


# Using Outdoor Education to Enhance Literacy and Numeracy

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# USING OUTDOOR EDUCATION TO ENHANCE LITERACY & NUMERACY

A COLLABORATIVE LEARNING COMMUNITIES PROJECT  
SPONSORED BY THE ONTARIO ENGLISH CATHOLIC  
TEACHERS ASSOCIATION

CREATED BY C&C INSPIRATIONS--  
SPECIFICALLY CORRINE BOUDREAU  
& CHRISTINA LUCCIANTONIO  
JUNE 2010

## Using Outdoor Education to Enhance Literacy & Numeracy

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- BLMs=black line masters

## Using Outdoor Education to Enhance Literacy & Numeracy

### Acknowledgements and Rationale

We took on the task of creating outdoor activities to keep children in Grades 3 and 4 interested and engaged in completing numerous Literacy and Numeracy expectations.

Literacy—understanding and knowing how to use language well

Numeracy—understanding and knowing how to use numbers well

"Research shows that students using the local environment as a comprehensive focus and framework for curricula have demonstrated --increased engagement with and enthusiasm for learning --  
--heightened proficiency in developing and applying language skills  
--greater sense of pride and ownership in accomplishments, with attendant reduction in discipline and classroom management issues  
--improved academic achievement  
--increase critical thinking skills including the ability to synthesize information, understand complex interrelationships and connections between individuals and communities and think strategically." Lieberman and Hoody -- State Education and Environment Roundtable (1998). Reconnecting Children Through Outdoor Education (2007) The Council of Outdoor Educators of Ontario.

"The children and nature movement is fuelled by this fundamental idea: the child in nature is an endangered species and the health of children and the health of the earth are inseparable." Richard Louv, Last Child in the Woods, 2008, Algonquin Books of Chapel Hill.

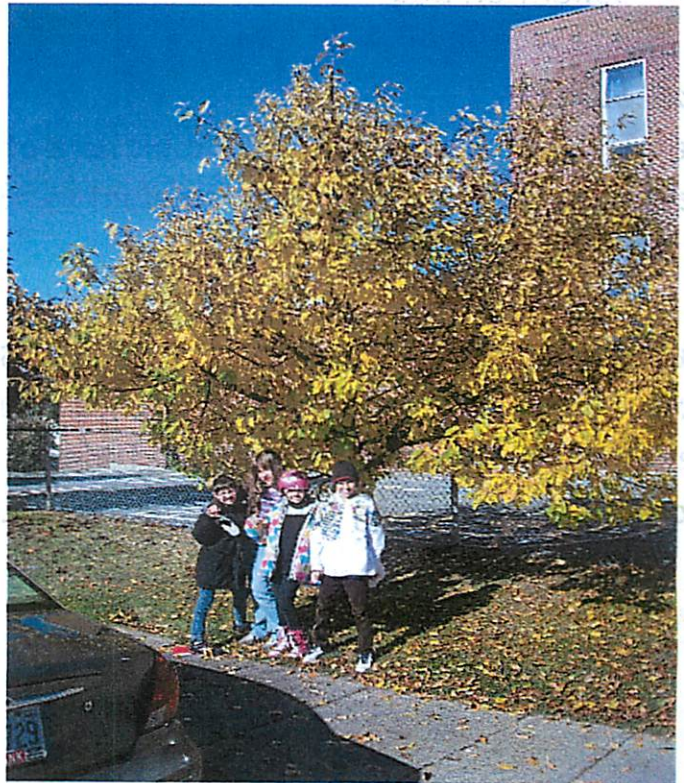
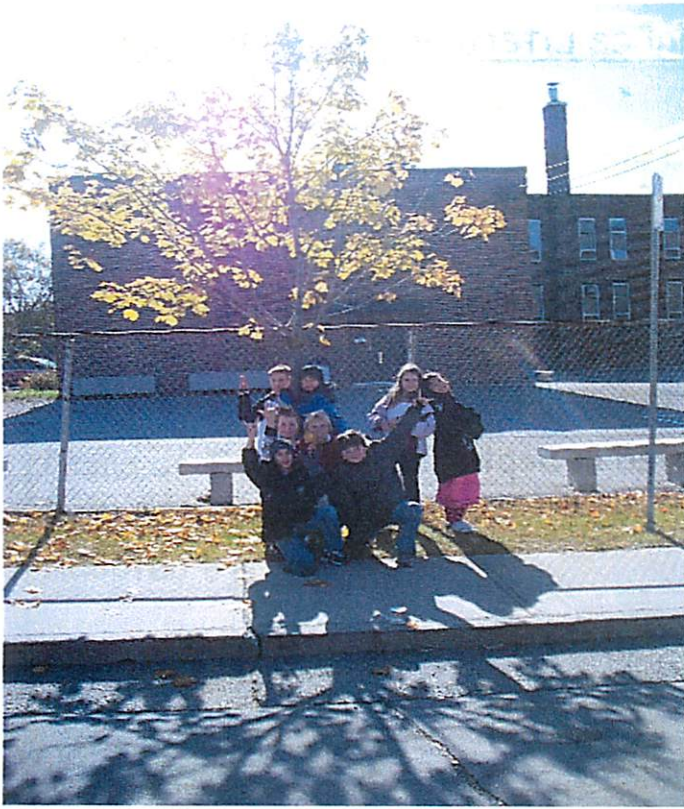
We thank Lyn Vause and Claire Laughlin for leading the Collaborative Learning Communities and for giving us this opportunity for professional growth and fun!

We also thank Lyn Vause and Linda Cameron for visiting us and offering many helpful and encouraging words.

We thank OECTA for allowing us funds to aid in getting this project completed.

Thank you to C. Thompson for the fabulous cover graphic.  
Corrine and Christina (C&C Inspirations 2010)





## Using Outdoor Education To Enhance Literacy and Numeracy

**Title:** Adopt a Tree #1

**Month and Season:** September/Late Summer

**Overview:** Students in your classroom will be asked to adopt a tree in the schoolyard, or just at the perimeter of the schoolyard, to conduct a variety of data gathering activities. These activities will be conducted once per season, so you must get started in September.

### **Materials Needed:**

- Metre stick
- Plastic threading string
- Ruler
- Chart paper
- Markers
- Camera
- Scissors
- Collection Bag

### **Procedure:**

**Step 1:** The teacher will take a picture of those students beside their tree as a visual log as well as conduct mathematical computations related to their adopted tree.

**Step 2:** Using a metre stick, the students measure one metre from the ground up. At this point the students measure the circumference of the tree using the plastic cord. The students are to cut the cord so that the two ends are touching but not overlapping.

## Using Outdoor Education To Enhance Literacy and Numeracy

Step 3: The students are asked to measure 12 leaves from their tree and record their lengths in millimeters.

Step 4: The students will organize their chart paper so they can record their data.

Name of Tree: \_\_\_\_\_

Date of observations: \_\_\_\_\_

Adopted by: \_\_\_\_\_

Circumference of the Tree: \_\_\_\_\_

Measurements of the leaf length:

- |    |     |
|----|-----|
| 1. | 7.  |
| 2. | 8.  |
| 3. | 9.  |
| 4. | 10. |
| 5. | 11. |
| 6. | 12. |

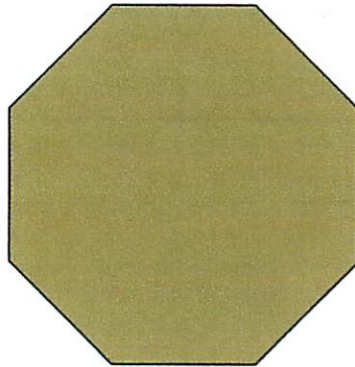
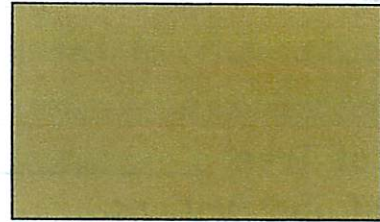
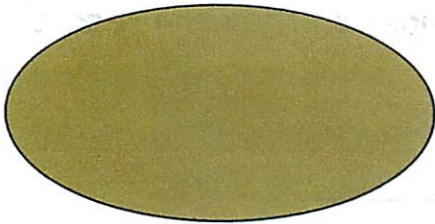
Step 5: Students make a brief presentation about the results of their investigation.

Save this data for future use for the next sessions.



## Using Outdoor Education To Enhance Literacy and Numeracy

### Title: 2-Dimensional Shapes in the Neighbourhood



#### **Expectations Covered:**

Grade 3—identify and compare various polygons

Grade 3—collect and organize primary data and display in tables and graphs with appropriate titles and labels

Grade 4—identify and compare different types of quadrilaterals

Grade 4—collect and organize primary data and display in tables and graphs with appropriate titles and labels

## Using Outdoor Education To Enhance Literacy and Numeracy

**Title:** 2-Dimensional Shapes in the Neighbourhood

**Month and Season:** September/Late Summer

**Mentor Text:** The Greedy Triangle by Marilyn Burns

**Overview:** Students walk around the school neighbourhood looking for various 2-dimensional shapes.

### **Materials Needed:**

tally chart & graph(included), clipboard, pencil, coloured pencils

**Procedure:**--in groups of 2 or 3, students go for a walk with the whole class and look around the neighbourhood, to find 2-dimensional shapes—collect data by filling in the tally chart--back in the classroom, use the graph to organize the collected data

## Using Outdoor Education To Enhance Literacy and Numeracy

### **Title: Patterning**



#### **Expectations Covered:**

Grade 3—identify, extend and create a repeating pattern involving two attributes

Grade 4—identify, extend and create a repeating pattern involving two attributes

## Using Outdoor Education To Enhance Literacy and Numeracy

**Title:** Patterning

**Month and Season:** September—Late Summer

**Overview:** --the students will gather various items from outside to use for patterning

**Materials Needed:**

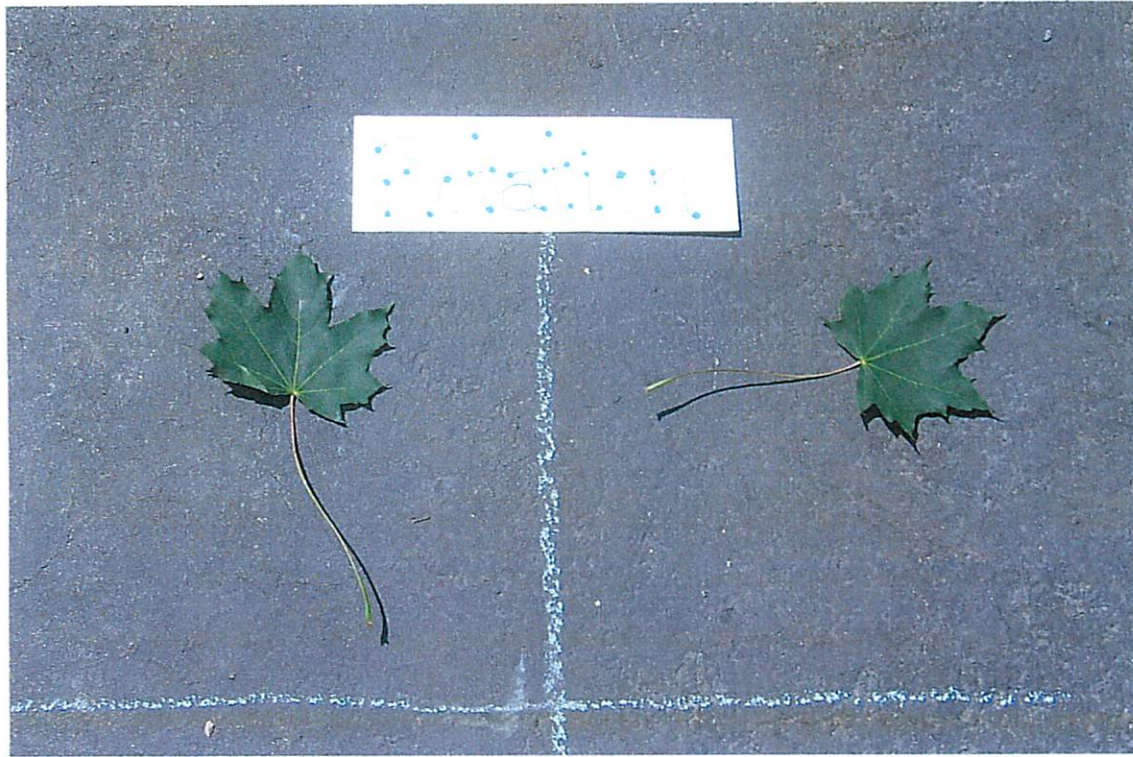
--outdoor items, like rocks, leaves, checklist for teacher

**Procedure:**--students gather outside and look for patterns outside—then each student collects various items that they find and makes a pattern with the item—the students walk around houses to describe and create growing and shrinking patterns with objects and num

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## Using Outdoor Education to Enhance Literacy & Numeracy

### **Title:** Transformations in the School Yard



#### **Expectations Covered:**

Grade 3: identify and describe the locations and movements of shapes and objects

Grade 4: identify and describe the locations of an object, using a grid map, and reflect 2-dimensional shapes

## Using Outdoor Education to Enhance Literacy & Numeracy

**Title:** Transformations in the School Yard

**Month and Season:** October/Early Autumn

**Overview:** Students will use the four square in the schoolyard to learn about the geometric properties of reflection (flip), translation (slide), and rotation (turn).

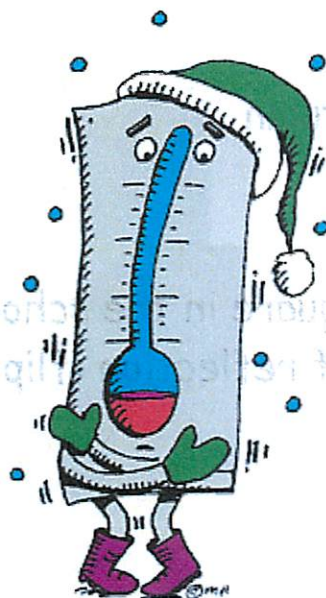
### **Materials:**

--four squares on the asphalt, chalk to make 4 squares if needed, objects from the classroom (examples-- a chair, a chalkboard brush, a box), camera to record, cards with names and pictures of flip (reflection), slide (translation) and turn (rotation)

**Procedure:** Remind the students about the properties of transformations in geometry. In groups of 4, have the students use the various objects to show how each can flip, slide and turn on the four square. Rotate through the groups to make sure they are on the right track. Using purposeful math talk, the students will be required to explain the transformations they created.

## Using Outdoor Education to Enhance Literacy & Numeracy

### Title: Measuring Temperature



#### **Expectations Covered:**

Grade 3—Collect and organize categorical data and display in a chart--measure and record the temperature using standard units

Grade 4—Collect and organize categorical data and display in a chart--measure and record the temperature using standard units, and elapsed time

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## Using Outdoor Education to Enhance Literacy & Numeracy

**Title:** Measuring Temperature

**Month and Season:** October—Early Autumn

**Overview:** Students will measure the temperature outside for ten school days to investigate fluctuation. They will also infer what clothing is needed for the changes in daily temperature.

### **Materials Needed:**

--small thermometers for students, one large thermometer for teacher, 3 column chart, pencil

**Procedure:** Review the use of a thermometer using the large one to show the students how to utilize it. Students will go outside with a partner and measure the temperature. Try to do this at the same time everyday for 10 school days. Students will complete a 3 column chart with the information they have gathered on a daily basis. Students can infer what clothing is needed for the day and add it to the chart.



## Using Outdoor Education To Enhance Literacy and Numeracy

### **Title: Measurement of Distance (Meters & Kilometers)**



#### **Expectations Covered:**

**Grade 3—estimate and measure distance in standard units**

**Grade 4—estimate and measure distance in standard units**

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## Using Outdoor Education To Enhance Literacy and Numeracy

**Title:** Measurement of Distance (Metres & Kilometres)

**Month and Season:** November—Autumn

**Overview:** -students go outside and determine the distance of a meter in children's footsteps

**Materials Needed:**

-- meter stick, piece of chalk, rolling meter wheel

**Procedure:**--each student walks at a normal pace, 4 or 5 steps, then measures with a meter stick to determine the length of his/her walking pace--inform the students that 1 kilometre =100 meters, how far will you have to walk to reach 1 kilometre?--- students go on a walk, counting their steps, and stop when they feel they have reached 1 kilometre

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## Using Outdoor Education to Enhance Literacy & Numeracy

**Title: Falling Leaves—Where Do You Go?**



### **Expectations Covered:**

**Grade 3—generate, gather and organize ideas and information to write for an intended purpose and audience**

**Grade 4—generate, gather and organize ideas and information to write for an intended purpose and audience**

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## Using Outdoor Education to Enhance Literacy & Numeracy

**Title:** Falling Leaves—Where Do You Go?

**Month and Season:** November/Autumn

**Overview:** Students will collect some leaves from outside and create a descriptive paragraph about where the leaves go.

**Materials Needed:**

--leaves, baggie, rubric for a descriptive paragraph, marker, chart paper

**Procedure:** --students can go outside and collect a few leaves each from the ground to use for their writing task --inside, have the students offer descriptive words, to be put on an anchor chart, about the leaves, how they would move, their colours, where they might go --students create a descriptive paragraph, on their own, about their leaves and can illustrate it.

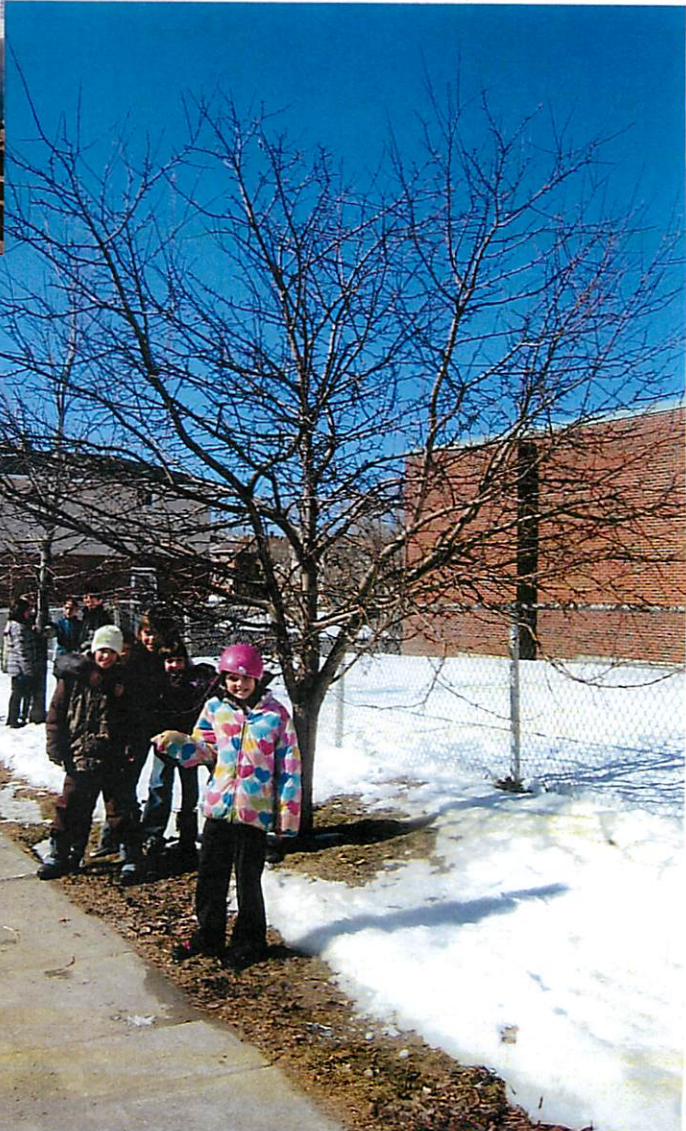
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et ipsum...  
 This...  
 North...  
 collect...



and...  
 with...  
 on...



## Using Outdoor Education To Enhance Literacy and Numeracy

**Title:** Adopt a Tree #2

**Month and Season:** December/Late Autumn

**Overview:** Students in your classroom will be looking at the trees for a second time.

### **Materials Needed:**

- Metre stick
- Plastic threading string
- Ruler
- Chart paper
- Markers
- Camera
- Scissors
- Collection Bag

### **Procedure:**

Step 1: The teacher will take a picture of those students beside their tree as a visual log as well as conduct mathematical computations related to their adopted tree.

Step 2: Using a metre stick, the students measure one metre from the ground up. At this point the students measure the circumference of the tree using the plastic cord. The students are to cut the cord so that the two ends are touching but not overlapping.

## Using Outdoor Education To Enhance Literacy and Numeracy

Step 3: The students are asked to measure 12 buds from their tree and record their lengths in millimeters.

Step 4: The students will organize their chart paper so they can record their data.

Name of Tree: \_\_\_\_\_

Date of observations: \_\_\_\_\_

Adopted by: \_\_\_\_\_

Circumference of the Tree: \_\_\_\_\_

Measurements of the bud length:

- |    |     |
|----|-----|
| 1. | 7.  |
| 2. | 8.  |
| 3. | 9.  |
| 4. | 10. |
| 5. | 11. |
| 6. | 12. |

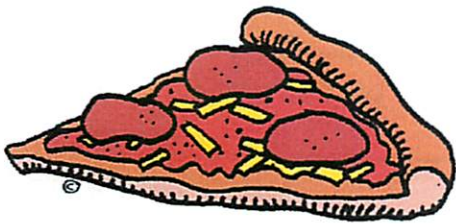
Step 5: Students make a brief presentation about the results of their investigation.

Save this data for future use for the next sessions.



## Using Outdoor Education to Enhance Literacy & Numeracy

**Title:** Grocery Adventure



### **Expectations Covered:**

Grade 3—estimate, count and represent the value of a collection of coins and bills with a maximum value of \$10

Grade 4—read and represent money amounts to \$100.

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## Using Outdoor Education to Enhance Literacy & Numeracy

**Title:** Grocery Adventure

**Month and Season:** December/Late Autumn

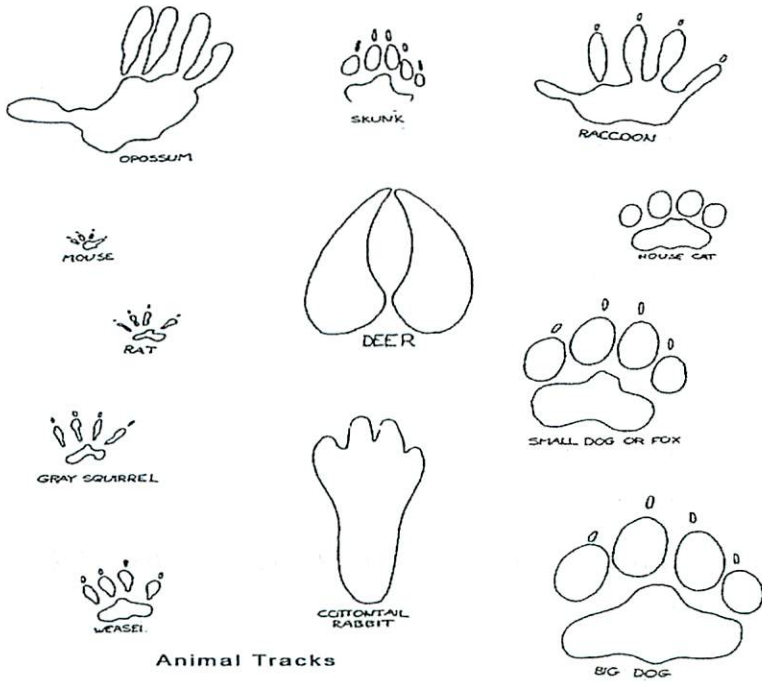
**Overview:** The students will visit a neighbourhood grocery store or market to investigate food that comes from local sources.

**Materials Needed:** items on cards (provided),

**Procedure:**--teacher will set up a grocery store or market visit for the students—using the cards, students can do a scavenger hunt in the store, looking for specific items—also discuss with the manager where the foods come from—back in the classroom, the students can do a variety of math problems, using the cards with the cost on them

## Using Outdoor Education to Enhance Literacy & Numeracy

### Title: Searching For Footprints



#### Expectations Covered:

Grade 3/4 ; 3. create a variety of media texts for different purposes and audiences, using appropriate forms, conventions and techniques.

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## Using Outdoor Education to Enhance Literacy & Numeracy

**Title:** Searching For Footprints

**Month and Season:** January/Early Winter

**Overview:** The students will go outside in their schoolyard or area around the school and look for animal tracks.

**Materials:**

--pictorial identification of footprints (included), paper and pencil to report findings

**Procedure:**--students will go outside with the teacher to investigate the animal prints in the schoolyard or area around the school—they can use the footprint identification chart to help keep track of prints—the students will then make a poster of the animal footprints they found and label them

Using Outdoor Education to Enhance Literacy & Numeracy

Title: Building A Cooler



**Expectations Covered:**

Math: Grade 3/4- estimate, measure, and record elapsed time

Language: Grade 3/4 -- generate, gather, and organize ideas and information to write for an intended purpose and audience;

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## Using Outdoor Education to Enhance Literacy & Numeracy

**Title:** Building A Cooler

**Month and Season:** February/Winter

**Mentor Text:** Sadie and the Snowman by Allen Morgan

**Overview:** The students will construct a homemade cooler using recycled materials brought from home. This cooler will be made within the classroom during Math and Science blocks. The purpose of this experiment is to find out how long their cooler can keep cubes of ice in their original form.

**Materials:** --any recycled material the students bring from home will be acceptable--a time chart to record the progress of the melting-scientific method page

**Procedure:** The students will be provided with a Scientific Method page to record their experiment.

- 1) In small groups (3-5 students), the students will design and construct a cooler using any materials that they have brought from home. ( boxes, sponges, Styrofoam, string, tape, cans, straw(hay), newspaper, plastic, packing material, bubble wrap, etc.)
- 2) Their cooler must be able to hold 10 ice cubes.
- 3) Their cooler must be able to open in order to check on the melting process at different intervals during the day.
- 4) The next school day, each group will be given 4 ice cubes to place inside their cooler.
- 5) The status of the ice cubes will be checked on hourly for the first 4 hours, then in half an hour intervals and the melting process will be recorded in their observations.
- 6) The cooler with the best insulation capability will be the one which kept the ice cubes in their frozen state the longest.
- 7) The students will gather for a debriefing session to discuss what worked and didn't work in their project. During this time, purposeful math and science talk is facilitated by the teacher.

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## Using Outdoor Education To Enhance Literacy and Numeracy

**Title:** Adopt a Tree #3

**Month and Season:** March/Late Winter

**Overview:** Students in your classroom will be looking at the trees for the third time.

### **Materials Needed:**

- Metre stick
- Plastic threading string
- Ruler
- Chart paper
- Markers
- Camera
- Scissors
- Collection Bag

### **Procedure:**

Step 1: The teacher will take a picture of those students beside their tree as a visual log as well as conduct mathematical computations related to their adopted tree.

Step 2: Using a metre stick, the students measure one metre from the ground up. At this point the students measure the circumference of the tree using the plastic cord. The students are to cut the cord so that the two ends are touching but not overlapping.

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Using Outdoor Education To Enhance Literacy and Numeracy

Step 3: The students are asked to measure 12 buds from their tree and record their lengths in millimeters.

Step 4: The students will organize their chart paper so they can record their data.

Name of Tree: _____	
Date of observations: _____	
Adopted by: _____	
Circumference of the Tree: _____	
Measurements of the bud length:	
1.	7.
2.	8.
3.	9.
4.	10.
5.	11.
6.	12.

Step 5: Students make a brief presentation about the results of their investigation.

Save this data for future use for the next sessions.

**Title:** Garbage Collection



**Expectations Covered:**

Grade 3-- estimate, measure, and record length, perimeter, area, mass, capacity, time and temperature, using standard units;--collect and organize categorical or discrete primary data and display the data using charts and graphs.

Grade 4-- estimate, measure and record length, perimeter, area, mass, capacity, volume and elapsed time, using a variety of strategies;--collect and organize categorical or discrete primary data and display the data using charts and graphs, including stem-and-leaf plots and double bar graphs;

## Using Outdoor Education to Enhance Literacy & Numeracy

**Title:** Garbage Collection

**Month and Season:** April/Early Spring

**Mentor Text:** Earth Day -Hooray! By Stuart J. Murphy

**Overview:** Students will collect, sort, weigh and graph the garbage that has been collected in the area which will be used for math activities.

### **Materials:**

--gloves, garbage bags, hula hoops, scale, graph paper, sidewalk chalk, camera

**Procedure:** Have students work in small groups to complete the following activities.

- 1) Students will collect garbage in and around the schoolyard using gloves.
- 2) The students will weigh their collection of garbage using a scale. If the garbage cannot be weighed independently then have the students problem solve as to how they can determine the mass of the garbage. (have a student stand on the scale to determine his/her mass and then give that student the bag of garbage and record the new mass. Subtract the students weight from the total weight to determine the garbage weight).
- 3) In a designated area, the students will dump out their bag of garbage that will be sorted using a Venn diagram made by intersecting two hula hoops that have been placed on the ground.
- 4) The students in each group will decide the criteria for their sort.
- 5) Using gloves, the students will sort the garbage into one of the 4 sections of the Venn Diagram. (They can write their criteria in the sections using sidewalk chalk.)
- 6) Take a photograph of each group

## Using Outdoor Education to Enhance Literacy & Numeracy

**Title:** Garbage Adventure

### **Expectations Covered:**

Grade 3/4 -- generate, gather, and organize ideas and information to write for an intended purpose and audience;  
--draft and revise their writing, using a variety of informational, literacy and graphic forms and stylistic elements appropriate for the purpose and audience;

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## Using Outdoor Education to Enhance Literacy & Numeracy

**Title:** Garbage Adventure

**Month and Season:** April/Early Spring

**Overview:** Students will choose a piece of garbage that was collected. They will mount it on a display page as inspiration for their written task.

**Materials:**

--Mounting pages (construction paper or card stock), piece of trash, writing paper, pencil, ZipLoc baggies, rubric, graphic organizer

**Procedure:** Choose a piece of trash for the assignment.

--have the students mount their piece of trash on their mounting page. ( the students place their garbage in a zip loc baggie to avoid decomposition within the classroom)

--using the graphic organizer, have students fill in their ideas about their subject, focusing on the 5 question words-- students then write an narrative adventure story about their piece of trash--the students are encouraged to publish this adventure story into a book format for the classroom library.

**Title:** Planting Flowers in Planter Boxes



**Expectations Covered:**

Grade 3--estimate, measure, and record length, perimeter, area, mass, capacity, time and temperature, using standard units;-identify and describe the locations and movements of shapes and objects

Grade 4-- estimate, measure and record length, perimeter, area, mass, capacity, volume and elapsed time, using a variety of strategies-- identify and describe the location of an object, using a grid map, and reflect two-dimensional shapes.

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## Using Outdoor Education to Enhance Literacy & Numeracy

**Title:** Planting Flowers in Planter Boxes

**Month and Season:** May/Spring

**Mentor Text:** City Green by D. DiSalvo-Ryan

**Overview:** If your school has planter boxes or a garden in your schoolyard, it would be a great opportunity to bring out a measuring tape and calculate the perimeter of the garden. Decide on a flower to plant in the garden. Read the instructions to determine how far apart the plants need to be from one another. Plot out a grid of the garden using the twine, prior to planting.

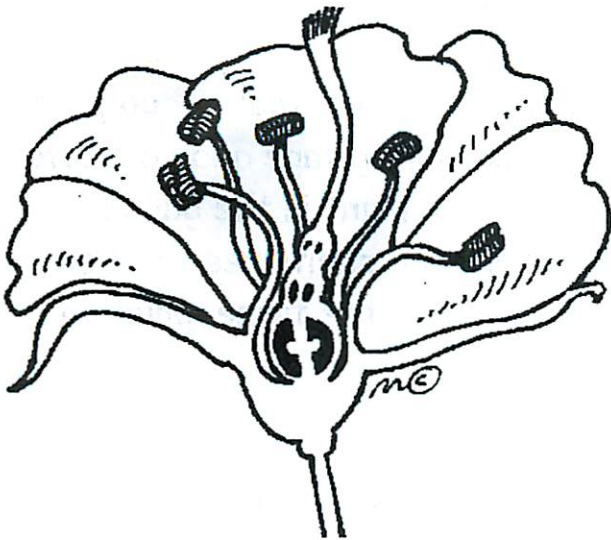
**Materials:** Measuring Tape, twine, tape or long dowels, flowers, garden tools, watering can and water, camera.

**Procedure:** --measure the length and width of the garden box and calculate the area of the planter box (grade 4) Or -- measure the length and the width and double it to find the perimeter of the planter box (grade 3). --measure along the top of the planter box, mark every 10 cm and attach a piece of twine to the planter box --run the twine to the bottom of the planter box and attach it --measure along the width of the planter-box, mark every 10cm running a piece of twine across the planter box, creating a grid for the planting area --using a garden trowel, have the students make one hole in each square --in each square, the students are to place one flower into each hole--cover with soil and water once the entire box has been planted--the class will now be responsible for their back yard garden centre and will have to water and weed their garden on a bi-weekly basis.

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**Title:** Procedure for Planting Flowers



**Expectations Covered:**

Grade 3/4 -- generate, gather, and organize ideas and information to write for an intended purpose and audience;  
-- draft and revise their writing, using a variety of informational, literacy and graphic forms and stylistic elements appropriate for the purpose and audience;

## Using Outdoor Education to Enhance Literacy & Numeracy

**Title:** Procedure for Planting Flowers

**Month and Season:** May/Spring

**Overview:** The students will be writing a procedural text about how to plant a flower in a planter box or a peat pot.

**Materials:**

--planter or peat pots, small flowers or seeds, soil, watering can, water, procedure writing form

**Procedure:** --demonstrate for the students how to plant a flower or how to plant a seed --the students may follow the demonstrated procedure prior to their written assignment to ensure their understanding and ability to visualize this process

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## Using Outdoor Education To Enhance Literacy and Numeracy

**Title:** Adopt a Tree #4

**Month and Season:** June/Late Spring

**Overview:** Students in your classroom will be looking at their tree for the last time.

### **Materials Needed:**

- Metre stick
- Plastic threading string
- Ruler
- Chart paper
- Markers
- Camera
- Scissors
- Collection Bag

### **Procedure:**

Step 1: The teacher will take a picture of those students beside their tree as a visual log as well as conduct mathematical computations related to their adopted tree.

Step 2: Using a metre stick, the students measure one metre from the ground up. At this point the students measure the circumference of the tree using the plastic cord. The students are to cut the cord so that the two ends are touching but not overlapping.

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Using Outdoor Education To Enhance Literacy and Numeracy

Step 3: The students are asked to measure 12 leaves from their tree and record their lengths in millimeters.

Step 4: The students will organize their chart paper so they can record their data.

Name of Tree: \_\_\_\_\_

Date of observations: \_\_\_\_\_

Adopted by: \_\_\_\_\_

Circumference of the Tree: \_\_\_\_\_

Measurements of the leaf length:

- |    |     |
|----|-----|
| 1. | 7.  |
| 2. | 8.  |
| 3. | 9.  |
| 4. | 10. |
| 5. | 11. |
| 6. | 12. |

Step 5: Students make a brief presentation about the results of their investigation.

Celebrate all of the trees and the growth achieved.

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# 2-Dimensional Shapes in the Neighbourhood

Rectangle	Rhombus/Diamond
Square	Triangle
Circle	Hexagon
Pentagon	Octagon

# 2-Dimensional Shapes in the Neighbourhood

Number of Shapes	Rectangle	Rhombus	Square	Triangles	Circles	Hexagon	Pentagons	Octagons
Types of Shapes								



# Checklist for Patterning Grade 3

	Students Name	Identify patterns using two attributes	Extending patterns using two attributes	Creating patterns using two attributes
1				
2				
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23				
24				

**Success Criteria**

**I** - Independent

**G** - Guided

**N** - Not at all

# Checklist for Patterning Grade 4

	Students Name	Describe patterns using two attributes	Extending patterns using two attributes	Creating patterns using two attributes	Create growing and shrinking patterns with objects/numbers
1					
2					
3					
4					
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21					
22					
23					
24					

**Success Criteria**

**I** - Independent

**G** - Guided

**N** - Not at all

## Transformations in the School Yard

Reflection (flip)

Translation (slide)

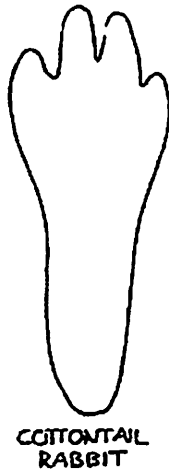
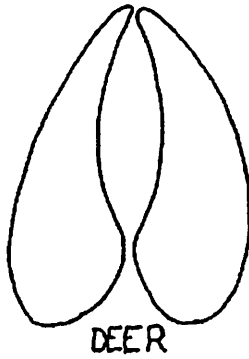
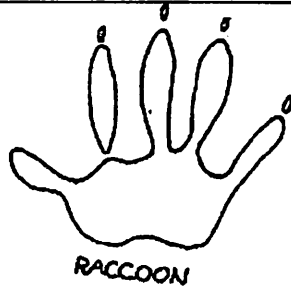
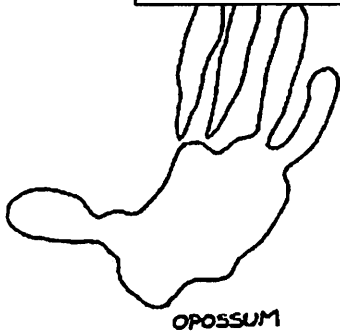
Rotation (turn)



## Falling Leaves Rubric (descriptive paragraph)

	Level 1	Level 2	Level 3	Level 4
<p><b>Knowledge &amp; Understanding</b></p> <ul style="list-style-type: none"> <li>-identifies the subject being described</li> <li>-uses a variety of sensory details</li> </ul>	<ul style="list-style-type: none"> <li>-demonstrates limited knowledge and understanding about the subject and sensory details</li> </ul>	<ul style="list-style-type: none"> <li>-demonstrates some knowledge and understanding about the subject and sensory details</li> </ul>	<ul style="list-style-type: none"> <li>-demonstrates considerable knowledge and understanding about the subject and sensory details</li> </ul>	<ul style="list-style-type: none"> <li>-demonstrates a high degree of knowledge and understanding about the subject and sensory details</li> </ul>
<p><b>Thinking</b></p> <ul style="list-style-type: none"> <li>-demonstrates the importance of the subject</li> <li>-writes as an observer</li> </ul>	<ul style="list-style-type: none"> <li>-demonstrates thinking with limited effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>-demonstrates thinking with some effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>-demonstrates thinking with considerable effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>-demonstrates thinking with a high degree of effectiveness</li> </ul>
<p><b>Communication</b></p> <ul style="list-style-type: none"> <li>-organizes information and communicates to inform the audience</li> <li>-uses proper spelling and grammar and vocabulary</li> </ul>	<ul style="list-style-type: none"> <li>-organizes, communicates and uses proper forms with limited effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>-organizes, communicates and uses proper forms with some effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>-organizes, communicates and uses proper forms with considerable effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>-organizes, communicates and uses proper forms with a high degree of effectiveness</li> </ul>
<p><b>Application</b></p> <ul style="list-style-type: none"> <li>-transfers knowledge and skills</li> <li>-shows ability to make connections</li> </ul>	<ul style="list-style-type: none"> <li>-transfers knowledge and makes connections with limited ability</li> </ul>	<ul style="list-style-type: none"> <li>-transfers knowledge and makes connections with some ability</li> </ul>	<ul style="list-style-type: none"> <li>-transfers knowledge and makes connections with considerable ability</li> </ul>	<ul style="list-style-type: none"> <li>-transfers knowledge and makes connections with a high degree of ability</li> </ul>

BLM January/Early Winter  
Animal Footprints



Animal Tracks

BLM February/Winter

# Building A Cooler Time Chart

Time	State of Ice Cubes	Observations
9:00am		
10:00am		
11:00am		
12:00 noon		
1:00pm		
1:30pm		
2:00pm		
2:30pm		
3:00pm		

BLM February/Winter

# Building A Cooler

## Scientific Method

Predictions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Materials: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Procedure: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

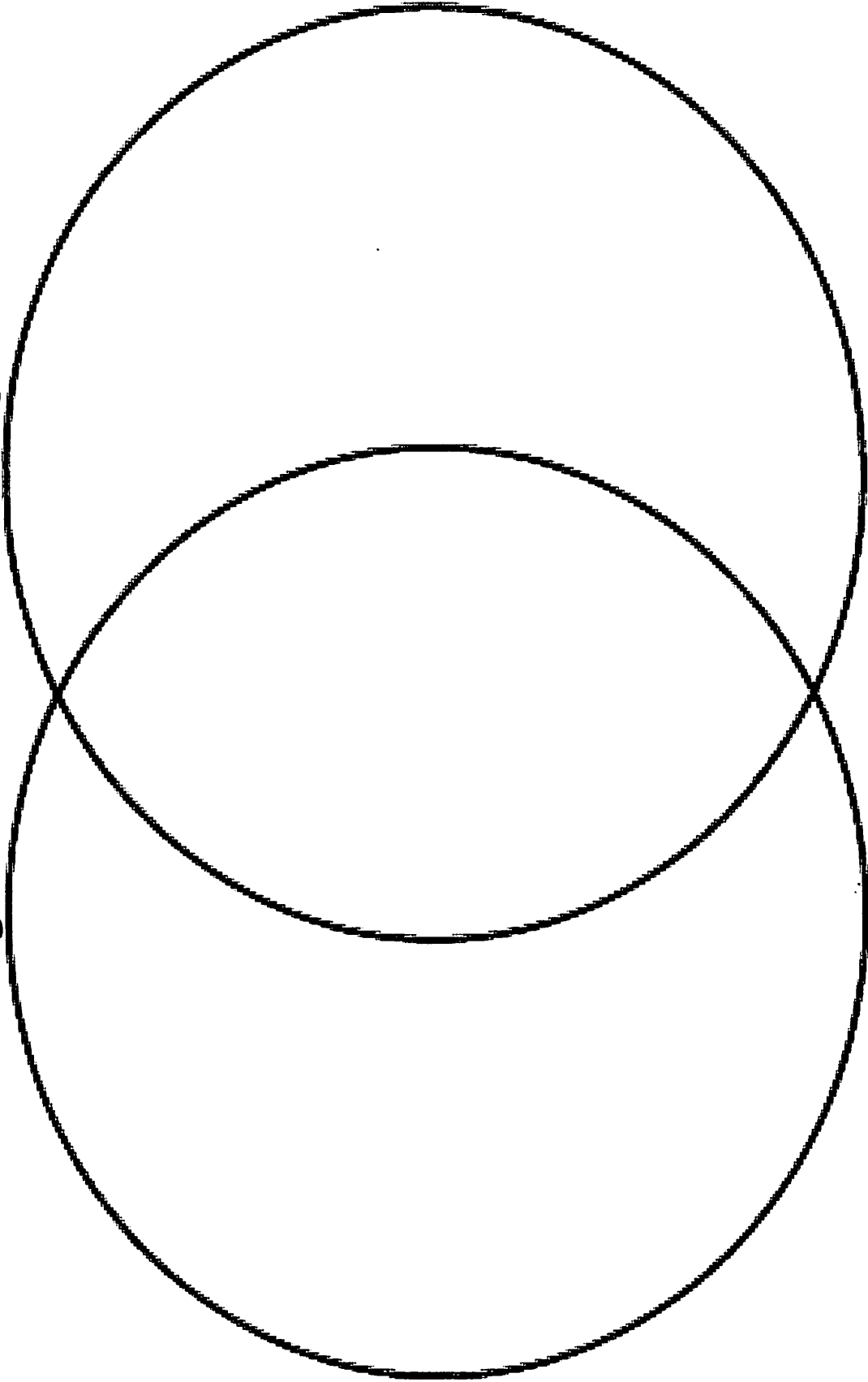
Observations: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Conclusions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



BLM April/Early Spring

# Garbage Collection Venn Diagram



## Garbage Adventure Rubric (narrative story)

	Level 1	Level 2	Level 3	Level 4
<p><b>Knowledge &amp; Understanding</b></p> <ul style="list-style-type: none"> <li>-includes beginning, middle, end in sequence</li> <li>-characters, setting, problem, solution</li> <li>-details relate to main idea</li> </ul>	-demonstrates limited knowledge & understanding	-demonstrates some knowledge & understanding	-demonstrates considerable knowledge & understanding	-demonstrates a high degree of knowledge & understanding
<p><b>Thinking</b></p> <ul style="list-style-type: none"> <li>-generates ideas that are connected and supports ideas with details</li> </ul>	-generates and supports ideas with limited effectiveness	-generates and supports ideas with some effectiveness	-generates and supports ideas with considerable effectiveness	-generates and supports ideas with a high degree of effectiveness
<p><b>Communication</b></p> <ul style="list-style-type: none"> <li>-expresses and organizes ideas</li> <li>-communicates to entertain</li> <li>-uses proper spelling, grammar and vocabulary</li> </ul>	-communicates and uses proper spelling, grammar and vocabulary with limited effectiveness	-communicates and uses proper spelling, grammar and vocabulary with some effectiveness	-communicates and uses proper spelling, grammar and vocabulary with considerable effectiveness	-communicates and uses proper spelling, grammar and vocabulary with a high degree of effectiveness
<p><b>Application</b></p> <ul style="list-style-type: none"> <li>-demonstrates an ability to make connections &amp; relate to personal experiences</li> </ul>	-makes connections and relates to experiences with limited effectiveness	-makes connections and relates to experiences with some effectiveness	-makes connections and relates to experiences with considerable effectiveness	-makes connections and relates to experiences with a high degree of effectiveness

# Procedural Writing

Title: \_\_\_\_\_

Materials Needed:

Procedure:

First, \_\_\_\_\_

Second, \_\_\_\_\_

Then, \_\_\_\_\_

Next, \_\_\_\_\_

Finally, \_\_\_\_\_

Conclusion: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

C&C Inspirations  
2010