

Elsa High School



Assessment Task – Grade 7 Mathematics

Due: Thursday, 5 November 2009

Criteria Areas – Reflection in Mathematics; Investigating Patterns

Objectives – Reflection in Mathematics

- Consider the reasonableness of their results in the context of the problem and attempt to explain whether they make sense
- Consider the importance of their findings
- Consider the degree of accuracy of their results where appropriate and estimate errors in simple measurements
- Consider alternatives to the method when appropriate.

Objectives – Investigating Patterns

- Select and apply basic inquiry and mathematical problem-solving techniques to problems by asking searching questions
- Recognize simple patterns in different situations
- Describe simple patterns as relationships or general rules
- Arrive at a single result or set of results and make predictions consistent with findings
- Explain simple mathematical relationships and general rules using logical arguments.

Marking Rubrics

Grade	Criteria D – Reflection in Mathematics					
0	The student does not reach a standard described by any of the descriptors given below.					
1 – 2	The student can, with guidance from the teacher, link the results with the investigation aim. The student can identify obvious problems encountered in the investigation.					
3 – 4	The student can identify and describe some obvious links between the result and the aim of the investigation. The student can identify the links between the results and real life situations. The student can identify and describe some of the problems encountered during the investigation and state ways they were overcome.					
5 – 6	The student can clearly explain how the result gained is linked to the aim of the investigation and real life. The student can describe how estimates and other methods can be used to check the accuracy of the results of an investigation. The student can identify and describe problems that were encountered during the investigation and explain how they were overcome.					
1	2	3	4	5	6	

Grade	Criteria B – Investigating Patterns							
0	The student does not reach a standard described by any of the descriptors given below.							
1 – 2	The student is able to identify obvious patterns in data. With guidance, the student is able to make a simplistic prediction concerning the data.							
3 – 4	The student is able to identify and describe patterns in some forms of data. The student is able to make a simplistic prediction concerning the data. The student can interpolate information from data.							
5 – 6	The student identifies and describes patterns in data in a variety of formats. The student is able to interpolate and, with guidance, extrapolate information from data. The student is able to use simple mathematical rules and logical arguments to explain patterns evident in data.							
7 – 8	The student identifies and describes patterns in data in a variety of formats. The student is able to interpolate and extrapolate information from data. The student is able to use simple mathematical rules and logical arguments to explain patterns evident in data.							
1	2	3	4	5	6	7	8	

Task Description

Complete the Leap Years Investigation provided, including the Challenge, in report format.

Additional Exercise: After completing the Challenge, construct two separate annual calendars for Mars. One Calendar would be for use during a regular year, and one for use during a leap year. In constructing these calendars:

- Choose the number of months in a year
- Name each month
- Choose the number of days in each month (months can differ in their number of days, but the total must add to the total number of days in the year for Mars that you chose in the Challenge)
- Choose which month(s) will have the leap day or days.
- Include a note with your calendar giving the rule for when leap years will occur.
- You can use any table program to create your calendar.

You must:

- Include your name, the name of the investigation, and the due date as your heading.
- Answer questions in sentence form.
- Organize your work in numbered list format.
- **Include pictures, diagrams and/or tables** to support your responses as appropriate
- **Cite all sources of diagrams, pictures and tables** you use directly below the diagram, etc.
- Use an appropriate way to **cite all references (i.e. Information sources) at the end of our report**
- **Plagiarising** (or directly copying information) is unacceptable
- **Attach this sheet to your final submission**

A sample method for referencing is shown below. Copy the method and use it in your report.

Referencing Your Research

a) Websites

Website Title:

Website Author:

Website URL:

When the website was last updated:

When you visited the website to access the data:

b) Books

Book Title:

Book Author:

Book Publisher:

Publishing Date: