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**Inquiry Approaches in Primary  
Studies of Society and Environment**

**Key Learning Area**

### Occasional paper prepared for the

##### Queensland School Curriculum Council

by

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**1. The Value of Using Inquiry Approaches**

Inquiry learning is fundamental to the key learning area of Studies of Society and Environment (SOSE). It emphasises process as well as product, moving away from the acquisition of facts to the development of understandings about concepts and generalisations. Inquiry learning develops students’ investigative and thinking skills and contributes to their ability to participate effectively in society. It can also contribute to enhancing self-esteem by encouraging students to take responsibility for their own learning.

The *Years 1 to 10 Studies of Society and Environment Syllabus* states that “learning is most effective when students use investigative, participatory strategies”. When these strategies are organised into a structured sequence, the result is even more worthwhile. Starting with the prior knowledge and experience of students, these inquiries follow a general sequence of phases which include:

1. framing and focusing questions;
2. locating, organising and analysing evidence;
3. evaluating, synthesising and reporting conclusions;
4. possibly taking action of some sort;
5. reconsidering consequences and outcomes of each of the above phases.

This sequence outlines a broad inquiry process, which is reflected in the inquiry models on the following pages. The *Years 1 to 10 Studies of Society and Environment Syllabus* also states that “…students learn through reflective inquiry which allows [them] to revisit familiar contexts to develop more sophisticated understandings”. This important stage of any inquiry process is also present in each of the models presented.

The *Years 1 to 10 Studies of Society and Environment Syllabus* also promotes student centred approaches to learning “…by using problem-solving and decision-making techniques of various traditions of inquiry” (Queensland School Curriculum Council 1998a). In addition, cooperative learning is proposed to “maximise student’s learning from each other, and as a means for practising effective participation in society” (Queensland School Curriculum Council 1998a). While students can undertake an investigation on their own, they may learn most effectively when they have the opportunity to share their ideas with others.

The roles of the student and teacher in an inquiry are also addressed in the *Years 1 to 10 Studies of Society and Environment Syllabus,* with learning viewed “…as active construction of meaning and teaching as the act of guiding and facilitating learning” (Queensland School Curriculum Council 1998a). This approach doesn’t exclude direct teaching which is particularly important for the development of skills both within and outside an inquiry. It does, however, challenge teachers to learn alongside students, handing as much control as possible over to them. Making the inquiry models used in the classroom explicit to students assists them to exercise control over their investigations and make choices about their directions.

In the same way, when syllabus values, processes and core learning outcomes are made explicit to students, it assists them to take control of their learning and make meaning of their work at school. Students can examine the key values relevant to their inquiry and/or use them to evaluate criteria during investigations. Students, once aware

of the outcomes they are required to demonstrate, can be invited by the teacher to propose ways in which they can meet those outcomes through their investigations.

Encouraging students to take more responsibility for their learning is problematic for some teachers and students. Some teachers resist handing over control and some students resist accepting it. Clearly, students require a great deal of explanation, skill development and modelling at first. This scaffolding can be reduced as students develop expertise. But as Brophy and Alleman (1998) suggest,

Students cannot learn self-regulation if the teacher continuously cues and directs their learning activities. If developing self-regulation is taken seriously as a goal, students must be taught the cognitive and metacognitive skills needed to function as autonomous learners.

**1.2 From themes to inquiry**

Many primary social studies programs in the recent past have been characterised by the creation and delivery of thematic units of work. While these units reflected the integrated nature of learning and teaching in primary classrooms, they may have failed to develop important concepts, understandings and processes central to SOSE. The move away from using thematic approaches in social studies in favour of inquiry models values purposeful integration and promotes sequential, investigative learning and teaching.

Hamston and Murdock (1996), in their practical book *Integrating Socially,* explore some fundamental differences between thematic and inquiry approaches in SOSE. They point out that thematic units were often based on language themes such as the sea, pirates and dinosaurs and didn’t develop significant understandings about society. They continue their comparison by saying that the activities in thematic units were often only loosely linked to the topic and carried out in a random order without a particular sequence. On the other hand, the teaching and learning experiences in inquiry-based units are purposefully designed to develop understandings about the topic and follow a sequence that builds understandings in stages. Finally, themes often included every area of the curriculum resulting in some forced rather than genuine links. An inquiry-based unit in SOSE is designed to address specific core learning outcomes, which contain the content, perspectives and values central to SOSE. Other key learning area outcomes may be integrated into the unit if they can contribute purposefully to identified student outcomes, and remain true to the spirit of the key learning area from which they are sources.

2. Inquiry Models

Consistent with the syllabus intent that “…inquiries are not confined by a singular model”, this paper outlines three popular inquiry models, namely:

1. Integrating Socially;
2. TELSTAR; and,
3. Action Research.

Each of these models follows the broad phases of inquiry and processes suggested in the *Years 1 to 10 Studies of Society and Environment Syllabus*.

Whilst the English planning model with its orienting, enhancing and synthesising stages is very popular with primary school teachers, it is not an inquiry model. However, an inquiry model can be superimposed onto this planning model.

The following table demonstrates the congruence of these inquiry models with each other and with the *Years 1 to 10 Studies of Society and Environment Syllabus* sequence of phases. In addition, the English planning model (Queensland Department of Education 1994) has been placed alongside the table to demonstrate where an inquiry model might fit within it. The table represents only an approximation of these connections, as there is some overlap of stages, steps and phases. In addition this linear representation doesn’t accurately reflect the *recursive nature* of particularly the action research model.

Examples of unit outlines using inquiry models can be found later in this paper. Good examples of units of work using these three inquiry frameworks can also be found in *Gender Up Front (1997), Our Natural Heritage (1998), Integrating Socially (1996),* and the Studies of Society and Environment Sourcebook Modules.

**Table 1 Inquiry models**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Inquiry models | | |  |
| **Years 1 to 10**  **SOSE Syllabus**  **broad phases of inquiry** | **Integrating Socially\*** | **TELSTAR\*** | **Action Research\*** | **ELA planning model** |
| Framing and focusing questions | Tuning in | Tune in | Identify the problem/issue | Orient |
|  | Preparing to find out | Explore |  |  |
| Locating, organising and analysing evidence | Finding out | Look | Investigate the problem/issue | Enhance |
|  | Sorting out | Sort | Evaluate data |  |
| Evaluating, synthesising and reporting conclusions | Going further | Test | List possible actions | Synthesise |
|  | Making connections |  | Predict outcomes |  |
|  |  |  | Select the best action |  |
| Possibly taking action of some sort | Taking action | Act | Implement the action |  |
| Reconsidering consequences and outcomes of each of the above phases |  | Reflect | Evaluate the action |  |

\* Each stage in an inquiry model is revisited as assumptions, content, values, attitudes, processes and skills are

challenged during the inquiry.

Table 2 Integrating Socially inquiry model

# THE ‘INTEGRATING SOCIALLY’ MODEL OF INQUIRY

## **TUNING**

## **IN**

FOCUS ACTIVITIES SHOULD:

* Provide students with opportunities to become engaged with the topic
* Ascertain the students’ initial curiosity about the topic
* Allow students their personal experience of the topic

FOCUS ACTIVITIES SHOULD:

* Establish what the students already know about the topic
* Provide the students with a focus for the forthcoming experience
* Help in the planning of further experience and activities

**PREPARING TO FIND OUT**

### FINDING

### OUT

FOCUS ACTIVITIES SHOULD:

* Further stimulate the students’ curiosity
* Provide new information which may answer some of the student’s earlier questions
* Raise other questions for students to explore in the future
* Challenge the students’ knowledge, beliefs and values
* Help students to make sense of further activities and experiences which have been planned for them

FOCUS ACTIVITIES SHOULD:

* Provide students with concrete means of sorting out and representing information and ideas arising from the ‘finding-out’ stage
* Provide students with the opportunity to process the information they have gathered and present this in a number of ways
* Allow for a diverse range of outcomes

SORTING OUT

FOCUS ACTIVITIES SHOULD:

* Extend and challenge students’ understanding about the topic
* Provide more information in order to broaden the range of understandings available to the students

## **GOING FURTHER**

FOCUS ACTIVITIES SHOULD:

* Help students draw conclusions about what they have learnt
* Provide opportunities for reflection both on what has been learnt and on the learning process itself

**MAKING CONNECTIONS**

FOCUS ACTIVITIES SHOULD:

* Assist students to make links between their understanding and their experience in the real world
* Enable students to make choices and develop the belief that they can be effective participants in society
* Provide further insight into students’ understanding for future unit planning

## **TAKING ACTION**

Adapted from Hamston, J. and Murdoch, K. 1996, *Integrating Socially: Planning Units of Work for Social Education*, Eleanor Curtin, Melbourne.

**Table 3 TELSTAR inquiry model**

# THE ‘TELSTAR’ MODEL OF INQUIRY

STUDENT FOCUS QUESTIONS

F**T**

UNE IN

* What is the topic?
* Why should we study this topic?

### T

F**E**

* Knowledge, viewpoints, questions, methods
* REFLECT: Should I change the questions?
* How do we feel about this topic?
* Who else feels strongly about it?

XPLORE

### E

F**L**

OOK

##### CONTROL CHECK

* Look for information
* Is there enough information collected?
* What do we want to find out? How can we do this best?
* How will we gather the information?

### L

F**S**

ORT

* How might we sort our information?
* What connections can we make?
* Sort the information
* Is it accurate, relevant, biased, worth using?

### S

F**T**

EST

* What conclusions can we draw? What evidence supports them?
* What might we do with our findings? What actions could we take?
* Does this answer the question sufficiently?

### T

F**A**

CT

* What conclusions can we draw? What evidence supports them?
* What might we do with our findings? What actions could we take?
* Have all the factors been adequately considered?

### A

**R**

* How could the investigation have been improved?
* REFLECT: Has my view on this topic changed?

EFLECT

* How do we feel about the topic now?

### R

Adapted from Department of Education, Queensland. 1994, *Social Investigators: An Approach to Active and Informed Citizenship for Years 8-10*, Brisbane.

**Table 4 Action Research inquiry model**

# A scheme for action research

## Community problem solving

**Identify problem**

(What’s up?)

**Evaluate action**

(How’d we go?)

**Investigate problem**

(Just give me the facts.)

**Identify a new problem and follow procedure**

**Implement action**

(Let’s hit the road.)

**Evaluate Data**

(What does it all mean?)

**Select best action**

(This is IT!)

**List possible actions**

(What could happen?)

**Predict outcomes**

(But if we do that – what then?)

### The action-research process

**Identify problem**

**(What’s up?)**

* Conduct surveys, discussions, brainstorming and debates to identify the real nature of the problem.
* Conduct ‘stimulus walks’ to places where environmental problems exist or where past problems have been solved.

**Investigate problem**

**(Just give me the facts.)**

An investigation of the causes, symptoms, extent, incidence, location and effects of the problem by:

* searching local papers and media;
* observing, recording, classifying and analysing data;
* building a database;
* listing all known information;
* measuring and surveying aspects of the problem;
* identifying and interviewing people known to be affected by the problem.

**Select best action**

**(This is IT!)**

Decide on the best course of action.

**Implement action**

**(Let’s hit the road.)**

* Develop a plan of action using flow charts, diagrams, timelines etc.
* Exhibit the plan and invite comments.
* Allocate roles and responsibilities.
* Put the plan into action.
* Monitor progress, using checklists, keeping diaries and gathering data.

**Evaluate action**

**(How did it go?)**

* Establish whether the problem was correctly identified in the first place.
* Were the data and information accurate and adequate?
* Were the correct alternatives considered?
* Has the situation improved?
* Is further action necessary?

**Evaluate data**

**(What does it all mean?)**

* Consolidate and organise the data

**List possible actions**

**(What could happen?)**

Identify and list alternative solutions (further research, interviews and community involvement).

**Predict outcomes**

**(If we do that, what then?)**

* Construct alternatives and consequences tables.
* Investigate costs and benefits of various solutions.
* Debate and discuss the merits of alternatives.
* Consult all interested individuals and groups who will be affected.

Adapted from Department of Education, Queensland. 1993*, P-12 Environmental Education Curriculum Guide*, Brisbane.

**3. Strategies That Assist Inquiry**

There are a number of skills that can enable students to participate successfully in the inquiry process. Two of these, which are very important but often overlooked, are asking questions and discussing. There are many strategies that can help students learn the skills and participate more fully. Some of these are described below.

Other worthwhile strategies are described briefly in the glossary.

### 3.1 Students asking questions

Central to inquiry learning is knowing how to ask and answer questions. If it is true that the questions we ask often determine the answers we get – then we need to know how to ask good questions. To be effective questioners, students need to be aware of the types of questions they ask. Making the purpose of different types of questions explicit helps students to frame their questions appropriately.

Even very young students can be aware of and ask different types of questions. Two things, modelling and engagement, will assist students to frame appropriate questions. Firstly, teachers need to regularly model the framing of different types of questions. Aids such as posters and flash cards will help to reinforce the modelling. Secondly, teachers need to provide appropriate contexts for students before inviting them to ask particular types of questions. When students are engaged with a subject, it will be easier for them to ask questions about it. The stimulus could be derived from an actual or fictional event, person, story or phenomena.

In the classroom context students are used to answering questions posed by the teacher rather than asking questions themselves, so it may take awhile for some students to get used to the idea. Teachers can demonstrate that they value the asking of questions as much as the answering of them in a number of ways. For example, consider asking students to frame a set of questions following the viewing or reading of a text instead of requiring students to answer questions about it. Teachers can use a number of different models of question types to scaffold student learning. Some of these are described below.

###### **Who, what, when, where, how and why questions**

Who, what, when, where, how and why questions are an ideal starting place for young students. During or following the reading of a picture book to the class, the teacher may ask a range of questions such as, What did Lenny see when he went to the beach? How did it make him feel? Where did he go for help? Who helped him? Why did so many people come to help? After modelling these questions a number of times using who, what, when etc, flash cards to reinforce the different question types, students can be invited to ask their own questions, such as ‘what’ and ‘who’ questions, following a story.

###### **Four-step questions**

Central to this four-step model is the assumption that students, or adults for that matter, often only ask descriptive questions and need to be encouraged to ask ‘deeper’ questions. Each step or type of question in this model builds on the one before. These four-step questions could provide examples of the types of questions to ask at different stages of an inquiry. An explanation of the background to and application of this model can be found in *Studying Society and Environment* (Gilbert 1996).

### Table 5 Four-step questions

*Description*

What is it?

Who does it involve?

Where is it?

Why does it occur here?

How does it occur?

*Evaluation*

What is the significance of this issue or problem to my life, the local community,

the nation, the world?

How have factors in the past influenced it?

How might it be seen by different people?

What conflicts of interest are there?

Who gains? Who loses? Who decides?

How are the relationships between people affected?

What are the relationships between people and other phenomena?

*Reflection*

Are these relationships desirable?

What will happen if these relationships are altered?

What are the alternatives?

*Action*

What change, if a change is thought to be desirable, should be introduced?

How can we bring about change if we or others think this is desirable?

Who could we contact to discuss action projects?

What action should we take?

*Sources*:

Calder, M. and Smith, R. 1991, *A Better World For All: Development Education for the Classroom* *(Teacher’s Notes),* Australian International Development Assistance Bureau.

###### **Strategic questioning**

Peavey and Hutchinson’s (1993) strategic questioning process provides another way to help students scaffold questions. Again, questions move from a simple through to a more complex level as outlined in Table 6. Refer to the Studies of Society and Environment Level 1 module: *Lean green cleaning machine* for an example of how this process can be applied.

###### **Table 6 Strategic questioning**

1. *Focus questions* identify the situation and the key facts to an understanding of the situation eg What is this about?
2. *Observation questions* are concerned with what a person sees and the information he or she hears about the situation eg. What do you see? What do you know?
3. *Feeling questions* are concerned with body sensations, emotions and health eg. How do you feel?
4. *Visioning questions* are concerned with identifying a person’s ideals, dreams and values eg. How could it be? How should it be?
5. *Change questions* are concerned with how to get from the present situation towards a more ideal situation eg. What needs to be changed?
6. *Personal inventory and support questions* are concerned with identifying a person’s interests and potential contribution and the support necessary to act eg. What should we do? What can you do?
7. *Personal action questions* are those which get down to the specifics of what to do, and how and when to do it. The actual plan begins to emerge eg. What support do you need?

*Sources:*

Peavey, F. & Hutchinson, V. 1993, *Strategic questioning: For Personal and Social   
Change*, Action Research Issues Association Inc.

Queensland School Curriculum Council. 2000, *Studies of Society and Environment Level 1 module: Lean green cleaning machine,* Brisbane.

### 3.2 Discussion

Many social studies and Studies of Society and Environment teaching and learning materials have activities that direct teachers and students to ‘discuss’ a question, issue or topic in pairs, small groups or as a whole class. Whilst classroom discussions can contribute significantly to the inquiry process, by developing thinking skills, Studies of Society and Environment values and conceptual understandings associated with the learning outcomes and core content, they can also be very frustrating for both student and teacher. This frustration often leads to abandonment of the discussion process.

There is a qualitative difference between talking and discussing. Effective discussion, for example, *requires active listening* which is not necessarily present when people are talking to each other. The discussion process includes skills that need to be taught in much the same way reading is taught to young learners. Patience is necessary, for just as a young child doesn’t learn to read in a day, a twelve-year-old who hasn’t learnt the skill of active listening will need time and practice to master the skill.

Attention to three things will greatly enhance discussions in the classroom. These are:

1. setting ground rules for group discussion;
2. knowing how to ask questions in a discussion; and
3. being aware of group dynamics during a discussion.

###### Each of these is outlined in more detail below, followed by some suggestions for reflecting on and evaluating group discussions.

###### **Setting ground rules for group discussion**

Conflicting ideas about how a discussion should operate can cause frustration in a group. It is important therefore to negotiate a set of rules that everyone can agree to in principle and try to uphold in practice.

Teachers can ask students to list the behaviours that contribute to a good discussion or provide a list and invite students to modify it (refer to the sample list in Table 7). Following the guidelines will be more difficult for some students than others but practice and encouragement from teachers will hasten cooperation. Inviting students to assess their own and the group’s discussion behaviour (refer to Tables 9 and 10) can also be productive.

**Table 7 Sample ground rules for group discussion**

1. We sit in a circle so everyone can see and hear each other.

2. Everyone’s contributions are equally respected.

3. We listen to each other.

4. We speak in turn.

5. We cooperate with each other.

6. We encourage others to participate.

7. We can agree to disagree.

8. We build on each other’s ideas.

###### **Knowing how to ask questions in a discussion**

Students may often not know how to create and sustain dialogue in a discussion. Instead, they jump from one idea to another in a disconnected way without really exploring the ideas offered. The questions below (Table 9) are taken from the tradition of philosophical inquiry. They encourage active listening, rigorous reasoning and building on each other’s ideas.

Asking questions such as these is a skill which requires practice. However, students will adopt this ‘language of dialogue’ with encouragement from and modelling by their teachers. Reproducing these sample questions on charts enabling ready reference during discussions may also be helpful.

**Table 8 Questions that promote dialogue**

## Focus

What is it that puzzles you?

What did you find interesting?

## Clarification

I didn't quite understand you. Could you explain it to me?

## Reasons

Why did you say that?

## Connections

Is that like what X said?

It sounds like you agree/disagree with X. Is that right?

## Distinctions

How is that different from what X said?

## Implications

What can we work out from that?

## Assumptions

What have you based that on?

## Testing

How could you work out if that was true?

## Information gathering

What do we know about that?

## Examples

Can anyone give me an example of that?

## Counter-examples

When wouldn't that happen?

## Consistency

Does that agree with what was said earlier?

## Speculation

Can anyone think of how that might have happened?

*Relevance*

How does that help us?

## Alternatives

How else could we think about that?

What if someone said...?

## Summarising

Where have we got to?

What have we found out?

## Listening strategies

Am I right that you said....?

Tell me if I'm wrong, but I think you said... Is that right?

## Participation

What do you think about this?

What do others think?

Who agrees? Who disagrees? Why?

## I'm not the expert here

I'm not sure.

I don't know. What do you think?

Source:

De Hann, C. MacColl, S. and McCutcheon, L. 1995, *Philosophy with Kids Book 3*, Longman, Melbourne.

###### **Being aware of group dynamics during a discussion**

If unhelpful group behaviour persists during discussions, it can be useful to bring students’ attention to the behaviour through an activity other than a lecture. There are many activities that can assist students to identify and practise positive discussion styles. The following are brief descriptions of four popular activities. More detailed descriptions of these can be found in a number of publications including *Global Teacher, Global Learner (1988)*; *Learning Together: Global Education 4-7* (1990); *P-12 Environmental Education Curriculum Guide (1993);* and *Interactive Teaching Strategies* (1993).

##### 3.3 Discussion strategies

##### Conch discussions

This strategy encourages very young students to speak in turn. Sitting in a circle, only the holder of the *speaker’s object*, in this case a shell, is allowed to speak. The shell can be passed around the circle or placed back in the centre when each speaker is finished. The activity has many names depending on the object used.

##### Goldfish bowl discussions

Suitable for any year level in the primary school, this strategy entails selected students observing the discussion dynamics of their peers. Observers then report on the helpful and unhelpful discussion behaviours they saw.

##### Discussion maps

This strategy also involves the observation of discussion dynamics. This time, an observer visually records each exchange between students during a discussion. The resulting diagram clearly shows who is talking to whom, who is dominating and who is not contributing to the discussion.

##### Group roles

This is a more complex strategy for older students that focuses on the positive and negative roles people take on during discussions. Using role cards, students adopt helpful and unhelpful roles during a discussion and then debrief afterwards. This activity is noisy but it’s a lot of fun and students remember it.

***Evaluating group discussions***

Reflecting on the discussion process, either as a class or individually, is a useful process. It enables students to congratulate themselves on their productive behaviour and remind them of areas that require improvement. While the following Tables are examples of reflection and evaluation tools students could use, they can also construct their own.

Evaluation of group discussions can also be tied to core and discretionary outcomes.

### Table 9 Sample class evaluation of discussion behaviour

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Date: | Topic: | | | | | |
|  | | Yes Always | Nearly all the time | Some of the time | Not very often | Not at all |
| Do we give good reasons for our opinions? | |  |  |  |  |  |
| Do we stay on track? | |  |  |  |  |  |
| Do we listen to each other? | |  |  |  |  |  |
| Do we all take part? | |  |  |  |  |  |

# Table 10 Sample individual evaluation of discussion behaviour

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Date:** | **Topic:** | | | | |
|  | | Always | Often | Seldom | Never |
| 1. I take an active part and contributed my fair   share without dominating | |  |  |  |  |
| 2. I draw others into the discussion | |  |  |  |  |
| 3. I listen carefully to what others said | |  |  |  |  |
| 4. I am able to build on other people’s ideas | |  |  |  |  |
| 5. I give good reasons for my opinions | |  |  |  |  |
| 6. I handle disagreement well | |  |  |  |  |
| 7.I am consistent (I don’t change ideas for   the sake of it) | |  |  |  |  |
| 8. I show respect for others | |  |  |  |  |

### 4. Sample Unit Plans

This section contains illustrative examples of how inquiry models can scaffold teaching and learning for levels 3 and 4.

**4.1 Using the Integrating Socially inquiry model at level 3**

The following page outlines a teaching and learning sequence for a unit entitled *Greenhouse Challenge: Glasshouses*. The unit, written for middle primary, uses the Integrating Socially inquiry model. It is one of a collection of units in *Our Natural Heritage* (1998).

This inquiry supports students to demonstrate level 3 core learning outcomes: Place and Space 3.1 and 3.5:

SRP 3.1 Students make inferences about interactions between people and natural cycles, including the water cycle.

PS 3.5 Students describe the values underlying personal and people’s actions regarding familiar places.

In this example, the focus questions guide student investigations toward achieving the core learning outcomes. Focus questions also match the purposes of the inquiry stages (eg. Tuning In stage: What is the Greenhouse Effect? and Finding Out stage: What causes it?). The focus activities were designed to enable students to explore the focus questions. It is not intended that every focus activity be attempted. Instead, teachers are asked to choose activities from each stage that suit the interests and abilities of their students.

Activity names requiring explanation have been described briefly in the glossary.

**Table 11 Sample inquiry sequence using the Integrating Socially model**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |
| --- | --- | --- |
| **INQUIRY STAGES** | **FOCUS QUESTIONS** | **FOCUS ACTIVITY** |
| **1**  **TUNING IN** | **WHAT IS THE**  **GREENHOUSE EFFECT?** | * 1. Experiment   2. Definitions   3. Physical continuum   4. Riddle |
| **PREPARING TO**  **2**  **FIND OUT** | **IS THERE AN ENHANCED**  **GREENHOUSE EFFECT?** | * 1. Limerick   2. Quiz   3. Concept map   4. KWL chart |
| **3**  **FINDING OUT** | **WHAT CAUSES IT?** | * 1. Graphs and images   2. Statistics and tables   3. Case studies   4. Web search |
| **4**  **SORTING OUT** | **WHO’S RESPONSIBLE?** | * 1. Bingo game   2. Surveys   3. Flow charts   4. Web search |
| **GOING**  **5**  **FURTHER** | **ARE THERE OTHER**  **EFFECTS?** | * 1. Venn diagram   2. Role play   3. Case studies   4. Consequence wheel |
| **6**  **MAKING CONNECTIONS** | **WHAT DOES IT ALL**  **MEAN?** | * 1. Indigenous perspectives   2. Interconnections and weaving   3. Globe game   4. Revisit physical continuum |
| **7**  **TAKING**  **ACTION** | **WHAT ACTION CAN WE**  **TAKE?** | * 1. Personal action   2. Class collage   3. Using surveys   4. Letter writing   5. Making contacts |

Adapted from Calder, M. and Gordon, K. (eds), 1998, *Our Natural Heritage*, South Australian Social Education Association, Adelaide.

### 4.2 Using the Action Research inquiry model at level 4

### Table 12 outlines a teaching and learning sequence for a unit entitled *Student Action: Social and economic planning in a school community*. The unit, written for upper primary, uses the Action Research inquiry model. It is one of a collection of units in *Educating for Responsible Citizenship* (Land 1997).

Action research, perhaps more than any other inquiry model, places importance on the teacher’s role as facilitator. For this reason both the teacher and students’ roles in the process have been recorded. While the tabular representation of the unit doesn’t reflect the recursive nature of the action research process, it allows more information to be presented on the page.

This inquiry supports students to demonstrate level 4 core learning outcomes, Systems, Resources and Power 4.3 and Space and Place 4.2. (Queensland School Curriculum Council 1998a)

SRP 4.2 Students plan and manage an enterprise that assists a community or international aid project.

PS 4.1 Students make justifiable links between ecological and economic factors and the production and consumption of a familiar resource.

Teaching and learning strategy names requiring explanation are described briefly in the glossary.

### Table 12 Sample inquiry sequence using an action research model

|  |  |  |
| --- | --- | --- |
| **Action Research**  **Cycle Stage** | Teaching and learning activities | |
|  | **Teacher** | Students |
| Identify problem or issue | * asks focus question (Is there a place/issue in the school/community you want to improve or change?) * facilitates student decision making * demonstrates action research cycle | 1. generate list of school/community issues in small groups 2. report back to whole class 3. select key issues that are possible to investigate and effect |
| Investigate issue | 1. asks clarifying questions to guide investigation | 1. form groups around particular issues and complete a KWL chart |
| Evaluate data | 1. provides focused learning episodes on the use of data gathering techniques 2. instructs students in using graphic organizers | 1. use surveys, interviews and data gathering methods 2. consolidate and organize data |
| List possible actions |  | 1. brainstorm alternative solutions |
| Predict outcomes | 1. guides students to analyse consequences of several possible alternatives 2. advises students about how and who to consult | 1. describe possible consequences of various solutions 2. investigate costs and benefits of various solutions 3. consult with interested individuals and groups who would be affected by particular choices of actions |
| Select best action | 1. assists students to allocate appropriate roles and responsibilities as part of an action plan 2. informs students of different group skills and roles, conflict resolution strategies | 1. decide on best course of action |
| Implement action | 1. guides students in the completion of realistic time lines | 1. develop an action plan 2. allocate tasks and timelines and record on a action planner 3. exhibit the plan and invite comments from the school/community |
| Evaluate action | 1. assists students to examine effectiveness of their actions measured against the data collected and the courses of action decided upon 2. passes on evaluative feedback through course of investigation | 1. consult action plan and journal to compare and contrast plans with completed actions, and review their reflective comments 2. invite key stakeholders and dignitaries to celebrate completion of the project |

*Source*:

Land, R. (ed), 1997, *Educating for Responsible Citizenship: Classroom Units for Junior Primary, Primary and Secondary Teachers*, The Social Education Association of Australia, Adelaide.

### 5. Trying It Out

Many teachers have been using inquiry approaches for many years. For those who haven’t, the challenge is to try to include, little by little, the elements of inquiry approaches into their Studies of Society and Environment program and practice. Trying too many new things all at once often leads to frustration and abandonment of the new ideas. A more sustainable adoption of inquiry approaches might begin with trying some strategies that encourage inquiry. Being patient and trying them more than once before they’re discarded is recommended, remembering that the strategies could be new for students too.

When some comfort is achieved with these strategies, teachers might try reorienting a familiar unit as an inquiry, using one of the models in this paper. The inquiry could be wholly teacher-directed. This gives the teacher an opportunity to become familiar with the process. Students will also benefit from being aware of the stages of the inquiry. Later when teachers and students are more familiar and comfortable with the process, the teacher can facilitate more, increasingly handing control of the inquiry over to students.

There are many published units of work, using inquiry approaches, that teachers may like to try without writing their own. These include many Studies of Society and Environment sourcebook modules and those developed by professional associations and commercial publishers. A number of these are listed in this paper.

The amount of curriculum change impacting on teachers in the primary school can be overwhelming. Making a plan to try something new, however small, each term is a positive and sustainable step.

**6. Glossary**

**Action planner**

Usually represented as a table, the action planner records the steps of the plan, who is responsible for carrying out the tasks, and when they need to be completed by. For an example see Land (1997).

**Action Research inquiry model**

This model is based on the idea of praxis, the merging of action and reflection. It involves repeated cycles of planning, acting, observing and reflecting. It has been used in research and evaluation as well as scaffolding student inquiry. Variations are based on the work of Kemmis and McTaggart (1981). See also Department of Education (1993).

**Brainstorming**

This is a popular activity for generating ideas quickly. All ideas are accepted and listed without comment. Discussion about appropriateness or desirability occurs later. See Pike and Selby (1988) and Lazear (1991).

**Cooperative learning**

This is an approach which promotes, among other things, the value of working together cooperatively, which is qualitatively different from working in groups. There is a huge range of classroom resources including Dalton (1985), Bennet et al. (1991), Kagan (1995), and Dalton and Watson (1997).

**Concept map**

An often used graphic organiser, this strategy assists learners to ‘map’ out their ideas visually. It can illustrate the parts of something (concept, event, phenomena, etc.) and the interconnections between the parts. For an example, see Lazear (1991).

**Conflict resolution**

This term usually refers to processes of resolving conflict peacefully. The Conflict Resolution Network, founded in Australia by the United Nations, has developed programs and materials for use in many contexts, many specifically for the classroom. A key teacher text is *Everyone Can Win* (Cornelius and Faire 1989). One of many student resources include *Creative Conflict Solving for Kids* (Schmidt and Friedman 1985).

**Consequence wheel**

Also called a cause and effect wheel or futures wheel, this is an excellent strategy for exploring the consequences of an event or the effects of an issue on people and places. For examples, see Pike and Selby (1988) and Department of Education, Queensland (1993).

**Flow chart**

This is a way of clearly organising information about a process (eg manufacturing, decision making) when a sequence is involved. It can also demonstrate relationships (hierarchy, interdependence). See Pike and Selby (1988), Lazear (1991) and Department of Education, Queensland (1993).

**Focused learning episodes**

These are lessons of direct teaching concentrating on a particular skill, process, genre, concept or topic. They are often used during an inquiry when it is apparent students require specific *input before they can continue.*

**Graphic organisers**

These are ways of representing information graphically to make the information easier to access visually. Tables are probably the most common example. Others include graphs, concepts maps, flow charts and venn diagrams. See Lazear (1991).

**Integrating Socially inquiry model**

This model is described fully in Hamston and Murdock (1996). The authors provide advice about writing units using the model and provide sample units (lower to upper primary) as well.

**KWL chart**

This is a useful strategy for organising thoughts at the beginning of an inquiry and reflecting on them at its conclusion. KWL stands for 1. What we **K**now, 2. What we **W**ant to know, and 3. What we’ve **L**earnt.

**Metacognition**

Described simply, it is learning how to learn or thinking about thinking. It usually refers to being aware of, thinking about, verbalising and understanding the processes you use to learn. The SOSE process of *reflect* includes metacognition.

**Philosophical inquiry**

A process from the Philosophy for Students movement, which emphasises the idea and practice of a ‘community of inquiry’, where mutual respect and genuine dialogue is encouraged. See Splitter and Sharp (1995), Cam (1995) and De Hann et al. (1995).

**Physical continuum**

This is a variation of a values continuum (Department of Education, Queensland 1993), where students indicate their level of agreement with a statement by standing along a line or continuum in the classroom. Designated corners of the room can also be used. See also rating scales (Lemin 1994) and a variation called Oxford Debate (also Lemin 1994).

###### **TELSTAR inquiry model**

This model appears in *Social Investigators: An Approach to Active and Informed Citizenship for Years 8-10*, (Department of Education, Queensland 1994a) as a simplified version of the Social Investigation Strategy (SIS), which appeared in the  *Social Education Years 1 to 10 Syllabus* (Department of Education, Queensland 1992). These were adapted from a number of sources including a similar inquiry model developed by the Ministry of Education in Victoria (1987).

###### **Venn diagram**

Mathematical in origin, this graphic organiser provides a good way to illustrate the overlap or commonalities of two or more things. See Lazear (1991).

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