Blog. January 25, 2011.
<http://www.leethal.net/zine/?p=1344>



Source: DIY T-shirt Bag. Paperblog. July 18, 2012.
<http://en.paperblog.com/diy-t-shirt-bag-266376/>



6. Pull the cord so that your T-shirt gathers and that the cord is centred.
7. Pull the cord tightly so that the hole that is created is as small as possible. Tie a tight knot.



8. You can leave the T-shirt cord hanging down at the bottom or hide it inside by bringing it through the centre, then tying a bow on the inside so it does not fall back through. Or, you could tie the bow on the outside, or just cut the cords short. Enjoy your bag!

Post-Activity Questions

Did you enjoy making your beach bag?

Did you have any challenges?

What would you do differently?

Do you have any other ideas on how to use old T-shirts?

Other Bag Ideas

- Add decorative trim to your bag to jazz it up.
- If you want a more tightly closed bag, instead of closing off the bottom of your bag in one go, divide the bottom in two or three and make two or three drawstring closures. To do this, cut two or more equally spaced slits at the bottom of the T-shirt and create a drawstring closure for each one.



2. Simple Sewing

If you can sew, the world of reworking clothes is a whole lot bigger. In this section, we are going to do a couple of sewing projects that you can sew on a machine, sew by hand or glue. Be warned that seams secured by glue are not strong!

Activity 35 – Dress Shirt Pillow

In this activity we are moving from T-shirts to men's dress shirts. These shirts are generally made of light weight cotton, which make great pillow shams to add a decorative accent to your room. This is a straight-forward sewing project. Since we are using a button up shirt, we do not have to create an opening to get the pillow in and out – it is already built in! Just sew, then unbutton the shirt buttons, turn the cover right side out and use your finger to poke out the corners a bit. Insert your pillow form, and then just button it up!



Source: Shut Up and Sew: Pillow Shirt Tutorial.
Lemon Tree Creations. February 15, 2011
<http://lemontreecreations.blogspot.co.nz/2011/02/shut-up-and-sew-shirt-pillow-tutorial.html>

You will need a pillow form that is slightly smaller than your shirt so that there is room to sew seams. We will be making a pattern based on the measurements of the pillow, so you will need some paper that is slightly larger than your pillow form. You can use newsprint but be careful because the ink can rub off onto your shirt when you cut out your pillow case.

Time

Allow 30 minutes; longer if you are hand sewing.

Materials and Tools

- Dress shirt
- Pressing iron
- Pillow form
- Measuring tape
- Paper
- Pins
- Scissors
- Pencil or chalk
- Sewing machine or sewing needle and thread

Instructions

1. Press your shirt, being careful with the hot iron.
2. Lay your pressed shirt flat with buttoned side up on your working surface. Once flat, pin the front to the back to hold the back and front together and in place.
3. With your measuring tape, measure your pillow form. Add 2.5 cm (1 inch) to the width and the length measurements.
4. Using your pencil or chalk, transfer your measurements to your paper and cut it out to make a pattern. Cut a slit in the pattern right down the middle, 2.5 cm to 5 cm (1 to 2 inches) from each end.
5. Place your pattern on your shirt. Poke the buttons of the shirt through the slit. Move the pattern up and down until the buttons are centred. Make sure that the pocket, if any, is either in or out of your design. Pin to secure pattern to shirt.
6. Cut through both layers of the shirt all around the pattern.
7. Put the right sides of your two pieces together. Pin the corners and sides to keep the pieces in place.
8. Using a sewing machine or needle and thread, make a 1.2 cm (1/2 inch) seam all the way around all the edges. If you are sewing by hand, make your stitches quite small to make your pillow sham strong.
9. Snip the corners on an angle so the fabric does not bunch up.
10. Unbutton, push out the corners, insert your pillow form, and rebutton. A beautiful pillow!



Source: Men's Shirt Pillows.
Homemade Modern. July 10, 2012.
<http://homemademodern.blogspot.co.nz/2012/07/mens-shirt-pillows.html?m=1>



Source: Shut Up and Sew: Pillow Shirt Tutorial.
Lemon Tree Creations. February 15, 2011
<http://lemontreecreations.blogspot.co.nz/2011/02/shut-up-and-sew-shirt-pillow-tutorial.html>



Post-Activity Questions

Did you enjoy making dress shirt pillow?

Did you have any challenges?

What would you do differently?

Do you have any other ideas on how to use old dress shirts?

Other Pillow Ideas

- Make your button line off centre
- Use a woman's blouse for bright colours and prints.
- Add decoration like embroidery, buttons or paint on the back.

Activity 36 – Denim Tote

Do you have any old blue jeans with worn out knees, or that are too small? This is the project for you. In this activity, we make those old blue jeans into a tote bag. We will cut off the legs and use the body of the jeans. The seams of the pant legs will supply us with our straps. To secure, you can either sew or use glue for this project. However, keep in mind that if you use glue, your tote will not be very strong and should be used for only light things. If you want to use it to carry books, please sew it.



Source:

Blue Jeans Denim Bootie Bag Purse. Craftbits.com.

<http://www.craftbits.com/project/blue-jeans-denim-bootie-bag-purse>

The size of your tote will be dictated by the size of your jeans. The bigger the bag, the bigger your jeans will need to be. Hipster jeans will make a shallower bag than high waisted jeans.

Time

Allow 1 hour

Materials and Tools

- Old blue jeans
- Measuring tape
- Pencil or chalk
- Scissors
- Sewing machine and thread (preferred), or fabric glue

Instructions

1. Turn your jeans inside out and lay them flat on your working surface. Pin the front to the back to hold the back and front together and in place.
2. Using your measuring tape, measure the distance from the waistband to just above the crotch. Measure and mark the same distance on the legs of your jeans.
3. With your scissors, follow your markings and cut off the legs, cutting through the crotch. You should end up with a straight even edge.
4. If you are using glue, glue the bottom closed, about 1.25 cm (1/2 inch) from



Source: Vitkus, 2005

the bottom edge. If you are sewing, sew about 1.25 cm (1/2 inch) from the bottom edge. To make your bag stronger, sew another seam just above and parallel to your existing seam.

5. Turn your jeans right side out and check that the bottom has an even edge.
6. Cut the inside seams from both the pant legs you have removed. Sew or glue the two seams to make one long piece. This will be your handles.
7. Thread the handles through the back belt loop of your tote. Secure the ends to the front of your bag either by sewing or gluing.



Post-Activity Questions

Did you enjoy making your denim tote?

Did you have any challenges?

Did you sew or glue the bottom of your bag?

What would you do differently?

Do you have any other ideas on how to use old blue jeans?

Other Ideas for Denim Totes

- Embellish your tote with embroidery, buttons or fabric paint.
- Thread a colourful scarf or piece of fabric through the belt loops
- Line it with a colourful old bandana or fabric.
- Make wide straps from the pant legs.



Source: Blue Jean Book Bag Project.
The Artful Crafter. 2005.
<http://www.theartfulcrafter.com/book-bag.html>



Source: Jean Purse - Quick and Easy. Sugar Bee Crafts. May 2, 2010. <http://www.sugarbeecrafts.com/2010/05/jean-purse-quick-and-easy.html>

3. Fabulous Felting

Felting is an easy and simple process in which wool fibres are matted together using a combination of heat, friction and water. Instead of starting with a fleece, we will repurpose a knitted wool sweater. To felt a sweater is quite easy and if you have ever washed a wool sweater in too hot of water, you might be already experienced at this technique!

To felt a sweater, wash it in a washing machine with hot water and pure soap flakes, and then dry it in a hot dryer. Hot water, detergent and agitation will cause the fibres in the sweater to bond and lock into each other. Once a wool item is felted, it will not unravel even if it is cut. With this technique, you can make everything from sturdy tote bags to felted jewellery depending on the sweater you use.

Only animal-fibre sweaters will felt whereas plant-based fibres, like cotton or rayon, will never felt. Look for sweaters that are made of wool, alpaca, cashmere, or a blend of these. Items that are made of 100 per cent wool will work best, but a blend with more than 50 per cent wool may work, although not as well.

Hints and Tips

- To tell if your sweater has felted, it should have shrunk significantly and become more fuzzy and matted. You should not be able to see the texture of the knitted stitches. If your sweater has not shrunk significantly and you can still see individual stitches, you may need to run the sweater through the washer and dryer again, and again.
- A check to tell if your sweater has felted properly is to make a small snip with a pair of scissors into an inconspicuous area in the hem of the sweater. If it does not fray, the felting process is completed. If it does fray, repeat the wash/dry cycle one more time.
- Protect your washer. As your sweater is felting in your washer, it will be throwing off lots of woolly fibre. This can easily clog up your washer and it can be costly to repair. Put your sweaters into a mesh laundry bag with a drawstring before you wash them. Close the drawstring tightly, and safety-pin the strings so they do not loosen during washing. Remove from the bag before you place the sweater in the dryer. Dispose of the wads of wool left in the bag.
- Do your felting in a top-loading washer. Front-load machines do not provide as much agitation during washing, so your sweaters will not felt as well.
- Add something like blue jeans in both your washer and dryer. This will help agitate the wool.
- Protect your dryer by cleaning the lint trap frequently.

Activity 37 – Felted Glasses Case

We will felt a wool sweater to make fabric that we will then use to make a simple glasses case. We will make our own pattern based on either your glasses or sunglasses, cut out the felt and then use a blanket stitch to sew it together.

Time

Allow 3 hours for felting and 1 hour to make the glasses case.

Materials and Supplies

- Wool sweater
- Soap
- Top loading washer
- Mesh laundry bag
- Safety pins
- Dryer
- Scissors
- Paper for pattern
- Pencil or chalk
- Measuring tape
- Sunglasses or glasses
- Needle and thread



Sew Together with Children Part 2. Sew Together.
December 10, 2010.
<http://www.sewtogether.com.au/1/post/2010/12/sew-together-with-children-part-2.html>

Instructions

Felting

1. To felt your wool sweater, put into a mesh laundry bag and pin the strings of the laundry bag so that they do not loosen.
2. Wash your sweater on the hot setting with 60 ml (1/4 cup) of pure soap flakes. Wash with a pair of jeans to help the felting process.
3. Using the hottest setting on your dryer, dry the sweater. You can add a towel or jeans to help with this part of the felting process. Be sure to dry the sweater completely.
4. Repeat steps 2 and 3 of washing and drying the sweater two more times.

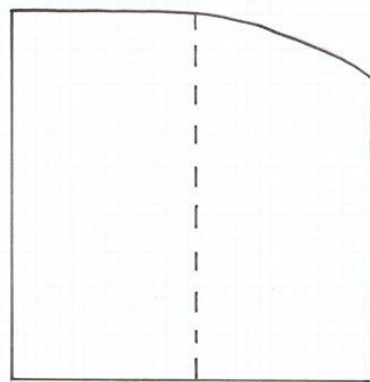


Source: Felt a Wool Sweater. Clever Nesting. August 19, 2009.
<http://www.clevernesting.com/2009/08/felt-a-wool-sweater-tutorial/>

- Once your sweater has felted, cut off the ribbed cuffs and then cut the sweater apart at the shoulder, side, and underarm seams. Remove any labels and buttons.

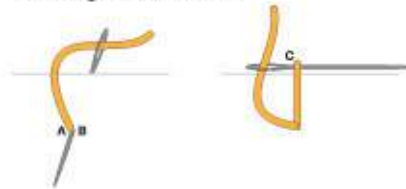
Making Glasses Case

- Based on the diagram provided, create a pattern for your glasses case. Measure the length and width of your glasses to make sure that they will fit into your case once it is sewn together. Add 6 mm (1/4 inch) on the bottom and on one side for your seam allowance.
- Cut out your pattern, pin it to your felt and cut out your glasses case.
- Pin the wrong sides together and sew the edges with a blanket stitch. To do the blanket stitch, place the wrong sides of the wool together and insert the needle from the back of the fabric to the front. Insert the needle again from front to back and pull the thread most of the way through, leaving a small loop. Insert the needle from the back through this loop and pull taut. Repeat every 3 to 6 mm (1/8 to 1/4 inch) apart until you have reached the end of the seam. Fasten securely.
- Enjoy your new glasses case!

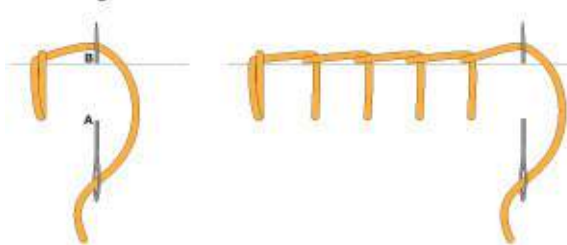


Source: Spatial Skills + Patterns ~ Using Nets (Math!) When You Sew. Sew, Mama, Sew. July 27, 2011.
<http://sewmamasew.com/blog2/2011/07/spatial-skills-patterns-using-nets-math-when-you-sew/>

Starting a blanket stitch



Working a blanket stitch



Source: Embroidery Stitches. Penguin and Fish.
<http://penguinandfish.com/stitches>

Post-Activity Questions

Did you enjoy making your felt?

Did you enjoy making your glasses case?

Did you have any challenges with your felt?

Your glasses case?

What would you do differently?

How else could you make from felt?

Other Felt Ideas

- Make a sunglasses case that you can close; cut two pieces of felt, one longer than the other to serve as a flap. This flap can be secured with a snap or a button.
- Make mitts from your felted wool by cutting out a mitten shape and then sewing together.

Unit 7: Heavenly Household Items

Household items like furniture, dishes and decoration bric-a-brac are the final category we are going to explore in this project. Although no statistics are available, this category is a contributor to waste. As witnessed by items in many thrift stores, it is also a major component of reusing and repurposing.

Discussion Point: How can you and your family or school use the 'r's of waste management (rethink, refuse, reduce, reuse, repair, recycle) to address household items that are no longer wanted?

Magical Mosaics

Mosaics date back to Ancient Greece where the floors were made from uncut pebbles laid in simple geometric designs. Mosaics become more elaborate using small cubes of stone, marble and sometimes glass figurative or floral designs. Over time, they became more realistic and detailed resembling paintings, and used for flooring, walls, vaults and fountains.

Mosaics can be made from many things including pieces of broken dishes, tiles, glass, pebbles and shells. In fact, it can be anything with enough variety in shape and colour to create a pattern. In addition, mosaics can be applied to almost any solid surface that is clean and dry including plywood, walls and floors.

Activity 38 – Mosaic Frame

In this activity, we are going to apply broken bits of tile and dishes to a frame to make a lovely surround for a treasured photograph or picture.

Many people have chipped china that they have been keeping. Give them a hand and put it to good use. Old tiles can provide contrast to the china pattern and expand the surface area you can cover, particularly if you have limited amounts china or dishes. See if you can find an old frame to suit your purpose and make this a truly up-cycled project.

For your first time at mosaics, use a frame that is flat and fairly wide. If your frame is wide enough, you can create a design; or you can mix colours and patterns for a pleasing effect.

Many mosaic artists cut their china or tiles with tile nippers, as they allow for good control in creating specific shapes for designs and patterns. However, for this project, we will be making more abstract designs so we will be breaking our china and tiles with a hammer – and this can be a lot of fun! In both methods of breaking tile and china, you should wear safety goggles, mask, and heavy gloves. Cover your china with a heavy towel to prevent chips and shards from flying about and make sure that bystanders are appropriately protected as the pieces can escape randomly.

Once you have created your pieces and glued them onto your frame, you will be finishing your project by grouting. This is messy but helps to create a nicely finished product.

Hints and Tips

- Making mosaics is messy so protect your work surface and be sure to wear old clothes!
- If you are re-using a frame that has been painted or varnished, strip it with paint thinner or other product. Be sure to follow the safety instructions, have good ventilation and safety protective clothing.
- If you are going to make a design, work it out on paper first.
- When gluing your pieces onto your frame, make sure you have enough adhesive on them; when they are pressed onto the frame, glue should ooze out around them.
- Work on one section at a time.
- If you get any glue on the top surface of the pieces, wipe it off with a damp cloth before it dries.



Source: DIY Mosaic Picture Frames.
The Budget Fashionista. January 4, 2008.
<http://www.thebudgetfashionista.com/archive/diy-mosaic-picture-frames/>

- If you are going to create a design rather than applying your pieces randomly, make your design bold and simple for greatest effect. Start with outlines of each section and border choosing the appropriate shapes.
- In mosaics, the gaps between the pieces are as much a part of the design as the pieces themselves. Different coloured grout can affect your piece dramatically.
- For a contrasting grout colour, mix acrylic paint or cement stain with the tile grout.

Time

Allow two days for this activity. You will need at least two hours the first day to break and glue your pieces; allow to dry overnight. On the second day, allow at least one hour to grout your frame. Let dry overnight.

Materials and Tools

- Plastic sheet
- Wood frame
- Craft knife
- White glue
- Water – less than 50 ml (1/4 cup)
- Tiles, china
- Safety goggles
- Nose and mouth mask
- Heavy gloves
- Hammer or tile nippers (optional)
- Heavy towel
- Waterproof tile adhesive
- Grout and container to mix if using powder
- Rubber or latex gloves
- Piece of cardboard 10 x 10 cm (4 x 4 inches)
- Cloths, rags or sponge
- Sealant (optional)
- Paintbrush (optional)

Instructions

1. Protect your working surface with a plastic sheet.
2. Lay your frame on a flat surface. Take a craft knife and score the surface of the frame. This will give the frame some 'tooth' and improves the grip between the tiles and the adhesive.

3. Wipe down the frame, and seal it with diluted white glue. Mix 1 part white glue to 3 parts water and apply it evenly to the surface of your frame with a paintbrush. Let dry.
4. While your frame is drying, move to an area where you can break your tiles and china. Outside or in a garage are good places.
5. Put on your safety glasses and mask. Cover your china and tiles with a heavy towel and smash with a hammer. You may need to hit some pieces repeatedly to get them to break. Or, you can use your tile nippers to make your pieces.
6. Organize your pieces by colour and design.
7. Apply tile adhesive to the back of your tile or china by either small brush or dipping your piece into the adhesive. Place it on your frame as close as possible to the other pieces.
8. Wipe off any excess adhesive and let dry overnight.
9. Once your tile adhesive is dry, scrape away excess adhesive that has squeezed out from under your pieces.
10. If you are using powdered grout, mix the grout powder with water according to manufacturer's directions in a clean old bowl or container.
11. Wearing rubber or latex gloves and using the 10 cm x 10 cm (4 x 4 inches) piece of cardboard, apply and spread the



Source: How to create a mosaic mirror. Craft Stylish. August 4, 2009. <http://www.craftstylish.com/item/50947/how-to-create-a-mosaic-mirror/page/all>



Source: Mirror in mosaic frame. Accessory own hands. House and Home 2011. <http://hejmon.com/mirror-in-mosaic-frame-accessory-own-hands/>



Source: How to create a mosaic mirror. Craft Stylish. August 4, 2009. <http://www.craftstylish.com/item/50947/how-to-create-a-mosaic-mirror/page/all>

grout on your frame. Push the paste into the gaps with your fingers and smooth it evenly over the whole surface. Do not put too much on; you want to use enough to get into the spaces and to make a light layer on the tiles.

12. Wipe off any excess grout with a damp cloth; the tiles do not have to be clean but they should not have a lot left on. Let dry for 10 minutes.

13. Wipe again with a damp cloth; if there is still a lot of grout, scrub the surface with a stiff nailbrush to remove the excess. It should come away as a powder.



14. Let dry for 24 hours.
15. Polish with a soft dry cloth.
16. Seal if you wish and add a favourite photo or picture.

Post- Activity Questions

Did you enjoy making your mosaic frame?

Did you have any challenges?

What would you do differently?

How else could you up-cycle by using mosaics?

Other Ideas for Mosaics

- Add pieces of mirror, beads, shells, pebbles.
- Cover a plant pot.

Classy Crockery

Crockery is dishes, cups, saucers and others items especially ones made from earthenware and china. Mosaics are one way to use old flat plates but what how can we repurpose things like cups and vases? The next three activities explore that!

Activity 39 – Teacup Bird Feeder

In this activity, we are going to use an old teacup or coffee mug to create a suet feeder for birds. Suet is animal fat that has been rendered to form hard cakes or balls. It is a good bird food for the fall and winter when the birds need greater numbers of calories to maintain their



Source: Birdcup 2.0 ...The Only True Feeding Cup. The Raumfee. February 7, 2012.
<http://dieraumfee.blogspot.co.nz/2012/02/bidcup-20-die-einzig-wahre.html>

body heat and energy levels. Making your own bird suet is easy and affordable and allows you to customize the ingredients to appeal to the types of birds in your yard or those you especially wish to attract.

When you choose your mug or cup, select one that has a flared or slightly wider lip. That way, the birds will be able to access all the suet you have made for them.

Time

Allow 2 hours

Materials and Tools

- Teacup or mug
- Wooden dowel – 6 mm (1/4 inch); 15 cm (6 inches), or a chop stick
- Industrial glue – E-6000
- Suet
- Knife
- Saucepan
- Stove

- Cheesecloth or sieve
- Birdseed (optional)
- String or ribbon – 100 cm (39 inches)

Instructions

Making Teacup Feeder

1. Clean your teacup well.
2. Glue the end of your wooden dowel or chop stick to the inside base of your cup so that it is sticking straight up. Let dry.

Making Suet

1. To make suet, purchase suet or beef fat trimmings from a local butcher.
2. Remove all traces of meat. With a knife, chop the fat into small pieces or run it through a meat grinder. Be careful as knives are sharp!
3. Put the chopped fat into a saucepan and set on stove. Heat slowly with a low setting and let it melt. Do not use higher temperatures to melt the suet more quickly, as this could lead to fires or scorching. Be careful as hot suet can burn.
4. Strain the liquid fat through cheesecloth or a fine sieve to remove any particles or contaminants. The suet should be strained several times so it is as pure as possible.

Finishing Suet Feeder

1. Pour melted suet into your cup. Add birdseed to top if so desired. Let cool.
2. Tie your string or ribbon to the handle of the teacup.
3. Once the suet has solidified, hang your suet birdfeeder in a tree and let the birds feast!



Post-Activity Questions

Did you enjoy making your teacup feeder?

Did you enjoy making your suet?

Did you have any challenges making your teacup feeder?

Did you have any challenges making your suet?

What would you do differently?

What else could you make from teacups?

What else can you use to make bird feeders?

Other Birdfeeder Ideas

- Take a teacup and saucer and glue the teacup to the saucer on a tilt. Fill with bird seed and hang from handle.
- Glue a large teacup to its saucer and then to copper cap; set on a copper pipe in the garden and fill the cup with bird seed.

Activity 40 – China Jewellery Holder



Source: 52 Week Challenge: #3 DIY Jewelry Stand. Calico Skies.
February 11, 2012. <http://mycalicoskies.blogspot.com.br/2012/02/52-week-challenge-3-diy-jewelry-stand.html>

In this activity, we will be using some china to build a jewellery holder. With two small plates and a vase or candlestick, you can make a lovely stand to hold jewellery, soap, candies, a candle or even a cupcake.

If you can, choose two plates of different sizes, like a bread and butter plate and a saucer. Use the larger plate for the base of your holder. This will allow for the vase or candlestick and still have room for some jewellery.

In case you wanted to use your china again, use hot glue to attach your plates to the candlestick or vase.

Time

This jewellery holder goes together quickly but drying time will depend on the glue you are using. With some glues, you may have to allow a drying time of 24 hours for each glue operation.

Materials and Tools

- Two china plates
- Candlestick or vase
- Glue – E-6000 or hot glue (if you do not want to permanently glue items together)

Instructions

1. Wash and dry your plates and vase/candlestick.
2. Place your larger plate on your work surface. Apply a thin strand of glue to the bottom of the candlestick.
3. Press the candlestick firmly onto the bottom plate and allow to dry.
4. Glue the second plate to the top



of the candlestick and allow to dry.

5. Fill your new stand with all your pretty rings, earring and necklaces!

Post-Activity Questions

Did you enjoy making your jewellery holder?

Did you have any challenges?

What would you do differently?

How else could you use this holder for?

Activity 41 – Sharpie Painting

By using an oil-based Sharpie or porcelain marker, you can personalize dishes. Write a message, draw a picture, or create a design. Once baked, it is fairly durable. However, do not put it in the dishwasher; hand wash only.

Time

One hour for decorating and baking and, another hour for it to cool.



Source: How to Decorate a Coffee Mug Using a Porcelain Marker. Tuts +. May 16, 2013. <http://hub.tutsplus.com/tutorials/how-to-decorate-a-coffee-mug-using-a-porcelain-marker--craft-7454>

Materials and Tools

- Plain coloured mug
- Oil-based fine point Sharpie marker, or porcelain marker
- Oven
- Timer

Instructions

1. Make sure your mug is clean and dry.
2. Take your marker and write a message or draw a simple picture or design
3. Bake in pre-heated oven at 180° C (350° F) for 30 minutes.
4. Let mug cool down in oven.
5. Remove from oven, use and enjoy!



Post-Activity Questions

Did you enjoy decorating with your Sharpie?

Did you have any challenges?

What would you do differently?

How else could you decorate with Sharpies?

Beautiful Books

Most everyone has books; once they are read, they usually sit on shelves collecting dust. Thrift stores are often overflowing with books to the point where they become garbage because there are too many. Hardback books often have rich coloured spines that are quite attractive. What can we do with books once we have read them and shared them with our family, friends and neighbours? Repurpose artists have some clever ideas on reusing books. Below is one.

Activity 42 – Book Box

In this activity, we are going to remove the pages or text block from a hardcover book and add decorative paper into inside cover and spine. We will build a box from cardboard to replace the pages and create a book box. The book you choose should be at least 2.5 cm (1 inch) thick. Hang onto the text block as future craft material!

Time

Allow 1 hour plus time to allow glue to dry

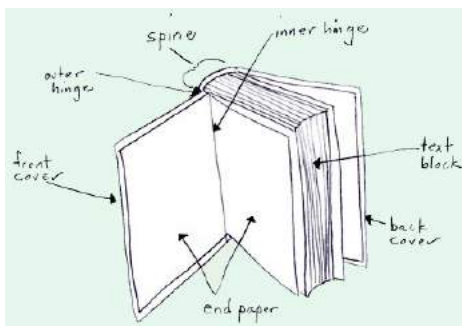
Materials and Tools

- Hardcover book – 2.5 cm (1 inch) thick
- Decorative paper
- Ruler
- Pencil
- Craft knife or scissors
- Heavy box board
- White glue
- Craft paint
- Paint brush



Source: How to: Turn an Old Book into a Book Box.
DIY Projects. September 6, 2011.
<http://korrinewojcik.blogspot.jp/2011/09/how-to-turn-old-book-into-book-box.html>

Parts of a book



Source: Guide to Identifying Damage to Book. March 16, 2009.
The University of Delaware Library.
http://www2.lib.udel.edu/Preservation/damage_id/bookparts.htm

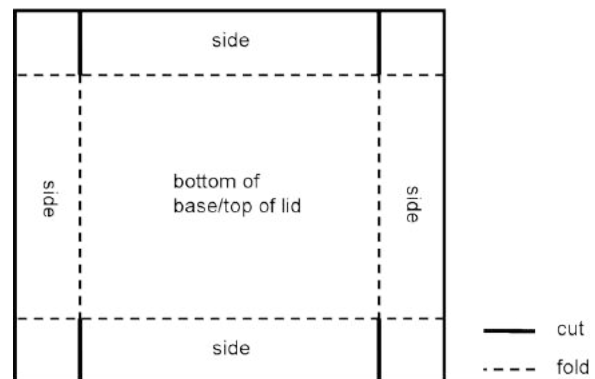
Instructions

1. Remove the inside of the book by cutting down the inside hinge in both the front and back of the book. The pages, or text block, should all come out, leaving the covers, spine and binding.
2. Using a ruler, measure the front endpaper and the spine (your back endpaper will be covered by your box) inside of the flattened cover. Cut out paper to measurements and glue inside the book cover. If your endpapers are particularly interesting or attractive, just cover the inside spine.
3. Using a ruler, measure the length, width and depth of the text block (or pages) that you have just cut out.

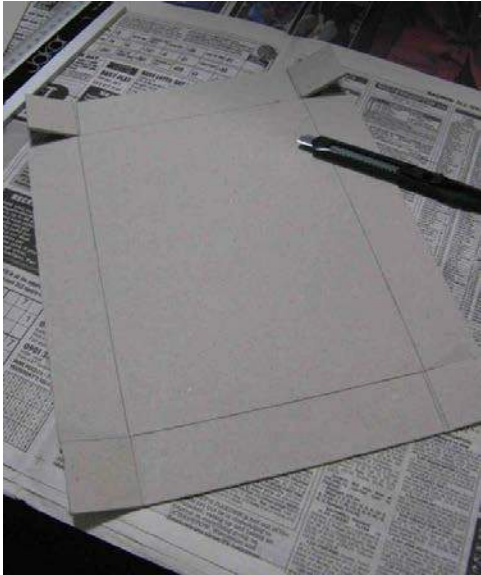


Source: How to: Turn an Old Book into a Book Box. DIY Projects. September 6, 2011.
<http://korrinewojcik.blogspot.jp/2011/09/how-to-turn-old-book-into-book-box.html>

4. Across your boxboard, mark off the depth measurement of your text block, then the width and then depth again.
5. On your boxboard going from top to bottom, mark off the depth measurement, then the length, and then depth again.
6. Using a craft knife or scissors, cut along the outside edge of measurements on the boxboard. A craft knife and a metal ruler will probably produce the best results. Score (or break the top fibres to make it easy to fold) the fold lines lightly with your craft knife.
7. With a craft knife or scissors, cut one side of each of the flaps.
8. Fold up two of the sides and glue the overlapping corners on the inside of the box. Let dry.



Source: How to make a box. Michael's Blog. January 22, 2011.
<http://stickinsect.wordpress.com/2011/01/22/making-a-cardboard-box/>



9. Glue the remaining two corners.
10. Using your craft paint, paint the inside and outside edge of the box. You can make the outside edge look like pages, or make it any colour you would like.
11. Glue the bottom of the box to back of the book. And voilà, a book box!

Post-Activity Questions

Did you enjoy making your book box?

Did you have any challenges making your book box?

What would you do differently?

What can you use the pages that were taken out for?

How else could you up-cycle old books?

Other Book Box Ideas

- Subdivide your box into smaller compartments to hold sewing supplies or other things.
- Use balsa wood instead of cardboard to replace the pages.
- Instead of removing pages, cut them with a craft knife to make a large 'hole' or series.

Frames

Picture frames are other household items that are frequently found at garage sales or thrift stores. What can we do with a frame, other than border a picture? Here is an idea.

Activity 43 – Earring Hanger

Organizing your jewellery can be challenge. In this activity, we are going to use an old picture frame and a piece of plastic canvas used in cross stitching to make a hanger for earrings and necklaces. We will hang it using ribbon that can either be glued or stapled to the frame.

Time

Allow 1 hour; add more time if you are painting your frame.

Materials and Tools

- Picture frame – 20 cm x 25 cm (8 x 10 inches)
- Paint and paintbrush, or spray paint
- Cross stitch plastic canvas
- Scissors
- Ruler or measuring tape
- White glue
- Industrial glue – E6000
- Ribbon – 100 cm (60 inches)

Instructions

1. Take off any backing and glass in your frame.
2. Make sure your frame is clean; paint it the colour you would like. Let dry.
3. Once your frame is dry, turn it over and measure the hole from the back.
4. Measure and cut plastic canvas to fit.
5. Put thin strand of white glue onto the back of your frame and place the canvas. Let dry.



Source: Earring Holder. A Girl and a Glue Gun. April 2010. <http://www.agirlandaglugun.com/2010/04/earring-holder.html>



6. Cut ribbon in two pieces. Use E-6000 to glue or ribbon onto top corners of frame. Let dry.



7. Tie ribbon in a nice bow. Voilà – a hanger for your earrings!

Post-Activity Questions

Did you enjoy making your earring hanger?

Did you have any challenges?

What would you do differently?

How else could you use an old frame for?

What else could you up-cycle for storing your jewelry?

Other Ideas for Frames

- Instead of putting in plastic canvas, string wire across opening and use it to hang sunglasses or even photos using clothes pegs.



Source: <http://cupcakesandcashmere.com/sunglass-solution/>

Concluding Remarks

Now that you have finished this project, you will have learned and practiced a range of techniques and created lots of great treasure. You will have been exposed to a wide variety of ideas on reusing and repurposing items that may have normally been taken to recycling or to the landfill. Hopefully you have gotten a huge amount of satisfaction from making something functional or beautiful, or both, from what would be considered waste. By repurposing these items to make objects that you will use and enjoy, you have joined the thousands, or possibly millions, of others who enjoy the art of repurposing and diverting waste.

Hopefully you will look at your waste with heightened awareness and regard the by-products of our consumer lifestyle make excellent craft materials. You may never look at discarded cans, paper, bottles the same way again. You may just be asking yourself: *‘Could I use this to make something fabulous?’*

Bibliography

Baird, Helen. 2004. *The Complete Practical Guide to Mosaics: With Other 60 Step-By-Step Techniques and Projects For Every Home And Garden*. Hermes House. Anness Publishing. London, England.

Boyd, Helen. 2009. *Craftcycle: 100+ Eco-Friendly Projects and Ideas for Everyday Living*. Northern Lights Books. Cincinnati, Ohio.

Bull, Jane. 2001. *The Christmas Book: 50 Activities for a Fun-Packed Celebration*. Dorling Kindersley (DK), London, England.

Elliot, Marion. 1996. *Papier Mache Project Book*. Quintet Publishing. London England.

Get Crafty: Creative Skills and Techniques Made Easy. 1996. Warrender Grant Publications Ltd. Marshall Cavendish Partworks. London, England.

Gibson, Ray. 1995. *The Usborne Book of Papier Mache*. Usborne Publishing, London, England.

Henry, Sally, Trevor Cook and Penny Worms. 2011. *Cool Stuff to Do*. Arcturus Publishing. London, England.

Jackson, Paul. 1991. *The Encyclopedia of Origami and Papercraft*. Simon and Shuster. New York.

LeBlanc, Rick. 2013. About Textile Recycling: Growth of Textile Recycling Promises to Divert More Material from Landfills. About.com Guide. <http://recycling.about.com/od/Glossary/a/About-Textile-Recycling.htm>

Martin, Laura C. 2004. *Recycled Crafts Box: Sock Puppets, Cardboard Castles, Bottle Bugs and 37 more Earth-Friendly Projects and Activities You Can Create*. Storey Publishing. North Adams Massachusetts.

Sustainable Recycling Solutions: Recycling Facts. *MRC Polymers*. 2013. <http://www.mrcpolymers.com/PlasticRecyclingFacts.php>

Occhipinti, Lisa. 2011. *The Repurposed Library: 33 Craft Projects That Give Old Books New Life*. Stewart, Tabori and Chang, Abrams. New York.

Platt, Brenda and Doug Rowe. *America's Experience with Refillable Beverage Containers*. Reduce, Reuse, Refill! Institute for Local Self-Reliance. 2002. <http://rillables.grn.org/content/americas-experience-refillable-beverage-containersef>

Recycling Fact Sheets. *Recycling Council of British Columbia*. August 28, 2012. http://www.rcbc.ca/files/u6/rg_100128_Think_Twice.pdf

Rhatigan, Joe and Rain Newcomb. 2006. *Paper Fantastic: 50 Creative Projects to Fold, Cut, Glue, Paint and Weave*. Lark Books. Sterling Publishing. New York.

Seo, Danny. 2011. *Upcycling: Create Beautiful Things with the Stuff You Already Have*. Running Press, Pereus Books Group. Philadelphia.

Shoup, Kate. 2008. *Rubbish! Reuse Your Refuse*. Wiley Publishing, New Jersey.

Smith, Cameron. 2008. "Let Growth Cater to Need, Not Want" February 02, 2008. *Toronto Star*. Toronto, Ontario.

Sorrell, Katherine. 2004. *The Home Guide to Craft*. Bay Books, Murdoch Books.

Vitkus, Jessica. 2005. *Alternacrafts*. Stewart, Tabori and Chang. Harry N. Abrams, Inc. New York.

Watson, David. 1991. *Creative Handmade Paper : How to Make Paper from Recycled and Natural Materials*. Search Press. Tunbridge Well, Kent, England.



Saskatchewan

3830 Thatcher Avenue
Saskatoon, Saskatchewan S7R 1A5
306-933-7727 • 306-933-7730 (fax)
www.4-h.sk.ca • info@4-h.sk.ca