GEOGRAPHY

Seventh-day Adventist Secondary Curriculum

ACKNOWLEDGEMENTS

The South Pacific Division Curriculum Unit has enlisted the help of a number of teachers and lecturers in preparing this document. We would like to thank all who have contributed time, ideas, materials and support in many tangible and intangible ways. In particular, the following people have helped most directly in the writing and editing of this document:

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It is our wish that teachers will use this document to improve their teaching and so better attain the key objectives of Seventh-day Adventist education.

Sincerely

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May1997 Second Edition

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WHAT IS A FRAMEWORK?

Adventist Framework

In the Adventist secondary school context, a 'framework' is a statement of values and principles that guide curriculum development. These principles are derived from Adventist educational philosophy which states important ideas about what is real, true and good.

In attempting to present an Adventist perspective, it is clearly understood that some aspects of a course may be taught in similar fashion, no matter where it is taught — state or Christian school. Therefore the objectives and content of many topics taught in Adventist schools may initially seem little different from state syllabi, merely because the content appears relatively neutral in philosophical terms. However, in Adventist schools, there will in fact be differences in approach for most of these topics. These differences will stem largely from the underlying philosophy.

The framework is <u>not</u> designed to do the job of a textbook. Although it contains lists of objectives, skills, and teaching ideas, the main emphasis is on relating values and methods of thinking to teaching topics.

Objectives of the Framework

- One objective of the framework is to show how valuing, thinking and other learning skills can be taught from a Christian viewpoint. The Adventist philosophy of geography influences this process.
- A second is to provide some examples of how this can be done. The framework is therefore organised as a resource bank of ideas for subject planning relating to values and skills of thinking and learning geography, so it is intended to be a useful planning guide rather than an exhaustive list of "musts".

The framework has three target audiences:

- All geography teachers in Adventist secondary schools. These teachers are attempting
 to bring together values and learning and thinking skills as they implement an underlying
 Adventist philosophy in their teaching.
- Principals and administrators in the Adventist educational system. The document should be useful in establishing the direction for any curriculum planning, whether it involves creating courses from scratch, adding to state syllabi, or evaluating units and resources.
- Government authorities who want to see that there is an Adventist curriculum emphasis which provides some justification for the existence of a distinctive Adventist school system.

USING THE FRAMEWORK

LAYOUT

The framework is comprised of four sections — philosophy and objectives, the planning process, sample unit plans and appendices. The nature and purposes of each section are set out below.

It is suggested that you read this page now before attempting to use the document for the first time.

Section 1 - Philosophy

Section One is the philosophical section which shows the world view that undergirds the framework. This section contains a philosophy statement, a rationale, a set of key ideas which stem from the philosophy, and a set of objectives which have a Christian bias.

This section is meant to help teachers refresh their memories of the Christian perspective they should teach from. They may consult this section when looking at longer-term curriculum planning, and when thinking about unit objectives. They may also consider adapting it or using it as is to form part of their geography program of work.

Section 2 - The Planning Process

Section Two is the "how to" section of the framework. It explains how teachers can plan a topic or unit of work while thinking from a Christian perspective.

Section 3 - Unit Plans

Section Three shows practical examples of how to use the framework in unit planning. It is meant to show how Section 2 can be used to produce a variety of possible approaches to teaching valuing, thinking and other learning.

Section 4 - Appendices

Section Four contains additional information that may be helpful for planning units.



SECTION 1

Philosophy Section

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PHILOSOPHY

Geographers study elements of both biophysical and built environments. In Adventist schools, the study of the natural environment assumes the existence of a Creator-God who has created all existing matter. The starting point of geographical knowledge is thus the act of creation. Through studying this creation students are taught to appreciate not only its aesthetic beauty, but also the need to live in harmony with its Creator's laws. Students also examine dramatic changes in the environment with the assumption that many of these changes have been caused by the intense conflict between good and evil which is the result of people's separation from God and called Sin.

Because Christian geographers assume the existence of God, they reflect on their relationship to God as they study geography. It follows that their study of the environment should lead to a heightened awareness of their responsibilities in caring for their created environment. Humans have induced changes in that environment. Some of these have been negative changes which are ultimately from the effects of sin. The environment, therefore, has been partially destroyed because of the alienation of humans and nature after sin entered the earth. Geographical study in Adventist schools will emphasize the importance of the concepts of restoration and stewardship. 'Stewardship' or 'earthmanship' are terms conveying the idea that for the sake of both their own and future generations people should carefully preserve and wisely manage their environmental resources. Students should be taught to respect and maintain the quality of the natural environment, and to promote the physical and spiritual welfare of the humans in that environment.

The concept of stewardship contains the idea that education should strengthen students' desire to be of service to the community and to people in general. Students serve by accepting community responsibilities, by preserving and improving the environment, and by finding practical ways to help those in need. They develop their Christian commitment by pursuing responsible and unselfish patterns of action.

RATIONALE

Geography may be defined simply as the study of places and their people - where these places are, what they are like, and what human activities go on in them and between them (Natoli, 1984). Because geographers study a wide variety of physical and human resources in many diverse places, they must explain similarities and differences between these resources. Geography is therefore a subject which requires its students to draw relationships between many different kinds of data, and between many disciplines - particularly the sciences and the humanities. The need to solve problems by thinking about relationships between people and places is one important justification for the study of geography in schools.

Geography is also important in Christian education because it presents students with opportunities to study God's creation, and to understand the intricate and often fragile relationships that exist in our environment. The student who investigates nature with a Christian perspective can better determine his own place in a world which is largely without a knowledge of God.

Concepts of stewardship and community service are two key values which sensitive geographical study readily develops. There are numerous issues which arise out of geographical study and which further support the place of geography in the curriculum. For example, students may look at the geographical expression of religious values, conflicts of social values in the ecological conservation debate, and the ethics of economic affluence which depends partly on economic disadvantage in the third world. Study of the welfare of humanity in different settings invariably raises issues of social justice and personal lifestyle, issues which are the vehicle for students to clarify, analyse, acquire and judge important personal values. In geography, they also have opportunity to develop empathy for the disadvantaged and tolerance for, but not necessarily acceptance of values of other cultures. In social group work, students can learn values associated with cooperation and consideration of others' perspectives. Developing the valuing process through studying issues is therefore an important aspect of geographical learning. The intended outcome of such learning is that students will be motivated to act out their values in serving others, in seeking social justice, and in shaping their lifestyle.

In addition to its emphasis on values, geographical study is justified by its skill emphasis. Inquiry skills focus on an array of thinking processes, and on the problem solving cycle which is taught in other social sciences. So geography demands development of skills in seeing problems, hypothesising, collecting data, and analysing and recording results. Geography also presents a unique opportunity for the development of spatial awareness through the study of maps, photographs and other resources. This study has been termed 'graphicacy' which is as necessary to education as are literacy and numeracy (Pinchemel, 1982).

The study of geography is also worthwhile because it naturally fosters understanding of current events and the place of Australia New Zealand and the Pacific in the world. This general knowledge is an important component of general education. Because geography deals with current events and many kinds of phenomena in a global setting, it has the potential to help students recognise and respond to change which may be local, regional, national and international.

Thinking about different kinds of geographical phenomena encourages students to develop a coherent world view, and the development of a reasonable world view is an essential aspect of education. Geographical study is particularly helpful in

understanding the world because its content considers human needs, whether they be physical, social or spiritual, and geography students are led to reflect on the causes of such needs, and on the social and religious issues which accompany them. When students possess a coherent world view, they have greater capacity to cope with, and to contribute to that world.

Key Ideas Which Stem From the Philosophy

- 1. The study of the natural environment assumes the existence of a Creator-God.
- 2. There is controversy between good and evil seen in the natural and human environments as well as in their interaction.
- 3. Christians should appreciate the aesthetic beauty of natural environments.
- 4. There is an obligation to live in harmony with the Creator's laws.
- 5. Many changes in the environment are a direct result of human interference with natural processes.
- 6. People have often had to make a choice between economic development and destruction of the environment.
- 7. Geography develops a coherent Christian world view which gives a greater capacity to cope with and to contribute to that world.
- 8. Geography encourages reflection on the student's relationship to God.
- 9. Geography develops an awareness of responsibilities in caring for the created environment.
- 10. The quality of the natural environment will be respected and conserved.
- 11. Christians will promote the physical and spiritual welfare of others.
- 12. Stewardship includes the idea of service to others.
- 13. Economic affluence in the rich countries depends partly on economic disadvantage in the third world and help social injustice.
- 14. The welfare of humanity in different settings raises issues related to personal lifestyle.
- 15. Opportunities arise in geography to develop empathy and tolerance.
- 16. There is a demand for the development of decision-making skills based on sound Christian values.
- 17. The unfinished task of taking God to those who do not know Him is seen to be enormous but not impossible if each person contributes.



OBJECTIVES

Kwowledge

- To develop understanding both of the interactions within the biophysical environment, and of the interactions between people and their environments.
- To develop understanding of the spatial patterns of the location and distribution of physical features and human activities on the earth's surface.
- To assist the development of a coherent world view through the study of a variety of communities and environments.
- To increase understanding of the interdependence of nations.
- To make informed judgments about important social, economic, political and environmental issues which have a geographical dimension.
- To develop awareness of the contrasting opportunities and constraints felt by people living in different social, economic, political and physical conditions.
- To comprehend the nature of environmental change in order to know how to cope with the change which operates in the dynamic systems which make up the world.
- To become more familiar with the nature of the environment and cultural and political identity of Australia and New Zealand and their position in the Asia Pacific region.
- To understand the basic concepts and terminology used in geography.
- To understand that various processes in the biophysical and built environments can occur on a variety of scales local, national and global.

Valuing

- To recognise, understand and describe personal and other value positions.
- To develop concern for and empathy with other cultures, social groups, and environments.
- To grasp the concept of ecological stewardship as it relates to the idea of humans as caretakers of God's creation.
- To develop an awareness of how sin causes alienation in the world, and to accept responsibility to seek ways to restore alienated relation ships.
- To develop an appreciation for the aesthetic qualities of the environment.
- To develop an appreciation of the Adventist perspective on creationism and earth chronology.
- To increase awareness of the relationships between religious, political and social issues.

- To develop the ability to take responsible action on biophysical and built environmental issues at individual, class, school and community level.
- To develop the ability to evaluate the consequences of actions in relation to environmental issues or situations.
- To develop the ability to use an understanding of value positions in relation to a particular issue, and to apply problem solving skills to suggest possible outcomes.
- To demonstrate a commiment to social justice.

Skills

- To develop a range of skills which focus on the observation and accurate collection and recording of data in fieldwork and classroom settings.
- To develop a range of mapping and graphing skills.
- To develop the cycle of skills required to initiate and conduct geographical inquiry. This cycle includes questioning, stating problems, predicting, hypothesising, collecting and analysing data, generalising, and reporting conclusions.
- To develop basic skills of communicating information in oral, written and graphic form.
- To develop skills of profitably participating in group discussion and decision-making.



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THE PLANNING PROCESS

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PLANNING A UNIT

Below is a list of possiblesteps to include in the process of planning a unit.

- Consult your state syllabus.
- Consult texts written for the syllabus, if available, and choose a text useful for your needs and your student needs (eg appropriate reading level).
- Consult with administration regarding standard program requirements for school.
- Talk to another SDA geography teacher in the area.
- Establish a timeline sequence of units for the year (do not do too many). A pro-forma is enclosed on pages 34-35.
- Decide on a format for your unit plan. See both the sample unit plan on Aboriginal use
 of the environment in the next section of this framework (page 26), and the flow chart on
 page 27. The beginning of a unit plan on page 27 has five elements: content, time,
 outcomes, teaching strategies, and resources.
- Decide on your content.
- Decide on the number of periods per unit.
- Decide on objectives and outcomes of each unit. Consult your syllabus and this framework for knowledge, values and skills objectives and outcomes. You could use the planning grid on pages 22-23 to help you get a Christian emphasis at the "objectives level" of planning. Questions to ask include:
 - Are these outcomes consistent with an Adventist world view?
 - Can the value statements in the syllabus have a deeper significance etc?
- Decide on teaching strategies, resources, and assessment strategies.
- Insert a Christian values perspective in the "teaching strategies" column of your unit plan
 by referring to the following pages (18-21) of this section of this framework document.
 The table on pages 22-23 shows you an example of how you could match value
 prompts with teaching methods. A blank table for your further use is found on page 37 of
 this framework.
- When planning teaching activities, ensure that there is balance in the unit by consulting the lists of skills and competencies in the appendices to this framework.



A Christian Perspective Of Geography

In studying the world, the Christian teacher is reminded that God created it, and that it was, and still is, beautiful (Gen. 1: 28-30). God expects humanity to be good stewards of His beautiful environment, and to remember Him as creator. Because sin has entered the earth, there is much human misery when human needs are not met. It is the Christian's responsibility to help the needy and to be of service to the community (Matt. 25: 34-46). In pursuing their tasks, Christians are confronted with all kinds of injustice which must be addressed creatively (See Deut. 16: 18-20). Finally, the fragile ecosystem of the planet will be restored when God recreates it (Rev. 21: 1). As Adventist Christian teachers who possess a distinctive world view contemplate the world's history and current state, they are inevitably led to ask themselves some key questions about what they are attempting to achieve in their classrooms. The following question framework is a checklist that teachers may refer to as a guide for their selection of case studies, skills, concepts and values when planning courses.

Guidelines For Choosing Geography Course Content

The Geography Program should encourage students to recognise and evaluate their own social, cultural, moral and religious values and to be aware of the value positions of other people. To focus on values, the following check-list of key values to be taught in Geography sets out some suggestions for choosing content.

GUIDELINES FOR PLANNING A UNIT

Values	Possible Methods to Teach Values							
Social Responsibility								
Do you study a variety of contrasting human environments in order to make students aware of human needs?	 Include some of the following: Health problems of developing countries Contrasting urban areas Wealth versus poverty Rural versus urban environments 							
Does your program allow students to put their concerns into action?	Provide opportunities to help others Fly 'n' build Voluntary collecting and giving Gardening Recycling Tree Planting Clean up Australia Day 							
 Does your subject allow students to recognise valuing self as a requirement for valuing others? To identify, clarify, analyse and judge values? 	Make the classroom environment supportive and develop respect for others. Use valuing teaching tactics.							
 Des your course develop the concept that students can relieve suffering through their own actions? 	Raise possibilities such as: Hospital visits Home help Forty Hour Famine Fundraising for charities 							
Does the course allow students to develop positive moral decision making?	Study the exploration of third world countries or local examples which involve public decision making.							

GUIDELINES FOR PLANNING A UNIT CONTINUED

	Values	Possible Methods to Teach Values
	Ecological R	esponsibility
1.	Which environmental issues does your course allow study in?	Foster awareness of local issues Christians should be involved with, such as forestry, estuary usage, etc.
2.	Does your course develop skills which raise an awareness of the need to care for and maintain the environment?	Examine local problems. Study of regeneration patterns over time.
3.	Does your course allow students to assess environmental ecological problems, and find out why and where these have originated?	Study the effect of pollution on organisms.
4.	Does your course allow for materials which discriminate between propaganda and truth?	Use materials written from opposing viewpoints.
5.	Does your course allow students to demonstrate an active interest and involvement in conservation issues?	Write letters to local politicians. Be responsible for personal actions in natural areas. Encourage others to be aware of their actions in the environment. For example, do not litter, keep tracks to protect fragile areas. Care of school or home environments. Use of non-fluorocarbon products. Conservation of energy, water, etc.
	Emp	athy
1.	Does your course allow students to develop sympathy for peers and people throughout the world?	Use Asian Aid or examples of World Vision people.
2.	Do you show that by caring for others' physical needs you may then use the opportunity to care for spiritual needs?	Talk about ADRA. Missionaries – show slides, invite speakers. Refer to needs of Muslims in countries with limited access – eg. Nepal
3.	Do you allow the exposure to the idea of equitable distribution of resources?	Choose topics which show the vicious cycle of poverty – India, Peru. Explain the function of offerings.

GUIDELINES FOR PLANNING A UNIT CONTINUED

	Values	Possible Methods to Teach Values
	Awareness o	of alienation
1.	Does your course allow students to develop insights into the real cause of current affairs?	Discuss effects of sin. Use newspaper clippings of current events related to topics studied to show relevance to life situations.
2.	Does your course allow students to demonstrate abilities in identifying and presenting plausible solutions to problems in the world?	Discuss issues such as: a) Squatter settlements b) Exploitation c) Land use conflict d) Refugees
3.	Do you make your students aware of the breakdown of God's original plan, which has led to the suffering and despair associated with both natural and man made disasters?	Refer to disasters such as floods and droughts which could have been induced by man, as well as natural disasters such as volcanoes, earthquakes and floods.
	Appreciation	and sensitivity
1.	Do you allow students to publicly and spontaneously acknowledge God as creator?	During study of the natural environment, class worships and field trips.
2.	Do you encourage students to draw spiritual lessons from their environment?	Observe patterns and processes.
3.	Do you encourage sensitivity to the environment as a method of facilitating relationships with God?	Organise field trips and the observation of natural landscapes. Beauty is often visible even through harsh environments like snow clad mountains.
4.	Do you encourage the development of students' aesthetic abilities?	Encourage the attractive presentation of diagrams and work. Mention local examples of perceived beauty or ugliness.
5.	Do you share personal experience which amplify your person values?	Live out and talk the values your pursue.



GUIDELINES FOR PLANNING A UNIT CONTINUED

	Values	Possible Methods to Teach Values								
	Worship and witness									
1.	Do you study a variety of natural communities and environments in order to develop an enhanced sense of adoration and worship of God?	Show the power of the creator God through the study of natural patterns and processes. Note the wealth God has provided in ecosystems such as wetlands, rain forests and mountain ranges.								
2.	Do you develop a Christian sense of mission?	Include local and overseas examples such as: a) Water supply in third world countries b) Aid organisations eg ADRA c) Career opportunities after leaving school d) A definition of the concept of 'neighbour'								
3.	Do you assist students to develop skills that help others find God?	Include skills of: a) Planning b) Improvement of land c) Reflection on nature and its meaning d) Research								
4.	Does your course give students the opportunity to analyse a variety of religious and other cultures as preparation for effective Christian witness?	 Refer to community examples of: a) Third world belief systems b) Australian attitudes and culture c) Special needs such as the need to better understand minority groups eg Aboriginals 								
5.	Does your course allow students to compare their beliefs with those of other cultures (eg African, Asian)?	Buddhist versus Christians. Australia? NZ. Versus Pacific Islands.								
6.	Do you provide opportunities for mission or other service?	Sponsoring Asian Aid student.								

SAMPLE UNIT SUMMARY - POPULATION

Below is an example of how you may use the guidelines set out on the previous four pages of this framework to make a summary of links between values and teaching methods in a teaching unit. A blank summary sheet which could be used in making your own summaries is found in the appendices on page 38-39.

Values	Possible Methods to Teach Values
Social Res	ponsibility
Variety of contrasting human environments taught?	Urban versus rural, ghettos and slums
Can students put concerns into action?	Letters to politicians
Is the class environment supportive of individuals?	Multicultural support in the class for different cultures
Is valuing self a requirement for valuing others?	Respect courtesy when working in groups (group norms)
Can students see that they can relieve suffering?	ADRA appeal, Asian Aid, class projects – Forty Hour famine
Can students develop positive moral decision-making?	Read about racism – develop set of class behaviours
Ecological R	esponsibility
What local issues are included?	Urban sprawl, pollution, traffic congestion
Is awareness for environmental care raised?	Watch local news, read paper articles
Assessment of environmental problems?	Visit local creek, survey pollution over a period of time
Use of a variety of materials which help students discriminate?	Use papers, videos, journals, texts
Active interest in conservation issues available?	Guest from local conservation group
Emp	athy
Is sympathy and awareness of others encouraged?	Discuss homeless problems, street kids
Is there correlation between physical and spiritual needs?	Role of Salvation Army
Is equitable distribution of resources discussed?	Rich versus poor (comparison of suburbs – field trip)



SAMPLE UNIT SUMMARY - POPULATION, CONTINUED

Values	Possible Methods to Teach Values
Awaranass	of alienation
Are the real causes of world problems discussed?	
Are plausible solutions to problems sought?	Debate solutions to urban poverty
Is the breakdown of God's plan discussed?	
Appreciation Are students encouraged to acknowledge God?	and Sensitivity
Are attempts made to draw spiritual lessons?	
Is the correlation between nature and God established?	Comparison of Urban and natural landscapes (field trip)
Are aesthetic abilities encouraged?	Poster on urban problems
Are personal experiences valued in the classroom?	Food and costume displays of class cultural groups
Worship a	nd Witness
Do you develop a Christian sense of mission?	Talk by returned missionary – slides
Are 'saving' skills developed?	
Are other religions analysed as comparisons?	Christian versus pagan religions – missionary
Can students compare their beliefs with others?	

mission

ADRA appeal, soup run for homeless, city

Are community service opportunities provided?

SECTION 3

UNIT PLANS

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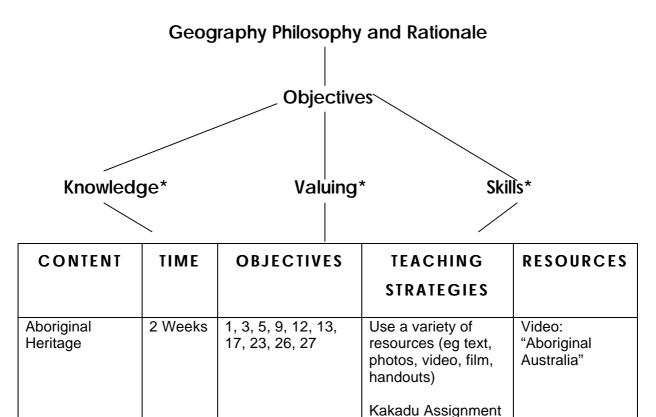
UNIT: ABORIGINAL USE OF THE ENVIRONMENT

Content	Time	Outcomes	Teaching Strategies	Resources
		Students should be	e able to:	
Aboriginal heritage	1	 Appreciate Australia's Aboriginal heritage Recognise were Australia's first inhabitants 	Use a variety of sources (eg text, photos, video, film, handouts, etc)	Video "Aboriginal Australians" "Australia Today" series
2. Location	1	Identify changes in location and number	Use of map and statistical information (reading, interpreting, analysing)	
3. Aboriginal use of the environment	2	Understand Aboriginal use of the Australian environment	Use of variety of sources, eg guest speaker	
4. Contrast with Australian attitudes towards use of environment	1	Distinguish between Aboriginal and Christian approaches to environmental management	 Class discussion, brainstorming, group discussion Contrast exploitive Christian views with sustainable use (as found in Genesis 1 and 2) 	
5. Case study regarding Kakadu	2	 Identify a variety of perspectives that people use in environmental management (eg, ranger, tourist, miner, politician, local resident) State a personal value position 	 Use case study material on Kakadu (kit, video) Class debate, role play, group work 	 Issue magazine 4 Corners "Kakadu" video NPWS Plan Management Booklet Classroom project: Video "Kakadu"

Assessment: Choose from a variety to suit requirements

- Draw a map or graph
- Video response report
- Library research
- Report group, individual on management
- State and justify value positions

DEVELOPMENT OF GEOGRAPHY PROGRAMS & UNITS USING THIS FRAMEWORK



For examples of the objectives, see page 10

SECTION 4

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GEOGRAPHICAL SKILLS

Geography teaching involves the systematic development of a range of different kinds of thinking, valuing, observational, inquiry, decision-making, research, communication, data processing, graphing, fieldwork and social skills. Particularly important are the processes of inquiry and decision-making. However if inquiry is taught without reference to Christian values, or if knowledge is always presented as being tentative or confirmed only by the senses, then there is cause for concern. Adventist geographers seek to include not only scientific method, but also matters of moral sensitivity, feeling and faith. The issue here is one of emphasis.

Below is a basic list of types of skills considered essential for geographers. Types of skills include:

Basic Literacy Skills

- Comprehend
- Compose and write
- Use grammar
- Spell

Practical

- Mapping
- Interpretation
- Construction
- Field skills
- Observation
- Data gathering
- Recording
- Interpretation
- Evaluation
- Measurement and calculation
- Graphing
- Graphics
- Sketches
- Photograph interpretation
- Diagrams
- Model interpretation
- Cartoon analysis
- Making and interpreting 3D models

Research

- Initiate
- Locate information
- Read information
- Process information
- Present information



Thinking

Acquire and Integrate Knowledge

- Understand content ideas, facts
 - -Construct meaning
 - -Organise knowledge

patterns

graphic organisers

- -Store knowledge rehearse, elaborate, link
- Understand procedural knowledge processes, skills
 - -Construct models sets of steps, strategies, rules, sets of related ideas
 - -Shape knowledge illustrate or give examples
 - -Internalise perform a skill or process with ease

Extend and Refine Knowledge

- Compare
- Classify
- Induce draw conclusions based on evidence or particular situations
- Deduce infer, derive a conclusion from something already known
- Analyse errors
- Construct support use different kinds of evidence and reason to justify a position
- •Abstract look at a situation and identify its basic elements in another situation
- •Analyse perspectives identify a stance on an issue, and the reasoning behind the stance

Use Knowledge Meaningfully

- Make decisions
- Investigate
- Inquire experimentally explain a situation and make further predictions
- Solve problems
- Invent

Productive Habits of Mind

- Think and learn in a self-regulating way
- Think critically
- · Think creatively
- · Set personal goals

Valuing

- · Identify values
- Clarify values
- Rank values
- Evaluate sources of authority
- Make value judgments
- Make choices
- · Act out values

TEACHING THE KEY COMPETENCIES

Working With Others and in Teams

This competency focuses on working with others. It includes the capacity to:

- interact effectively with other people on a one to one basis (eg listen carefully, show trust, keep agreements, communicate)
- interact effectively with other people in groups (eg collaborate and cooperate, and recognise the value and contributions of others)
- understand and respond to the needs of a client (eg use questioning, listening and negotiation skills and make responses which meet mutual expectations)
- work effectively as a team member to achieve a shared goal (eg negotiate, be responsible, work towards agreed goals, give constructive feedback to the group)

Using Mathematical Ideas

This competency focuses on using mathematical ideas and techniques for practical purposes. It includes the capacity to:

- clarify the purposes and objectives of the activity or task (ie so that we can then identify the most appropriate mathematical ideas and techniques to use)
- select appropriate mathematical ideas and techniques for our purposes
- apply mathematical procedures and techniques with precision and accuracy
- judge levels of precision and accuracy appropriate to the situation
- interpret and explain a solution for given context, and evaluate the effectiveness and efficiency of the methods used

Solving Problems

This competency focuses on **problem solving strategies**. It includes the capacity to do the following:

- apply problem solving strategies where the solution is clearly evident
- analyse problems by identifying their similarities with previous learning
- display confidence in problem solving
- apply critical thinking and a creative approach to solving problems by doing the following:
- clarify the problem by identifying all of its relevant aspects
- apply chosen strategies and adapt them where necessary to achieve the desired outcomes
- explore possible solutions
- evaluate the effectiveness of the strategies chosen to solve the problem

Using Technology

This competency focuses on using technology by combining physical and sensory skills (needed to operate equipment) with the understanding of scientific and technological principles (needed to explore and adapt systems).



It includes the capacity to do the following:

- clarify and define the purposes and objectives for the use of technology in a situation
- assess the function and suitability of materials, equipment and processes for a given task
- select and use systems, techniques, equipment and materials to achieve desired outcomes
- use equipment, materials and processes safely, with regard for safety, the rights of others, and social and environmental implications
- select or adapt equipment, materials and procedures to optimise the use of existing resources and account for the capacity of the people involved
- design, create, or hypothesise about possible technological solutions

APPENDIX FOUR: VALUES SUMMARY CHART

Value prompts

possible methods to teach values

Social Responsibility

Variety of contrasting human environments taught?

Can students put concerns into action?

Is the class environment supportive of individuals?

Is valuing self a requirement for valuing others?

Can students see that they can relieve suffering?

Can students develop positive moral decision making?

Ecological Responsibility

What local issues are included?

Is awareness for environmental care raised?

Assessment of environmental problems?

Use of a variety of materials which help students discriminate?

Active interest in conservation issues available?

Empathy

Is sympathy and awareness of others encouraged?

Is there correlation between physical and spiritual needs?

Is equitable distribution or resources discussed?

Awareness of Alienation

Are the real causes of world problems discussed?

Are plausible solutions to problems sought?

Is the breakdown of God's plan discussed?

Appreciation and sensitivity

Are students encouraged to acknowledge God?

Are attempts made to draw spiritual lessons?

Is the correlation between nature and God established?

Are aesthetic abilities encouraged?

Are personal experiences valued in the classroom?

Worship and witness

Do you develop a Christian sense of mission?

Are 'saving' skills developed?

Are other religions analysed as comparisons?

Can students compare their beliefs with others?

Are community service opportunities provided?

