



Forward Thinking By Designing Backwards

by

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Using elements from
Multiage Classes
to help a teacher
in a 4/5 split-class
become student-centered in a
curriculum-centered environment.

“Begin With the End In Mind”

Steven Covey

Background

A teacher of a 4/5 split class approached me to express frustration and concern over how to teach the social studies program.

This teacher had 3 years experience teaching grade 5 but was asked to take the split-class because it was ‘her turn’.

A new grade 4 social studies curriculum complicated things for this teacher making classroom management very difficult for her.

Some of the Frustrations

- Students had wide range of abilities but many were independent workers
- Students seemed to be a tactile - kinesthetic learners
- Many of the students were new to our school and did not seem to work well in groups
- Classroom management issues while teacher tried to teach each grade separately
- Teacher found it difficult juggling two curriculum topics
- Discipline problems were starting to surface
- Parents were starting to complain

Current teaching methods

- Notes on the overhead for grade 4 while teacher worked with grade 5 in their textbooks.
- Teacher would then repeat the process and reverse the grades.

The Multiage Approach to the Rescue!

After observing the teacher in the classroom, we met to discuss the issues and possible solutions.

The Multiage Approach to the Rescue!

We talked about not seeing the children as grade 4 students and grade 5 students but as learners. We looked at the kinds of learners in her class and what teaching methods would be the best fit for her class.

The Multiage Approach to the Rescue!

I showed her some of the video clips of Williston Central and we brainstormed what approaches we could use from the video to assist in her class.

Step 1 Brainstorm Solutions

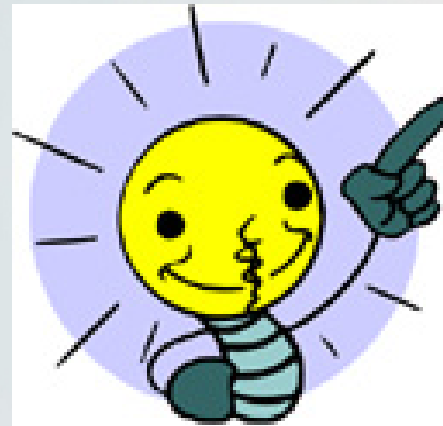
Problems

- Wide range of abilities
- Tactile-kinesthetic learners
- Group work
- Classroom management issues
- Discipline problems
- Teaching 2 curriculums

Solutions

- Peer groupings
- Provide more hands-on activities, less seat work
- Teach co-operative group work skills
- Practice routines and transitions
- Use the Inquiry Method

EUREKA!



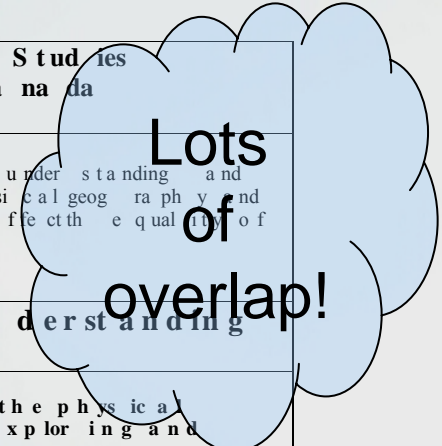
Step 2

Working Smarter, not Harder

- We looked at the social curriculum for both Grade 4 and 5 and compared the outcomes for each.
- The teacher noted the similarities in outcomes for both grades
- We discussed teaching the skills so students can apply them in the research project on their topic on regions.

A Comparison of Grade 4 and 5 Social Studies

Grade 4 Social Studies Regions of Alberta	Grade 5 Social Studies Regions of Canada
<p>General Outcome Students will demonstrate an understanding and appreciation of how elements of physical geography, climate, geology and paleontology are integral to the landscape and environment of Alberta.</p>	<p>General Outcome Students will demonstrate an understanding and appreciation of how the physical geography and natural resources of Canada affect the quality of life of all Canadians.</p>
<p>Knowledge and Understanding</p>	<p>Knowledge and Understanding</p>
<p><i>Students will:</i> 4.1.2 examine, critically, the physical geography of Alberta by exploring and reflecting upon the following questions and issues:</p>	<p><i>Students will:</i> 5.1.2 examine, critically, the physical geography of Canada by exploring and reflecting upon the following questions and issues:</p>
<ul style="list-style-type: none"> Where is Alberta located in relation to the other provinces and territories of Canada? (LPP) 	<ul style="list-style-type: none"> What are the differences and similarities among the geographical regions of Canada? (LPP)
<ul style="list-style-type: none"> What are the major geographical and natural vegetation regions, landforms and bodies of water in Alberta (e.g., prairie region, forests, rivers, hoods, Rocky Mountains, oilsands)? (LPP) 	<ul style="list-style-type: none"> What are the major geographical regions, landforms and bodies of water in Canada? (LPP) How do landforms, bodies of water and natural resources affect the quality of life in Canada? (LPP)
<ul style="list-style-type: none"> What are the factors that determine climate in the diverse regions of Alberta (e.g., latitude, mountains)? (LPP) 	<ul style="list-style-type: none"> How have natural disasters and severe weather been part of Canada's physical geography? (LPP, TCC)
<ul style="list-style-type: none"> What are the factors that determine climate in the diverse geographical regions of Canada (e.g., latitude, water, mountains)? (LPP) 	<ul style="list-style-type: none"> What are the factors that determine climate in the diverse geographical regions of Canada? (LPP)
<ul style="list-style-type: none"> What are the significant natural resources in Alberta, and where are they located (e.g., mineral deposits, coal, natural gas and oil, forests)? (ER, LPP) 	<ul style="list-style-type: none"> How is the geographical region they live in different from the other regions of Canada? (LPP)
<ul style="list-style-type: none"> How are Alberta's provincial parks and protected areas and the national parks in Alberta important to the sustainability of Alberta's natural environment? (ER, LPP) 	<ul style="list-style-type: none"> How are Canada's national parks and protected areas important to the sustainability of Canada's natural environment? (ER, LPP)



Grade 4

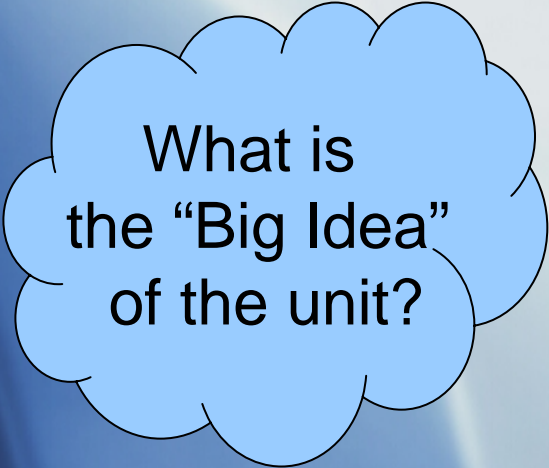
Grade 5

<ul style="list-style-type: none"> □ generate original ideas and strategies in individual and group activities and seek responses to inquiries from various authorities through electronic media 	<ul style="list-style-type: none"> • examine diverse perspectives regarding an issue presented in the media identify and distinguish points of view expressed in electronic sources on a particular topic
<ul style="list-style-type: none"> • use the scale on maps of Alberta to determine the distance between places 	<ul style="list-style-type: none"> • use the scale on maps and globes to determine the distance between places
<ul style="list-style-type: none"> • construct graphs, tables, charts and maps to interpret information 	<ul style="list-style-type: none"> • construct maps, diagrams and charts to display geographic information
<ul style="list-style-type: none"> • use cardinal and intermediate directions to locate places on maps and globes 	<ul style="list-style-type: none"> • use cardinal and intermediate directions and simple grids to locate places on maps and globes
<ul style="list-style-type: none"> • identify the location of sources of non-renewable resources (e.g., fossil fuels, minerals) 	<ul style="list-style-type: none"> • use latitude and longitude to determine the absolute location of places in Canada on maps and globes
<ul style="list-style-type: none"> □ use graphic organizers, such as mind mapping/webbing, flowcharting and outlining, to present connections among ideas and information in a problem-solving environment 	<ul style="list-style-type: none"> □ use graphic organizers, such as mind mapping/webbing, flowcharting and outlining, to present connections between ideas and information in a problem-solving environment generate alternative solutions to problems by using technology to facilitate the process
<p>4.S.5 demonstrate skills of cooperation, conflict resolution and consensus building:</p> <ul style="list-style-type: none"> • demonstrate an awareness of the skills required for compromise and consensus building 	<p>5.S.5 demonstrate skills of cooperation, conflict resolution and consensus building:</p> <ul style="list-style-type: none"> □ determine when a decision needs to be made in dealing with problems and issues
<ul style="list-style-type: none"> • work collaboratively with others to complete a group task, share information collected from electronic sources to add to a group task 	<ul style="list-style-type: none"> • collaborate with others to apply strategies for decision making and problem solving • select and use technology to assist in problem solving

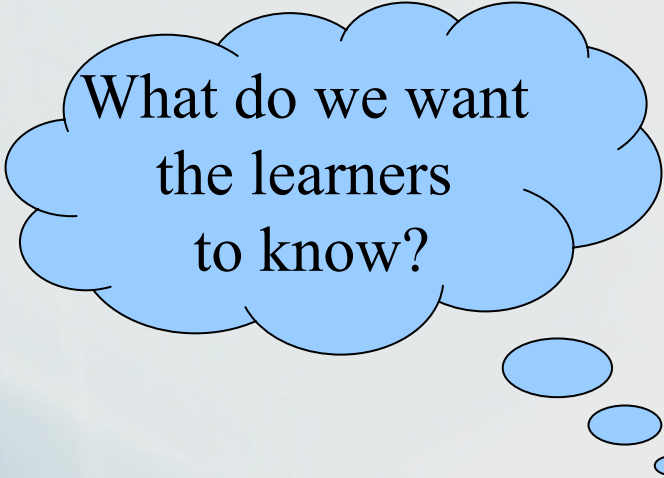
Step 3 Design Backwards

Stage 1 Desired Results

- Establish the Enduring Understandings of the unit
- What are the Essential Understandings?



What is the “Big Idea” of the unit?



What do we want the learners to know?

Stage 1 ~~Desired~~ Results

Ending Understandings(s):

Students will understand that

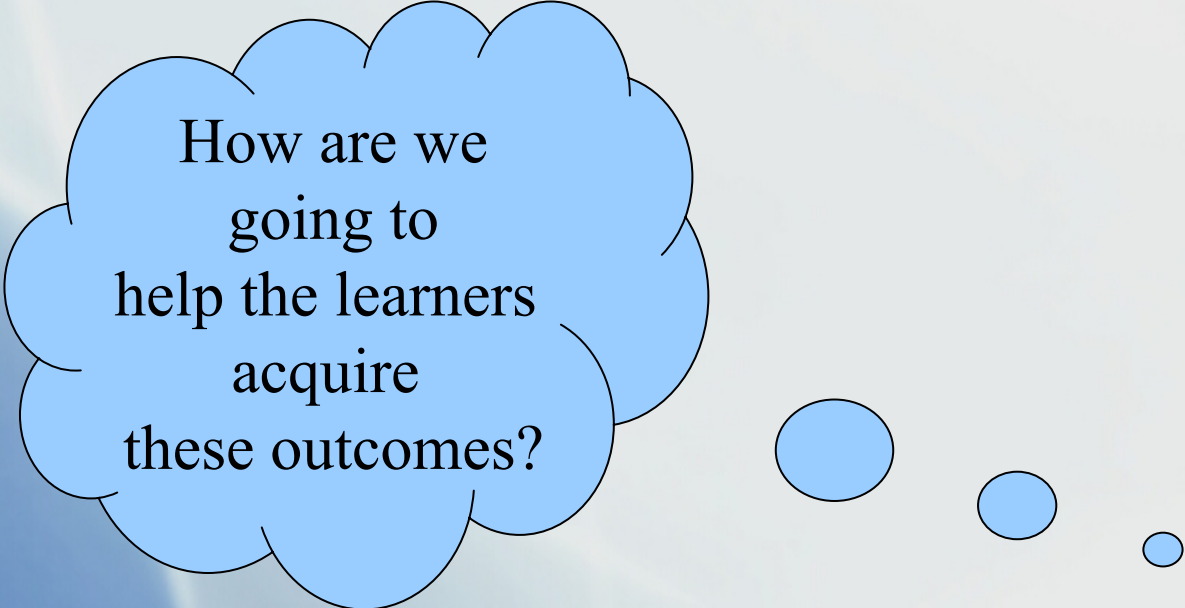
- Canada and Alberta are divided into distinct geographical regions.
- factors such as latitude and mountains can affect the climate in certain regions.
- Canada and Alberta make use of their natural resources.
- Provincial and National Parks are important to the sustainability of the natural environment.
- geography and natural resources determine the establishment of communities.

Essential Question(s):

- What are the different geographic regions of Alberta and Canada?
- What are the major landforms and bodies of water in the regions?
- What factors determine the climate and natural resources in the regions?
- How does geography and natural resources determine the establishment of communities?
- What factors affect the quality of life in the regions?

Step 4 Establish Criteria

- What are the GLOs (General Learner Outcomes)?
- What are the SLOs (Specific Learner Outcomes?)




How are we
going to
help the learners
acquire
these outcomes?

Specific Learner Outcomes

Students will be able to:

- work cooperatively with peers in research groups
- use scale on maps to determine distances
- construct and interpret a political, economic and a relief map
- use cardinal directions to locate places on a map
- use research skills to locate information about their regions
- prepare a museum exhibit
- prepare a 2-3 min presentation about their exhibit
- use graphic organizers such as Inspiration to organization outlines
- use data management charts to organize climate charts




What
will give us
the best
evidence
of learning?

Step 5

Design Assessment Tools

Step 5

We Designed Our Rubric

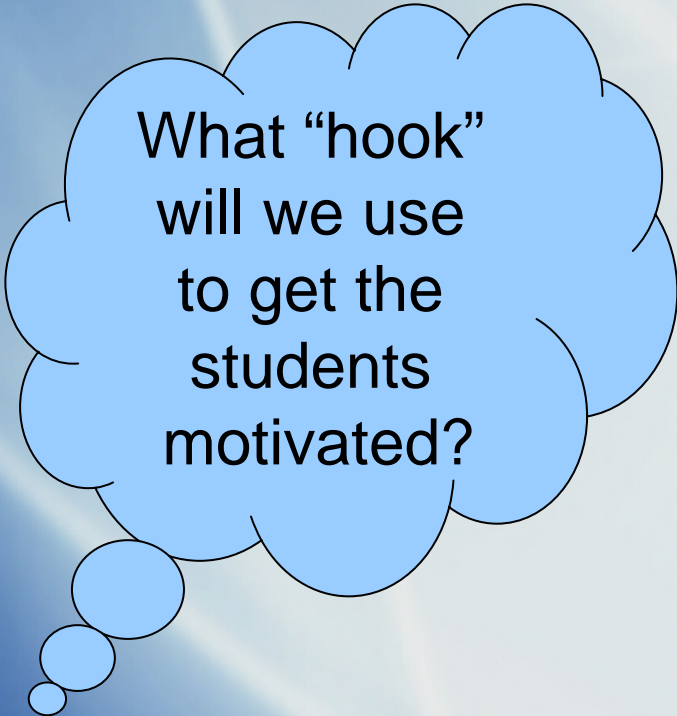


That Was
Easy!!

SOCIAL STUDIES RUBRIC

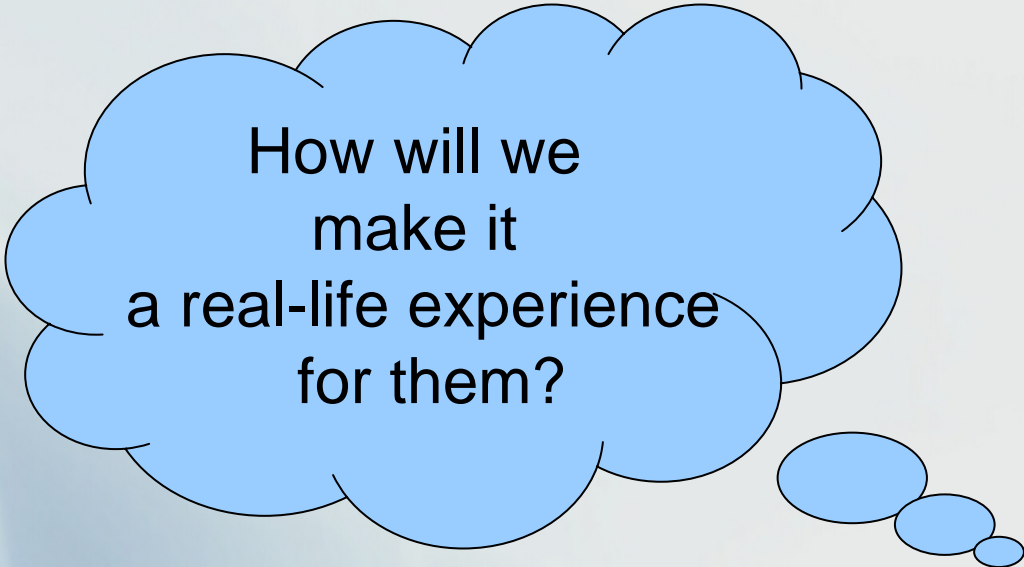
MUSEUM EXHIBIT

Level Criteria	4 Excellent	3 Proficient	2 Adequate	1 Limited *	Insufficient / Blank *
• Explain elements of physical geography in the region	Provides a comprehensive explanation of elements of physical geography in the region	Provides a thorough explanation of elements of physical geography in the region	Provides a basic explanation of elements of physical geography in the region	Provides a sketchy explanation of elements of physical geography in the region	No score is awarded because there is insufficient evidence of student performance based on the requirements of the assessment task.
• Explain how elements of physical geography affect the land	Provides a comprehensive description of how elements of physical geography affect the land	Provides a thorough description of how elements of physical geography affect the land	Provides a basic description of how elements of physical geography affect the land	Provides a sketchy description of how elements of physical geography affect the land	No score is awarded because there is insufficient evidence of student performance based on the requirements of the assessment task.
• Explain how elements of physical geography affect development of the regions	Provides a comprehensive description of how elements of physical geography affect development of the regions	Provides a thorough description of how elements of physical geography affect development of the regions	Provides a basic description of how elements of physical geography affect development of the regions	Provides a sketchy description of how elements of physical geography affect development of the regions	No score is awarded because there is insufficient evidence of student performance based on the requirements of the assessment task.
• Draws conclusions	Draws and supports insightful conclusions based on information collected.	Draws and supports logical conclusions based on information collected.	Draws and supports simple conclusions based on information collected.	Draws unsupported conclusions.	
• Communicate information	Communicates information in a compelling manner to engage the audience	Communicates information in a purposeful manner to interest the audience.	Communicates information in a straightforward manner that generally holds the attention of the audience.	Communicates information in a superficial manner that does little to sustain attention of the audience.	

A light blue thought bubble with a black outline, containing text. It has three smaller circles leading to it from the bottom left.

What “hook”
will we use
to get the
students
motivated?

Step 6 The Hook!

A light blue thought bubble with a black outline, containing text. It has three smaller circles leading to it from the bottom right.

How will we
make it
a real-life experience
for them?

MUSEUM EXHIBIT- Performance Assessment Task

Your class has been invited by a museum curator to prepare exhibits for the Discovery Center. As part of this task you have been invited to present your exhibit to a group of Paleontologists and Provincial Premiers. Your hosts have requested that you speak about the factors that affect the quality of life in each region.

Choose one of the regions of Albert (grade 4) or Canada (grade 5) to research information about :

- ‡Landforms
- ‡bodies of water
- ‡parks
- ‡major cities or communities
- ‡natural resources
- ‡climate

Research this topic using multiple sources and record your findings. Based on your findings you will prepare a visual exhibit with artifacts as well as an oral presentation with appropriate visual aids to present to Paleontologists and Provincial Premiers.

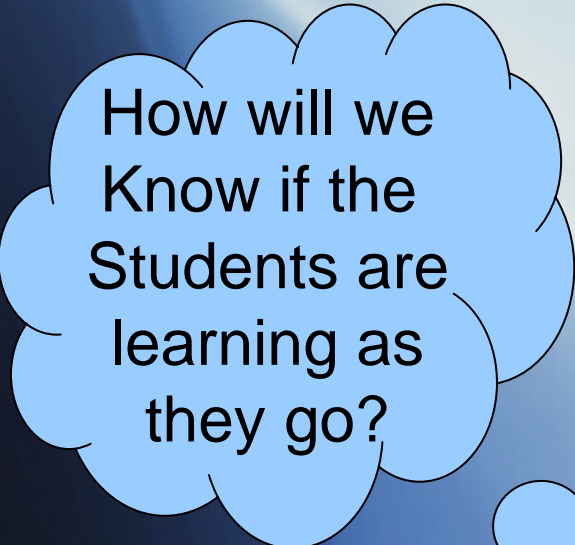
As part of your presentation, you will:

- ‡describe why people settled in that region.
- ‡draw conclusions about the impact of the physical geography on the climate, natural resources on the quality of life in that region.

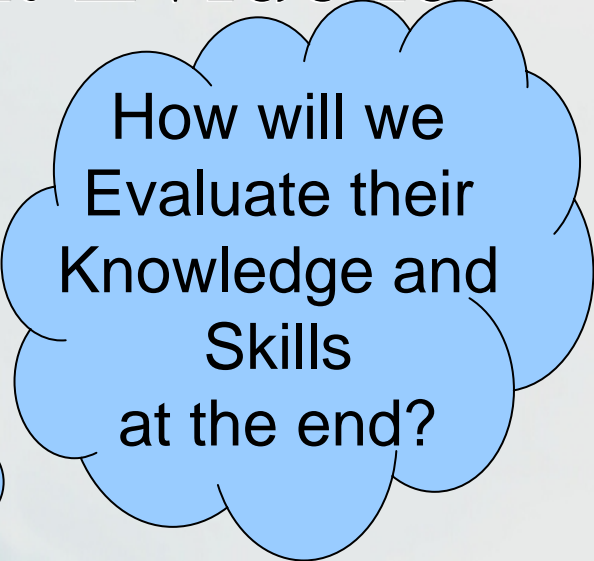
Remember that your hosts will be expecting a polished presentation.

Step 7

Formative and Summative Assessment Evidence

A large blue thought bubble with a black outline, containing the text "How will we Know if the Students are learning as they go?". It is connected to the main title by a series of smaller blue circles of decreasing size.

How will we
Know if the
Students are
learning as
they go?

A large blue thought bubble with a black outline, containing the text "How will we Evaluate their Knowledge and Skills at the end?". It is connected to the main title by a series of smaller blue circles of decreasing size.

How will we
Evaluate their
Knowledge and
Skills
at the end?

Stage 2 Assessment Evidence

Formative Performance

Quiz Maps

Homework Book Regions

Assignment: Notes on region

Assignment: Natural resources

Observation Cooperative Group Work

Assignment: Climate chart

Assignment: Essay

Museum Exhibit Evaluation

Artifacts and self evaluation

Summative

Assignment: Paragraph Region

Assignment: Climate chart

Test: Maps

Unit Test: Climate

Assignment: Paragraphs of natural resources

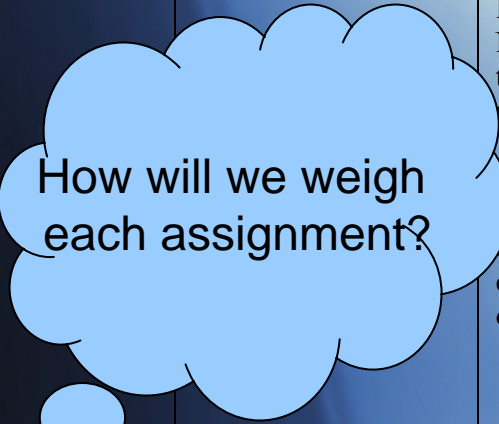
Quiz on climate in regions

Assignment: Quality of life in communities in

regions

Stage 3 Learning Activities

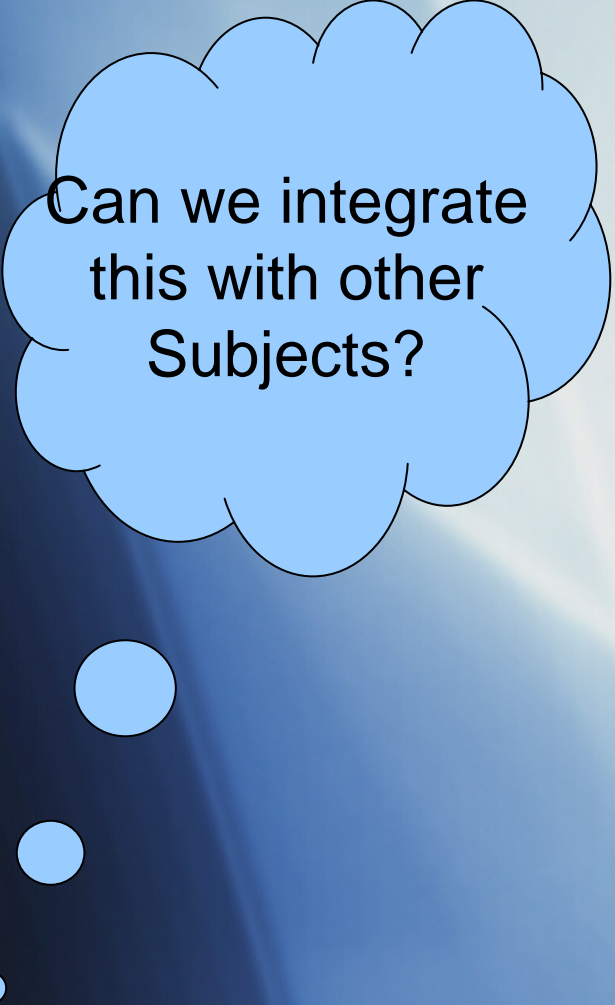
Social Studies Grade 4/5 Topic A Regions of Alberta And Canada Weight 30%	EU 1: Canada and Alberta are divided into distinct geographical regions. 20%	Formative 0%	Quiz: Maps
			Assignment: Notes on region
		Summative 100%	Assignment: Paragraph on Region 60%
			Unit Test: Maps 40%
	EU 2: Factors such as latitude and mountains can affect the climate in certain regions. 20%	Formative 0%	Quiz: Latitude
			Assignment: Climate chart
		Summative 100%	Assignment: Climate chart 60%
			Unit Test: Climate 40%
	EU 3: Canada and Alberta make use of their natural resources. 20%	Formative 0%	Quiz: natural resources
			Assignment: Notes on natural resources
		Summative 100%	Assignment: Paragraph on use of natural resources 60%
			Unit Test: natural resources 40%
EU 4: Provincial and National Parks are important to the sustainability of the natural environment. 20%	Formative 0%	Quiz: Parks	
		Assignment: Parks	
	Summative 100%	Assignment: Photos Essay 60%	
		Unit Test: Parks 40%	
EU 5: Geography and natural resources determine the establishment of communities and the quality of life. 20%	Formative 0%	Artifact: Peer and self evaluation	
		Museum Exhibit Self Evaluation	
	Summative 100%	Assignment: Paragraph on quality of life in communities 60%	
		Unit Test: communities in regions 40%	



How will we weigh each assignment?

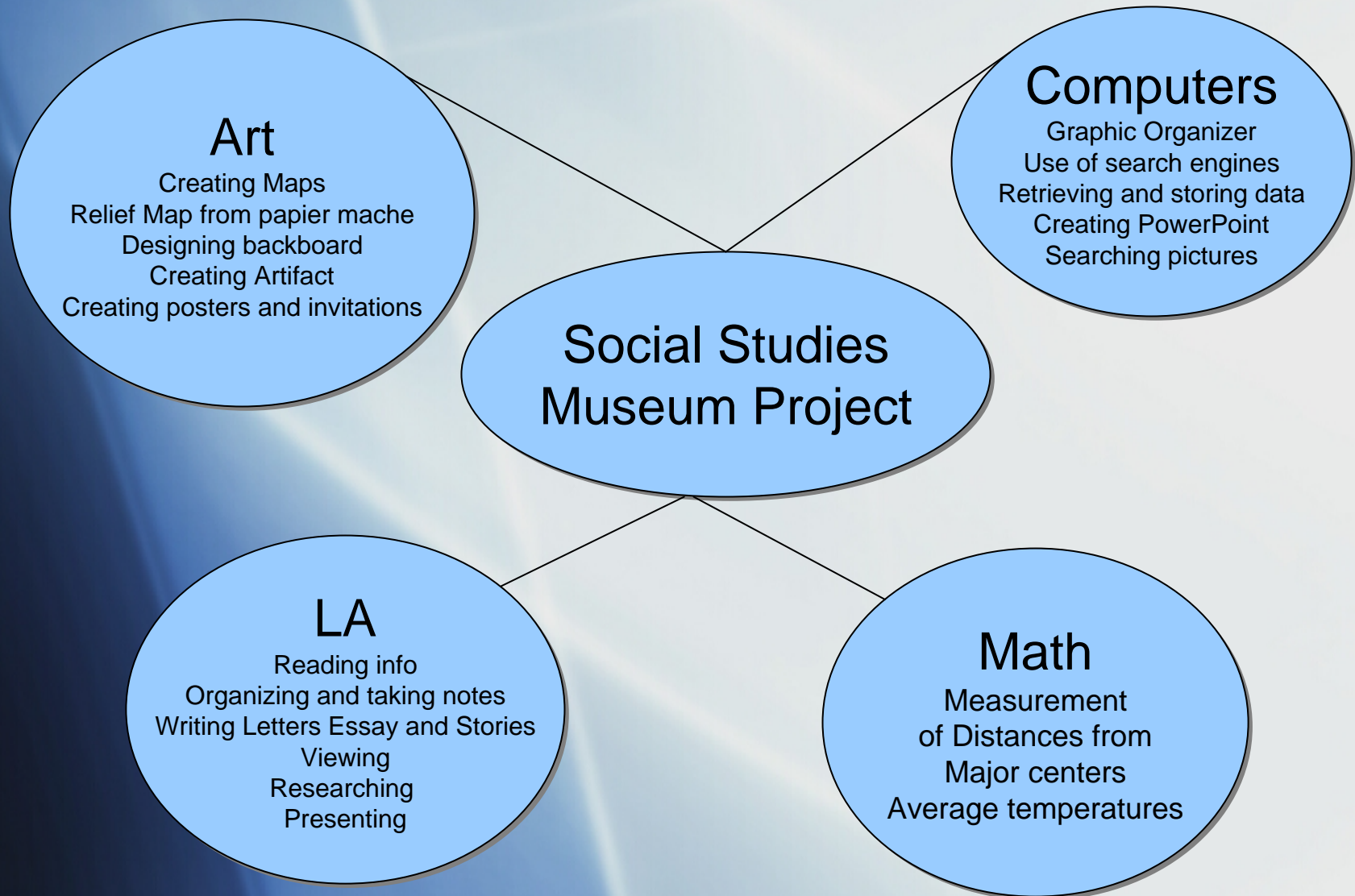
Step 8

Curriculum Connections



Can we integrate
this with other
Subjects?

Museum Project : Curriculum Connections





Step 9
Putting the Plan into Action

Day by Day Plan

- Introduce students to the overall project. (rubric)
- Create Map of Alberta and Map of Canada
 - (showing the location of regions)
- Regional Maps
 - (include cities, bodies of water, parks, landforms, communities)
 - color, label, laminate, trace as foundation for the relief map
- Geographic Relief Map
 - papier mache on cardboard forms
 - include landforms and bodies of water
 - paint the maps
 - complete rubric for map

Day by Day Plan....continued

- Research on Regions and Communities in that region
 1. Skim reading
 - a. Note taking
 - b. Citing references

- Computer Software Inspiration
 - create organizational research webs
- Research on regions (library, travel agency, internet)
 - Geographic features (landforms and bodies of water)
 - Geological features (minerals, rocks, mountains)
 - Climate (weather affected by elevation, latitude)
 - Resources (natural resources and vegetation)
 - Major Communities
 - Parks (Provincial or National)
 - Quality of Life

- Visual Essay - Search for photos of each aspect
 - Magazines
 - Internet (Google images)
 - Travel Brochures

Day by Day Plancontinued

- Create an artifact that is unique to that region to display in museum exhibit.
- Create invitations for classes, district office, trustees, media
- Write stories titled Night at the Museum (Artifacts come to life and tell **their** story)
- Presentations and Peer and Self-evaluations

Step 10

Evaluation and Reflection

What worked?

What didn't work?

How could we improve it for next time?

Multiage Benefits to Teacher

- Curriculum Outcomes were achieved in a differentiated manner
- Better understanding of how to make the curriculum fit the child
- Actively engaged students
- Improved student partnerships
- Improved discipline as routines were established and maintained
- Can see benefits of “multiage” class
- Happy students = Happy parents = Happy teacher

Multiage Benefits to Students

- Students working at their own level
- Students engaged in activities suited to their learning styles
- Older students assisting the younger ones
- Better cooperation in groups and in class
- Discipline Problems settled down

Limitations of NOT being a multiage program.

- I had to work on changing the teacher's attitudes at the onset
- We were forced into a specific curriculum framework and a specific time frame of bells
- Students were limited with choice of topics
- Students will not have the advantage of being with the same teacher next year to continue on their learning continuum
- Because the time together was limited, the bond and relationships between teacher and student were not yet evident

Influence of Multiage Pedagogy

- Learner-centered
- Effective learning environment
- Process approach
- Peer tutoring
- Cooperation and collaboration
- Caring and belonging
- Differentiation

According to M L

References

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