



# YSISTE

## ASSESSMENT OF SCIENCE AND TECHNOLOGY ACHIEVEMENT PROJECT (ASAP)

Science and Technology Exemplars

### Grade 1: Earth and Space Systems – Daily and Seasonal Cycles

Exemplar Task (1ESPT01/Aug 2000)

## A Year In My Life



***Preface***

This task is one of a series developed by the Assessment of Science and Technology Achievement Project (ASAP) which is being used for the ASAP Science and Technology Exemplars Project.

This task is organised in three parts:

- A. Task Overview
- B. Student task sheet – designed to be photocopied for the students
- C. Teacher Information – providing essential information relating specifically to this task

For further information, contact the ASAP office at 416-736-5269 or email: [asap@edu.yorku.ca](mailto:asap@edu.yorku.ca)

## Task Overview

### Description of the Task:



***This is a culminating activity designed to assess a cluster of expectations for this grade and strand. Students should have been taught the concepts and skills required to perform this task prior to attempting it.***

***Students will complete a poster to show the different seasons in the year.***



### Materials and Equipment Required:

paper  
pencil crayons  
wall thermometer  
scissors  
black line masters

bristol board  
markers  
wide variety of magazines  
glue



### Suggested Timeline:

2 x 40 minutes



### Suggested Grouping:

Individual



### Safety Considerations:

Care with scissors

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## **Science and Technology Exemplars Project**

### **Grade 1: Earth and Space Systems – Daily and Seasonal Cycles**

Exemplar Task (1ESPT01/Aug 2000)



**A Year In My Life**

## **Student Task Sheets**

# A Year in My Life

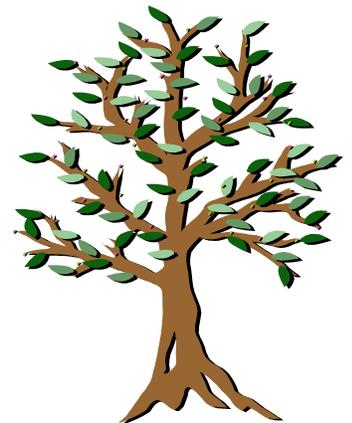
You are going to make a poster to show a season.

Choose a season from the year.



Make a poster that shows:

- the name of the season
- an outdoor activity for that season
- how long the days are in each season
- what clothes you could wear in the season
- why you choose these clothes
- draw an apple tree as it would look through the season
- draw thermometer to show the temperature in each season



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## **Science and Technology Exemplars Project**

### **Grade 1: Earth and Space Systems – Daily and Seasonal Cycles**

Exemplar Task (1ESPT01/Aug 2000)



**A Year In My Life**

## **Teacher Information Sheets**

This task addresses the following cluster of expectations. Expectations assessed by the rubric are highlighted in bold.



### ***Developing Skills of Inquiry, Design and Communication***

- ***use appropriate vocabulary in describing their explorations, investigations and observations (e.g., use words such as buds, flowers, seeds and leaves to identify seasonal changes in plants)***
- ***record relevant observations, findings and measurements using written language, drawings, concrete materials and charts***
- ***identify characteristics of clothing worn in different seasons and make appropriate decisions about clothing for different environmental conditions***



### ***Relating Science and Technology to the World Outside the School***

- ***identify outdoor human activities that are based on the seasons (e.g., swimming, gardening, skating) and examine some of the solutions humans have found to make it possible to engage in these activities out of season (e.g., community and sports centres make it possible to swim and skate in any season; green houses make it possible to garden in any season)***
- ***describe changes in the characteristics behaviour, and location of living things that occur in seasonal cycles (e.g., trees shed their leaves, birds migrate)***



**Prior Knowledge Required:**

Before attempting this task students should have been taught the following:

- the differences between the four seasons and their characteristics
- days, months and seasons
- how the outdoor temperature changes during the year
- how trees change during the year e.g., shedding leaves in autumn
- the different human activities that are based on the seasons



Students should be familiar with the following science and technology terminology:

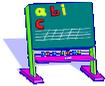
Spring, Summer, Winter, Autumn, temperature, seasons



**Prior Skills Required:**

Before attempting this task students should have experience of the following:

- independent work



**Suggested Introductory Activities:**

The following activities are suggested to introduce this task to the students:

- read the task aloud
- explain use of the materials provided
- brainstorm as a class the different features of each season on chart paper to recap



### Cross-strand Links:

Links can be made to *Grade 1 Life Systems*. The specific expectations that could be addressed with this task are:

- compare ways in which humans and other animals use their senses to meet their needs

Links can also be made to *Grade 1 Energy and Control*. The specific expectations that could be addressed are:

- recognize that the sun is the principal source of energy used on the surface of the earth

Every strand in the Science and Technology document has common set of expectations clustered under the title ***Developing Skills of Inquiry, Design and Communication***. This task is therefore appropriate to assess and evaluate these skills for every Grade 1 strand



### Cross-curricular Links:

Links can be made to *The Ontario Curriculum 1-8, Health and Physical Education: Grade 1*. The expectations that could be addressed are:

- describe simple life cycles of plants and animals, including animals
- recognize that rest, food, and exercise affect growth

Links can be made to *The Ontario Curriculum 1-8 Mathematics: Grade 1*. The expectations that could be addressed are:

- name the days of the week in order, and the seasons
- relate temperature to their daily activities

Links can be made to *The Ontario Curriculum 1-8 Art Creative Work: Grade 1*. The expectations that could be addressed are:

- identify a variety of art tools, materials, and techniques, and demonstrate understanding of their proper and safe use (e.g., brushes, sponges, fingers, sticks for painting; modeling clay for making sculptures; oil pastel, crayons, markers, pencil crayons for drawing)



### Reading and Writing Skills:

This task has been constructed to take into account the possible limited reading and writing skills of some students at this grade level. At the end of Grade One students are expected to be able to write a simple sentence (see MET Writing Exemplars 1999). Depending on the achievement level of the children in the class and the time in the school year that this task is administered, teachers will need to take into account the diverse abilities in their classes. The task could be presented orally and evaluated through teacher/student conferences. Teachers could use the questions on the student task sheet to guide their conferences.

Students could make oral presentations about their observations to the class. Their presentation could be based upon the questions outlined in the student task sheet. Grade 5/6 students could act as reading/writing buddies to read out questions and transcribe them.



**Considerations for Combined Grade Classes:**

Appropriate strategies are as follows:

- Teach one grade while the other grade completes the task which does not require active teacher guidance
- Create separate learning centers for student investigation specific to each grade topic and strand. The methods of science and technology (inquiry and communication) would provide the whole class focus
- Introduce self-directed student activities connected to specific expectations
- Reorganize students into grade groupings for the purposes of teaching a given topic
- Teach specific grade expectations when part of the class is working with another teacher
- Make thematic connections by clustering the overall expectations around a unifying organizer such as “Form and Function”.

## DRAFT RUBRIC FOR GRADE 1: A Year in My Life

Knowledge/Skills		Level 1	Level 2	Level 3	Level 4
<b>Understanding of Basic Concepts</b>					
<b>S K I L L S</b>	a) Inquiry Skills				
	or				
b) Design Skills					
<b>Communication of Required Knowledge</b> <ul style="list-style-type: none"> <li>clarity and precision of work</li> <li>use of appropriate science and technology terminology</li> </ul>		<b>The Student:</b> <ul style="list-style-type: none"> <li>presents a limited number of ideas and details with little clarity</li> <li>includes few appropriate terminology</li> </ul>	<b>The Student:</b> <ul style="list-style-type: none"> <li>presents some ideas and details with some clarity</li> <li>includes some appropriate terminology</li> </ul>	<b>The Student:</b> <ul style="list-style-type: none"> <li>presents most of the main ideas and details clearly</li> <li>includes mostly appropriate terminology</li> </ul>	<b>The Student:</b> <ul style="list-style-type: none"> <li>presents all of the main ideas clearly and precisely</li> <li>includes all appropriate terminology</li> </ul>
<b>Relating Science and Technology to each other and the World Outside the School</b> <ul style="list-style-type: none"> <li>identify outdoor human activities based on the season</li> <li>describe changes in living things in the seasons</li> <li>identifies characteristics of clothing worn in the different seasons</li> </ul>		<b>The Student:</b> <ul style="list-style-type: none"> <li>provides simple descriptions and explanations</li> </ul>	<b>The Student:</b> <ul style="list-style-type: none"> <li>provides partially detailed descriptions and explanations</li> </ul>	<b>The Student:</b> <ul style="list-style-type: none"> <li>provides detailed descriptions and explanations</li> </ul>	<b>The Student:</b> <ul style="list-style-type: none"> <li>provides complex descriptions and explanations</li> </ul>

