



Small School Mentorship Program

As an extension of Flying Arts' Connecting Arts with School Curriculum (CASC) program, the Small Schools Mentorship Program (SSMP) is for schools with 50 or less students in regional and remote Queensland. This unique program offers the support of a registered primary teacher/artist to collaborate with small schools to plan and deliver an incursion combining arts and non-art curriculum. Ongoing support is a unique feature of this specialised program.

This program is intended to develop confidence in the planning and delivery of arts rich experiences in the classroom, better understanding of how to deliver on arts curriculum, how to connect arts into other areas of curriculum to enhance teaching and learning, to enhance practical skills in the visual and media arts and to collaborate with artist to deliver arts.

This template and materials are intended as a resource and source of ideas for educators to use as a model.

SCHOOL	Yelarbon State School	TEACHER	Philippa Sly
LOCATION	Darling Downs, South West Queensland	ARTIST	Therese Flynn-Clarke
YEAR LEVEL	P-6	LESSON NAME	How do artists use materials differently to scientists?

INTRODUCTION

Yelarbon State School, situated 50km east of Goondiwindi, expressed an interest in a Science/ Visual Art collaboration, with a whole school focus on the Chemical Sciences including the observable properties of materials. It was decided to link this to the eco dying practised by a Visual Artist using local plants and metals to experiment with changes in materials under heat. Students also would have the opportunity to explore sculptural installation using a number of recycled materials inspired by the artwork of Lucy Irvine.

LESSON IDEA

A series of Visual Art activities are planned to link closely to the Chemical Science strand the students are studying. The first half of the day was to experiment with eco dyeing fabric and paper. The students were to view a PowerPoint on the topic *How do Artists use materials differently to scientists?* And considered the properties of a variety of materials and explore them through a sculpture installation project using newspaper, plastic strapping, masking and duct tape. The opportunity to collaborate with classmates and take creative and problem solving risks was also built into the collaboration.

AUSTRALIAN CURRICULUM LINKS

Science - Chemical Science

F Objects are made of materials that have observable properties ([ACSSU003](#))

Sorting and grouping materials on the basis of observable properties such as colour, texture and flexibility (Basketry Materials)

Thinking about how the materials used in buildings and shelters are suited to the local environment

Yr 1 Everyday materials can be physically changed in a variety of ways ([ACSSU018](#)) (Papermaking with recycled paper)
Predicting and comparing how the shapes of objects made from different materials can be physically changed through actions such as bending, stretching and twisting

Exploring how materials such as water, chocolate or play dough change when warmed or cooled (Papermaking, Eco Dyeing)

Yr 2 Different materials can be combined, including by mixing, for a particular purpose ([ACSSU031](#))

Exploring the local environment to observe a variety of materials, and describing ways in which materials are used (Eco Dyeing, Weaving)

Investigating the effects of mixing materials together (Eco dyeing eg gum leaves, rusty iron etc)

Suggesting why different parts of everyday objects such as toys and clothes are made from different materials

Identifying materials such as paper that can be changed and remade or recycled into new products (handmade paper from scrap paper and from plants)

Yr 3 A change of state between solid and liquid can be caused by adding or removing heat ([ACSSU046](#))

Investigating how liquids and solids respond to changes in temperature, for example water changing to ice, or melting chocolate (Heating process in Eco Dyeing)

Exploring how changes from solid to liquid and liquid to solid can help us recycle materials (Papermaking- deckle and frame)

Predicting the effect of heat on different materials (Eco Dyeing)

Yr 4 Natural and processed materials have a range of physical properties; these properties can influence their use ([ACSSU074](#))

Describing a range of common materials, such as metals or plastics, and their uses (random weave materials- plant fibres and recycled materials)

Investigating a particular property across a range of materials

Selecting materials for uses based on their properties (Basketry-weaving)

Considering how the properties of materials affect the management of waste or can lead to pollution

Yr 5 Solids, liquids and gases have different observable properties and behave in different ways ([ACSSU077](#))

Recognising that substances exist in different states depending on the temperature

Observing that gases have mass and take up space, demonstrated by using balloons or bubbles

Exploring the way solids, liquids and gases change under different situations such as heating and cooling (Eco dyeing- leaves print onto fabric under heat. Solids changing.)

Recognising that not all substances can be easily classified on the basis of their observable properties (Basketry; Eco Dyeing)

Yr 6 Changes to materials can be reversible, such as melting, freezing, evaporating; or irreversible, such as burning and rusting ([ACSSU095](#)) (Eco dyeing using rusty objects and vinegar)

Describing what happens when materials are mixed (Eco Dyeing; Papermaking- paper and water)

Investigating the change in state caused by heating and cooling of a familiar substance (Eco dyeing eg onion skins heated with fabric or paper)

Investigating irreversible changes such as rusting, burning and cooking (Eco Dyeing)

Exploring how reversible changes can be used to recycle materials (Basketry; Papermaking)

Visual Arts

F - Yr 2 Explore ideas, experiences, observations and imagination to create visual artworks and design, including considering ideas in artworks by Aboriginal and Torres Strait Islander [artists](#) ([ACAVAM106](#))

Use and experiment with different [materials](#), techniques, [technologies](#) and processes to make artworks ([ACAVAM107](#))

Respond to visual artworks and consider where and why people make visual artworks, starting with visual artworks from Australia, including visual artworks of Aboriginal and Torres Strait Islander Peoples ([ACAVAR109](#))

Create and display artworks to communicate ideas to an [audience](#) ([ACAVAM108](#))

Yr 3-4 Use [materials](#), techniques and processes to explore [visual conventions](#) when making artworks ([ACAVAM111](#))

Develop and apply techniques and processes when making their artworks ([ACAVAM115](#))

Present artworks and describe how they have used [visual conventions](#) to represent their ideas ([ACAVAM112](#))

Yr 5-6 Develop and apply techniques and processes when making their artworks ([ACAVAM115](#))

Plan the display of artworks to enhance their meaning for an [audience](#) ([ACAVAM116](#))

APPROACH AND SEQUENCE OF LESSON

Students were shown a PowerPoint

Eco Dyeing

1. Safety considerations are implemented prior to strainings.
2. Large pots of tank water, dyeing materials and natural mordants were to be placed on a stove and brought to the boil.
3. In a wet or outdoor area model the process for creating clamped watercolour paper samples to be dyed and fabric bundles (the students each have a piece of cotton white fabric to dye).
4. The student's bundles are to be dyed are placed into the pot and boiled up for an hour or so. Later, bundles are removed from the pots and allowed to cool before being opened and revealed.

Sculptural Installation

1. While the Eco dyeing pots are brewing students have the opportunity to explore the properties of some recycled materials to create a sculptural installation inspired by the art work of Canberra artist Lucy Irvine.
2. Students are shown how to fold lengths of newspaper and magazine pages on the diagonal, to make a long length of material; they then create a circle taping the join with masking or duct tape. Students are also shown how to join plastic strapping using masking and duct tape.
3. Circles or rings are to be made with these items and joined back to back in a variety of ways. These are to be built on, and the properties of the materials used to be explored including: flexibility, twisting, rolling etc, to create new shapes for a sculptural installation.
4. Students begin working individually with their chosen material and after producing enough fixed circles can join their creation to another students and even work in a group or as a class.
5. There is a focus on creative problem solving and collaboration amongst the students. The principles of this installation can be applied to other materials and concepts for larger, even permanent, sculptural installation in the school grounds.
6. Follow up with a sculptural Artist in Residence could be pursued.

RESOURCE REQUIREMENTS

Eco Dyeing

- A piece of fabric for each student (either 100% silk, wool or cotton - silk and wool dye is better but cotton is cheaper! Old wool blankets could also be used)
- Black permanent marker
- Paddle pop sticks (to write student names on)
- 1-2 pieces of good quality watercolour paper each.
- Lead Pencils (to write student names on paper)
- A couple of big stock/cooking pots (Not great to use again for cooking food afterwards)
- String for each student to wrap their fabric bundle with - approximately 2-4m each
- Old tiles (or small cut flat pieces of wood) - to create 'sandwiches' to fit in the pots. Two tiles will fit a few pieces of folded paper between.
- Fold back bulldog clips (to clamp the tiles - 4 clips for each set of two tiles)
- Local plant fibres (e.g. Gum leaves, grevillea leaves)
- Onion skins
- Red cabbage
- Alum powder (can be bought at produce stores)

- Metal pieces e.g. copper pipe/bits; rusty iron bits
- Flat metallic pieces e.g. rusty washers, bottle tops

Sculptural Installation

- Masking tape/or duct tape rolls - 1 per child or 1 between 2. Speedy School supplies have some designer tape in different colours and prints- Code 3684, \$13.95 for 5x10m rolls.
<http://www.speedyschoolsupplies.com.au/designer-tapes-assorted>
- Materials that are flexible and can be taped together with masking tape e.g. newspaper and magazine sheets folded in lengths, plastic strapping (source from hardware stores, supermarkets etc- Scissors
- Materials such as fishing line to string up installations and hang for display

Additional Resources

- Eco dyeing web links

Dyeing to bring new life to old fabric

http://splash.abc.net.au/home?WT.tsrc=Email&WT.mc_id=Innovation_Innovation-Splash|Primary_email|20150826#!/media/1504378/dyeing-to-bring-new-life-to-old-fabric

Dyeing with Red Cabbage

http://splash.abc.net.au/home?WT.tsrc=Email&WT.mc_id=Innovation_Innovation-Splash|Primary_email|20150826#!/media/1589896/dyeing-with-red-cabbage-

Eco Dyeing segment on *Gardening Australia*

http://www.abc.net.au/gardening/video/default.htm?clip=http://mpegmedia.abc.net.au/tv/gardeningaus/prog_streams/harvestingcolour_ep15_2015.mp4&title=Harvesting%20Colour

Growing a Dye Garden

<http://theplanthunter.com.au/gardens/growing-dye-garden/>

Visual Artist Eco dyeing images

www.thereseflynnclarke.com

Solar Dyeing in Jars

<https://obovate.wordpress.com/2014/07/23/solar-or-sun-kissed-dyeing/>

Lucy Irvine artist - web links

<http://www.lucyirvine.com.au/styled/index.html>

<http://www.smh.com.au/entertainment/art-and-design/a-diy-pipe-dream-come-true-20131128-2yc3l.html>

Sculpture - recycled materials - *Hidden Creatures*

http://splash.abc.net.au/home?WT.tsrc=Email&WT.mc_id=Innovation_Innovation-Splash|Primary_email|20161109#!/media/2169307/discover-hidden-sculptures-in-an-outdoor-exhibition

PHOTOGRAPHS

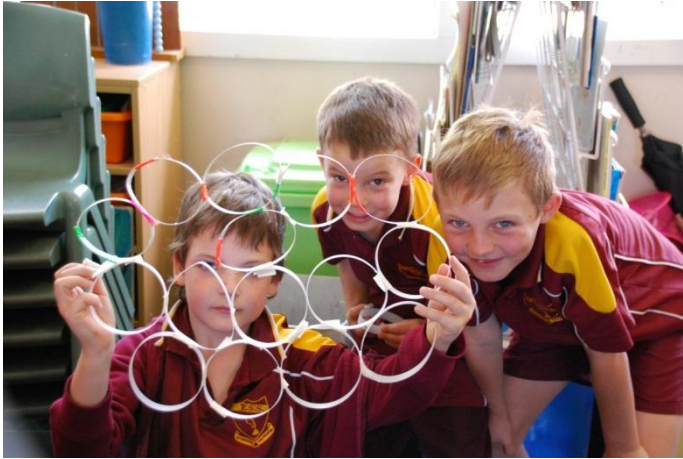


Preparing the bundles and paper for eco dyeing.



While the pots were simmering we began the Sculptural installation art activity- exploring the properties of a variety of materials.







And finally the eco dyed bundles and 'packages' are opened and revealed...



Images Credit: Therese Flynn-Clarke