

TITLE:

Linking Social Studies History and Geography with Mathematics

DIVISION:

Primary

STRAND:

Heritage and Identity: Changing Family and Community Traditions

GRADE 2: SCHOOL HERITAGE SURVEY

These activities link Heritage and Identity: Changing Family and Community Traditions with data management expectations in math.

BIG IDEA

Understanding the diversity that exists among families and within the local community leads to an appreciation of diverse perspectives.

Guiding Question(s)

- •What is the heritage of the people in your class and your school?
- •Do you or your peers speak a different language than English at home?
- Is there a great deal of diversity in your school?

Framing Question(s)

•How does an understanding of unique individuals and groups help us appreciate the diversity in our community? *(The Ontario Curriculum, Social Studies,* 2013 pg 74)

Learning Goals

•identify different groups in our community, and describe how they add to the diversity of Canada

CONCEPTS OF DISCIPLINARY THINKING

Interrelationships:

This concept requires students to explore connections within and between natural and/or human systems, including how they adapt to and have an impact on one another. Students explore various components within a system, interactions between components of a system, and relationships between systems.



Continuity and Change:

This concept requires students to determine what has stayed the same and what has changed over a period of time. Continuity and change can be studied with reference to ways of life, political policies, economic practices, relationships with the environment, social values, and so on. Students make judgements about continuity and change by making comparisons between some point in the past and the present, or between two points in the past.

Social Studies Inquiry Process (Revised [2013] SSHG Curriculum page 23)

Inquiry Process:

The students will collect data on the heritage of their peers in different classrooms, graph the data they collect, determine trends in the data, and create a poster to celebrate the diversity that is found within their school community.

The Social Studies Inquiry Process Model can be viewed on page 23 of the 2013 Social Studies Curriculum that can be viewed through the link posted below.

http://www.edu.gov.on.ca/eng/curriculum/elementary/sshg18curr2013.pdf

The Spatial Skills: Using Maps, Globes, and Graphs (Ontario Curriculum pages 24-25)

Spatial Skill:

Students will collect data on the heritage of their peers in different classrooms in the school, develop a bar graph by hand or by computer, and then they will analyse their graphs to determine trends in the data. Electronic applications could be used if the students have the required skill sets and access to technology to complete the assignment.

http://nces.ed.gov/nceskids/graphing/classic/bar.asp

PRIMARY ACTIVITY

The students will complete the following in this activity:

- Collect data regarding the heritage of the students in their own classroom, build a bar graph as a class, and determine trends in the data. This will serve as a diagnostic activity
- Work in teams of two or three and in an assigned classroom in the school to collect data regarding the heritage of the students in that classroom
- Construct a bar graph by hand or by using computer applications to display the data collected <u>http://nces.ed.gov/nceskids/graphing/classic/bar.asphttp://nces.ed.gov/nce</u> skids/graphing/classic/bar.asp
- Analyze the bar graphs created and look for trends
- Compare the data collected from the class assigned to other classes in the school



- Use the data and trends found to create a poster that celebrates the diversity within their school
- Write three sentences to explain the design of their poster

DIFFERENTIATION SUGGESTIONS

Word prediction software could be provided to those students who need support with their writing when they answer the main questions of the activity. Students who have difficulty writing out their ideas could use word prediction software to type out their work or they could use an iPad application like Dragon Dictation, Dictamus, or the camera to record their oral explanations of their thinking. This activity could also be conducted with older "grade level buddies" similar to reading buddies. The older students could help keep the younger students on task and monitor them as they move from one room to the other.

Edugains outlines many effective ways to differentiate lessons, links to these resources are provided below.

http://www.edugains.ca/newsite/index.html

Edugains – Differentiated Instruction - DI educators package – DI scrapbook: <u>http://www.edugains.ca/newsite/di2/edupackages/2010educatorspackage.html</u>

TECHNOLOGY INTEGRATION OPPORTUNITIES

Bar graphs can be easily generated through Microsoft Excel, Mac Numbers, or a variety of iPad applications. Students could also use the link posted below to develop their bar graphs using an online bar graph generator. Students who have difficulty writing out their ideas could use word prediction software to type out their work or they could use an iPad application like Dragon Dictation, Dictamus, or the camera to record their oral explanations of their thinking.

http://nces.ed.gov/nceskids/graphing/classic/bar.asphttp://nces.ed.gov/nceskids/graphing/classic/bar.asp

ASSESSMENT



The students will collect data on the heritage of the students in their class. As a class, they will create a bar graph to represent the diversity of the different heritages within their class. The teacher could also work with the students on a Smartboard to develop an electronic bar graph using the link listed below. This activity will enable the teacher to determine the students' ability to collect data, build a bar graph and look for trends in the data as a diagnostic assessment before the students



collect their own data, build their own graphs and create their own posters celebrating the diversity of cultures within their school community.

http://nces.ed.gov/nceskids/graphing/classic/bar.asphttp://nces.ed.gov/nceskids/ graphing/classic/bar.asp



Anecdotal notes can be used to track students' progress throughout the activity. Teachers could also develop anchor charts with their students that outline how to construct the graphs, analyze trends in the graphs, their abilities to use the data they graphed and the expectations of the poster that they will create.

Descriptive feedback is another assessment strategy teachers could use to provide students with the constructive criticism they need to improve their work.

Students will review the information posted on the anchor charts to track their own progress in relation to the assignment and determine their own next steps. They will also be expected to act upon any descriptive feedback that they have been given by their teacher to improve their work, work habits, or to help facilitate their completion of the assignment.



The ability to conduct the survey, create the required bar graph, determine trends in the data, and create a poster to celebrate the different heritages within their school could be assessed using a rubric that could be teacher generated or teacher and student generated. A checklist would also be effective.

OVERALL EXPECTATIONS

Social Studies:

A3. Understanding Context: describe some of the major groups in their community, including different types of families, and some of the ways in which traditions and heritage are passed on by such groups (FOCUS ON: *Interrelationships; Significance*)

Mathematics:

Overall Expectation #1: collect and organize categorical or discrete primary data and display the data, using tally charts, concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers, with labels ordered appropriately along horizontal axes, as needed



Overall Expectation #2: read and describe primary data presented in tally charts, concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers

CITIZENSHIP EDUCATION FRAMEWORK

Identity:

• Consider and respect others' perspectives

Attributes:

- Explore issues related to personal and societal rights and responsibilities
- Demonstrate self-respect, as well as respect and empathy for others

RESOURCES

• Online generator to build a bar graph:

http://nces.ed.gov/nceskids/graphing/classic/bar.asphttp://nces.ed.gov/nceskids/ graphing/classic/bar.asp