What are instructional strategies?

Instructional strategies are techniques teachers use to help students become independent, strategic learners. These strategies become learning strategies when students independently select the appropriate ones and use them effectively to accomplish tasks or meet goals. Instructional strategies can:

- motivate students and help them focus attention
- organize information for understanding and remembering
- monitor and assess learning.

To become successful strategic learners students need:

- step-by-step strategy instruction
- a variety of instructional approaches and learning materials
- appropriate support that includes modelling, guided practice and independent practice
- opportunities to transfer skills and ideas from one situation to another
- meaningful connections between skills and ideas, and real-life situations
- opportunities to be independent and show what they know
- encouragement to self-monitor and self-correct
- tools for reflecting on and assessing own learning.

Effective instructional and learning strategies can be used across grade levels and subject areas, and can accommodate a range of student differences.

Instructional strategies that are especially effective in the health education program include:

- cooperative learning
- group discussion
- independent study
- portfolio development
- journals and learning logs
- role-playing
- cognitive organizers
- literature response
- service learning
- issue-based inquiry.

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Cooperative learning

Cooperative learning involves students working in small groups to complete tasks or projects. Tasks are structured so that each group member contributes to the completion of the task. Success is based on the performance of the group rather than on the performance of individual students.

Program benefits

Cooperative learning activities play an important role in increasing students' respect for and understanding of each other's abilities, interests and needs. These activities encourage students to take responsibility for their learning.

Tips for getting started

Consider the following suggestions for successful cooperative learning in the health education classroom.

- Keep groups small—two to five members is best (the larger the group, the more skillful group members must be).
- Create diverse groups; this allows everyone to learn from each other's differences.
- Structure groups in such a way that success depends on each group member being responsible for some part of the task.
- Initially, group students and assign roles within each group.
- Teach basic routines for classroom management, including forming groups quickly and quietly, maintaining appropriate noise levels, inviting others to join the group, treating all students with respect and helping or encouraging peers.
- Monitor behavioural expectations by scanning groups, using proximity and friendly reminders, sitting and watching a group for a while, revisiting expectations, and when necessary, reteaching expectations.
- Ensure individual students are aware of their roles and responsibilities within the group. Post a list of roles or give students cards describing specific roles.
- Discuss and model collaborative skills, such as listening, allowing others to speak, asking for help when needed, reaching consensus and completing a task within the allotted time. Students need opportunities to practise these skills, and receive feedback and reinforcement.
- Allow students time to evaluate the cooperative learning process, both individually and as a group.

Think–pair–share

In think–pair–share, the teacher poses a topic or question. Students think privately about the question for a given amount of time, usually one to three minutes. Each student then pairs with a partner to discuss the question, allowing students to clarify their thoughts. Next, each pair has an opportunity to share their answers with the whole class.

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Think–pair–share is a cooperative learning strategy that provides opportunities for students to:

- participate
- learn from others
- make connections.

Forming learning groups

There are many strategies to choose from when forming cooperative learning groups. Using a variety of strategies ensures that students have an opportunity to work with many different group members throughout the year.

Consider the following strategies for forming groups.

- **Pairing up partners**—Students pair up with someone who falls into the same category. For example, students pair up with the first person they meet who is wearing the same colour socks as them.
- **Pick a card**—Use old decks of cards to form groups. For example, to get groups of four, put together four king of spades, four queen of diamonds, and so on. Distribute the cards randomly and ask students to find the others with matching cards.
- **Chalkboard list**—This is a good strategy to use when students are finishing their work at different times. As students complete one assignment, they write their names on the chalkboard. When three names accumulate, they form a new group and move on to the next activity.

1. Lee	1. Eric	1.	1.
2. ~~Sam~~	2. Haijia	2.	2.
3. Rain	3.	3.	3.

For additional ideas on forming learning groups, see *Energize! Energizers and Other Great Cooperative Activities for All Ages* by Carol Apacki.

Group roles

The roles in a cooperative learning group depend on the task. Before assigning roles, review the task and determine what roles are necessary for the group to be successful. Roles could include:[3]

- **Checker**—Ensures that everyone understands the work in progress.
- **Timekeeper**—Watches the clock and makes sure the group finishes the task within the time allotted.
- **Questioner**—Seeks information and opinions from other members of the group.
- **Recorder**—Keeps a written record of the work completed.

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- **Reporter**—Reports on the group's work to the rest of the class.
- **Encourager**—Encourages everyone in the group to contribute and offers positive feedback on ideas.
- **Materials manager**—Gathers the material necessary to complete the task. At the end of the task, the materials manager returns materials and turns in the group's work.
- **Observer**—Completes a checklist of social skills for the group.

When introducing roles to the class, explain and model them. Give students opportunities to practise. Emphasize that all roles are equally important and contribute to the success of the group.

Students need many opportunities to work in small groups to improve their ability to be part of a team. The number one reason people fail at their jobs is their inability to get along with coworkers. Cooperative learning creates opportunities for students to learn and apply important social and communication skills.

Cooperative learning is an effective strategy for the health education classroom. It enhances perspective, encourages higher-level reasoning, creates social support and provides opportunities for students to participate in meaningful, thoughtful activity.

Group achievement marks

One controversial aspect of cooperative learning is whether or not to assign group achievement marks. Spencer Kagan, in O'Connor's *The Mindful School: How to Grade for Learning*, argues against using a group achievement mark for the following reasons.

- Group marks convey the wrong message. If grades are partially a function of forces entirely out of students' control, such as who happens to be their partners, that sends students the wrong message.
- Group marks violate individual accountability if individual students find ways to manipulate situations to their advantage.
- Group achievement marks are responsible for parents', teachers' and students' resistance to cooperative learning.

Rather than awarding group achievement marks, Kagan suggests providing feedback in written form on students' cooperative learning skills. Kagan believes students will work hard if they know in advance that such feedback will occur. He also suggests asking students to set their own goals and use self-assessment to promote learning and improve social skills.

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Group discussions

Group discussions are an integral part of the health and life skills classroom. They are essential for building background on specific issues, creating motivation and interest, and giving students a forum for expressing and exploring new ideas and information.

Group discussions help students learn to articulate their views and respond to opinions that differ from their own. Group discussions may involve the whole class or a small group. Groups of two to six students work well. Participating in group discussions help students consider other people's perspectives and develop effective problem-solving skills.

Consider the following suggestions for using group discussions in the classroom.

- Create an atmosphere of openness and acceptance. Encourage students to show respect for the ideas and opinions of others even though they might not agree with them. Model this behaviour for students.
- Establish ground rules for discussion. Rules should include:
  - no put-downs
  - no interrupting
  - everyone has the right to pass.
- Be prepared to accept silence after a question. Give students the opportunity to think before they respond.
- Encourage students to formulate their own questions. Asking good questions is an important part of learning.
- Probe beyond neat and tidy answers. Encourage students to express what they really think, not simply say what they think the teacher or other students want to hear. Use "what if" questions. Present situations where there are no right or wrong answers. Offer situations in which people have a variety of opinions or emotions. Discuss the idea that sometimes the best solution is to agree to disagree.
- Ask "What else …" questions to encourage students to go beyond their first responses.
- Guard against inappropriate disclosure. Be vigilant in situations where students might reveal hurtful or embarrassing information about themselves. Head off such revelations.

Talking circles[4]

Talking circles are useful when the topic under consideration has no right or wrong answer, or when people need to share feelings. The purpose of talking circles is not to reach a decision or consensus. Rather, it is to create a safe environment for students to share their points of view with others. This process helps students gain trust in their classmates. They come to believe that what they say will be heard and accepted without criticism. They may also gain an empathetic appreciation for other points of view.

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Talking circles may initially require a facilitator to ensure guidelines are followed. People are free to react to the situation in any manner that falls within the following guidelines.

- All comments, negative or positive, should be addressed directly to the question or issue, not to comments that another participant has made.

- Only one person speaks at a time. Everyone else listens in a nonjudgemental way to the speaker. Some groups find it useful to signify who has the floor. Going around the circle systematically is one way to achieve this. Passing an object, such as a feather, from speaker to speaker is another method.

- Silence is an acceptable response. No one should be pressured at any time to contribute. There must be no negative consequences, however subtle, for saying, "I pass."

- At the same time, everyone must feel invited to participate. There should be some mechanism to ensure that a few vocal people don't dominate the discussion. An atmosphere of patient and nonjudgemental listening usually helps shy students speak out and louder ones moderate their participation. Going around the circle in a systematic way, inviting each student to participate by simply calling each name in turn can be an effective way to even out participation. It is often more effective to hold talking circles in small groups.

- Students should avoid comments that put down others or themselves, such as "I don't think anyone will agree with me, but …". Words like "good" or "excellent" are also forms of judgement.

Brainstorming

Brainstorming is an effective technique for generating lists of ideas, and creating interest and enthusiasm for new concepts or topics. Brainstorming provides teachers and students with an overview of what students know and/or think about a specific topic. Students can use brainstorming to organize their knowledge and ideas. The information gathered during brainstorming can be used as a starting point for more complex tasks, such as essay outlines or mind maps. The ideas can also be used to assist in the decision-making process.

Brainstorming serves a variety of purposes. It can be used to introduce new units of study, assess knowledge at the beginning or end of units, review information for tests, generate topics for writing assignments or projects, solve problems or make group decisions.

Establish brainstorming ground rules such as:
- accept all ideas without judgement
- everyone participates
- focus on quantity rather than quality.

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During the brainstorming activity, record single words or phrases. Continue brainstorming until ideas run out or the time limit is over. Review the ideas and look for ways to combine and/or sort them.

Independent study[5]

Independent study is an individualized learning experience that allows students to select a topic focus, define problems or questions, gather and analyze information, apply skills, and create a product to show what has been learned. Independent study can be effectively used in upper elementary and junior high health programs. This learning strategy works best with students who have a high degree of self-directedness and a mastery of basic research skills.

The general purposes of independent study include:

- learning to gather, analyze and report information
- encouraging in-depth understanding of specific content areas
- making connections between content and real-life applications.

Basics

A successful independent study project depends on recognizing and planning for these basic elements:

- cooperative teacher–student planning of what will be studied and how it will be shown
- alternative ideas for gathering and processing information
- multiple resources that are readily available
- teacher intervention through formal and informal student–teacher communication
- time specifically allowed for working and conferencing
- working and storage space
- opportunities for sharing, feedback and evaluation
- student recognition for expertise and finished product
- established evaluation criteria.

Student–teacher interaction

Regular student–teacher interaction is essential during independent study. The interaction may be formally structured conferences or casual conversations as teachers circulate while students are working. Teachers interact with students in order to:

- keep in touch
- help with problem solving
- provide direction
- open up new areas for exploration and production
- give encouragement
- introduce, teach and/or reinforce the needed skill.

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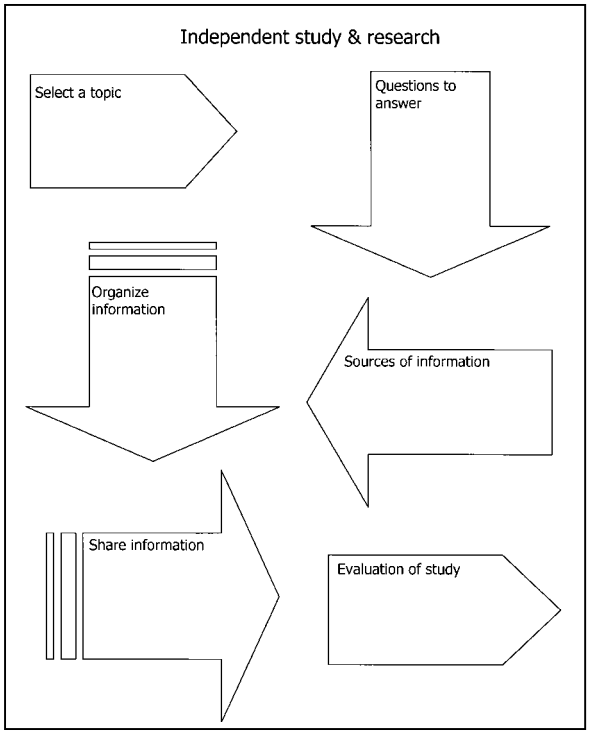
Independent study plans

In developing independent study plans, it is important to:

- select topics or issues that are motivating
- discuss and brainstorm possible questions
- identify key questions to pursue and answer
- develop plans and time sequences
- locate and use multiple resources
- use learning to create products
- share findings with classmates
- evaluate the process, products and use of time
- explore possibilities that could extend studies into new areas of learning.



(See *Student activity master 1: Independent study and research* on page 1 of Appendix C.)

Topics for independent study

Topics can come from a variety of sources:

- learner outcomes in the Health and Life Skills Program of Studies, such as the effects of smoking
- an extension of the regular curriculum, such as how volunteers contribute to the economy of the community
- a problem to be solved, such as finding out what motivates young people to participate in high-risk sports
- an event in the environment, such as the effect of new smoking bylaws on the local social and business scene.

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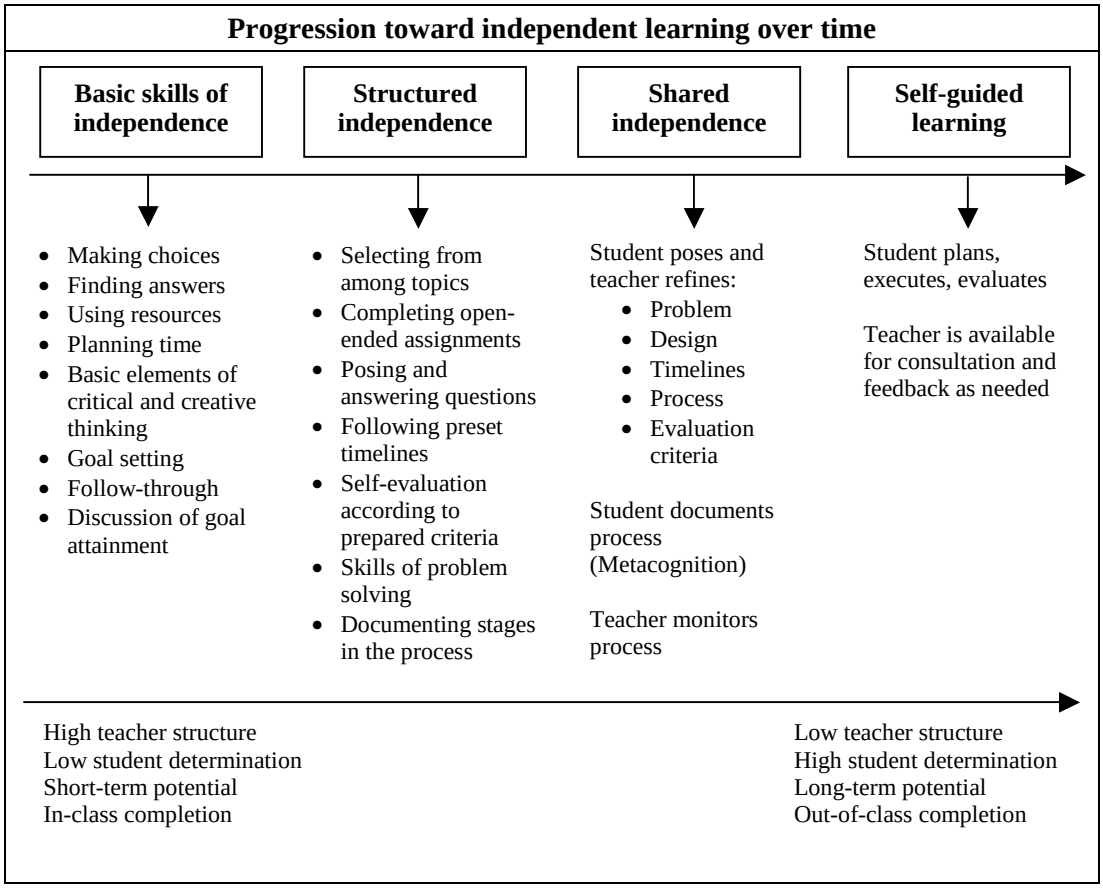
Readiness for independent study

Students are at varying levels of readiness for independent work.[6] Use this chart to identify where students are on a continuum, from having basic skills to being ready to assume the full responsibility and challenge of self-guided learning.



Many students are between categories of development at any given time. For example, one student may be quite capable of generating a problem for study and a design for investigating the problem, but lack skills of adhering to timelines without close teacher supervision. Teachers need to know:

- that movement toward independence is developmental
- that there are specific skills required in order to develop independence
- that students vary in their readiness to apply certain skills
- what level of readiness each student has, and encourage maximum application of skills at that level.

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Suggestions for successful independent study

When students are ready to begin working at a shared independence or self-guided level, they are ready to design independent studies with reasonably well-developed degrees of student determination and out-of-class, long-term investigation potential. The following guidelines ensure greater success in independent study projects and may be modified for the readiness level of students.[6]

- Have students propose a topic for study that they really care about. This maximizes intrinsic motivation and goes a long way toward ensuring follow-through.
- Encourage students to read broadly about the topic before they describe the project. This ensures they understand the issues they will be studying before they proceed.
- Help students use a variety of resources for their study, including people, print resources and other media.
- Have students find problems or issues that professionals in the field think are important and might choose to study.
- Ensure that students develop timelines for completing the whole task as well as components of it. Keeping a simple calendar of the time spent and tasks completed on a given day may be useful in helping students and teachers monitor progress and work habits. Many students at the shared independence level need to have teachers and peers critique their work as it progresses to reduce procrastination and monitor quality. For these students, it is helpful to establish check-in dates.
- Have students plan to share their work with an audience that can appreciate and learn from what students create. Students should participate in identifying and securing these audiences. Audiences may range in size from one to many.
- Help students develop awareness of a range of possible final products.
- Have students generate criteria to evaluate their products. These rubrics should be developed early in the process and modified as the project develops. Criteria give students a sense of power over their own work and help teachers evaluate final products fairly and objectively.
- If independent projects are part of class work, ensure students understand:
  - when it is appropriate to work on the independent study
  - where in the classroom and within the school they may work
  - what materials need to be at school for in-class work
  - other ground rules for in-class independent study.

Portfolio development

Portfolios are a chance for students to gather, organize and illustrate examples of their learning and accomplishments. It is the process of creating, collecting, reflecting on and selecting work samples that engages students in continuous reflection and self-assessment.

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Purposes

Students may develop a portfolio for many purposes, including:

- documenting their activities and accomplishments over an extended period of time
- monitoring and adjusting their actions and plans
- communicating their learning with others
- expressing and celebrating their creative accomplishments
- providing a foundation by which to assess their personal growth and skill development, and to set future goals.

Portfolios develop students' organizational skills and increase their sense of responsibility and ownership in their work. Students are encouraged to produce their best work, value their own progress and select products for their portfolio that represent what they are learning.

Benefits

Portfolio development can be a useful strategy in health education because it allows teachers to see students' thinking. It also gives students a format and motivation for completing assignments and is helpful in assessing and communicating student learning. Portfolios allow students a measure of autonomy and self-expression that can be highly motivating.

Process versus product

Although the ultimate goal of a portfolio is a *product*, the *process* of creating that product is where the most learning takes place.

The portfolio process has four steps.

1. Collect
2. Select
3. Reflect
4. Share.

Step 1: Collect

Throughout the term, students should maintain a collection of their class work and any other pieces that show relevant skills and achievement. It is important to have effective strategies in place to organize and manage portfolio selections. *Success for All Learners: A Handbook on Differentiating Instruction* offers the following tips on managing portfolios.[7]

- Choose and use a system to store all work until portfolio selections are made. Storage boxes, manila envelopes, unused pizza boxes and three-ring binders are all sturdy, inexpensive options.
- Provide students with checklists of requirements to help them collect, select and organize their pieces. Checklists can double as the table of contents for younger students.
- Include photographs of projects and activities at various stages of development. Photos can document skills in action.

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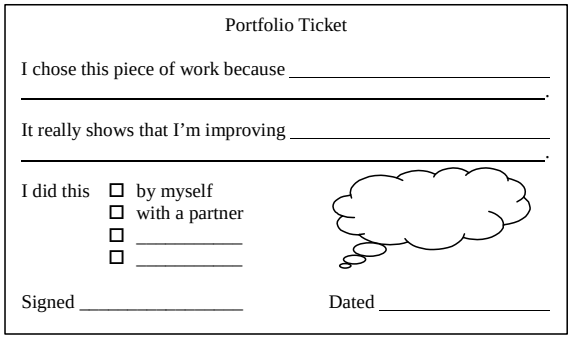
- Write captions for various pieces on index cards and clip them to the samples.
- Have readers of the portfolio (teachers, parents, peers) fill out a feedback form or attach their feedback to various pieces.

Step 2: Select

It is important to establish clear criteria for what is to be included in portfolios. Teachers and students need to work together to establish criteria and begin the selection process. At certain points in the term, students must reflect on the pieces in their collections, assess them against these criteria and make appropriate selections.

A basic portfolio contains:[8]

- a cover page
- a table of contents
- a statement of student goals
- items that represent understanding of concepts
- items that illustrate the process of learning, such as excerpts from learning logs and journals or a sample project in all its stages, along with the student's commentary on decisions made along the way
- performance items that demonstrate applications of concepts and skills
- self-assessment rubrics
- labels and captions that identify items, explain the context in which they were produced and provide reasons for choosing them (see sample portfolio ticket below).



Other content possibilities include:[8]

- a piece chosen from the student's work by a classmate, with a caption explaining why he or she considered the piece a valuable addition
- a piece from another subject area that relates to the health and life skills program, such as a graph created for math that shows daily activity choices of students
- an artifact from outside the school demonstrating the transfer of concepts and skills, such as a letter to the editor on a health-related issue.

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In *The Mindful School: The Portfolio Connection*, Burke, Fogarty and Belgrad offer a sample list of criteria, which includes:[9]

- accuracy of information
- connection to other subjects
- correctness of form
- creativity
- development of process
- diversity of entries
- diversity of multiple intelligences
- evidence of thoughtfulness
- growth and development
- insightfulness
- knowledge of concepts
- organization
- persistence
- progress
- quality products
- self-assessment
- visual appeal.

This list could be used both to select portfolio items and to develop assessment criteria.

Step 3: Reflect

Teachers can use the portfolio process to teach students to critique their work and reflect on its merits. As students review their samples, teachers can prompt students' analysis and decision-making skills by asking them to think about these questions.

- What really makes something your best work?
- What examples do you want to keep in your portfolio to represent what you are learning in health throughout the year?
- How is this product different from other pieces of work?
- How does the product show something important that you think or feel?
- How does this product demonstrate a new skill you are learning?
- How does this product demonstrate the progress you've made in a specific topic of health education?

Step 4: Share

The final stage in the portfolio process is sharing the portfolio with others. Portfolios can be presented in many different formats, including the following:

- print format (text, pictures, graphics)
  - folder
  - scrapbook
  - binder with dividers and/or page protectors
- portfolio case format—zippered case or box large enough to hold materials such as art work
- multimedia format, such as videotapes and audiotapes, CD-ROMs or photographs
- Internet or web-based format.

It may be useful to maintain two portfolio files or binders: one binder could contain all material from the "collect" stage and the second could be a final "share" version.

For more ideas on portfolio development, see *Assess, Evaluate and Communicate Student Learning*, pages 124–126 of this guide.

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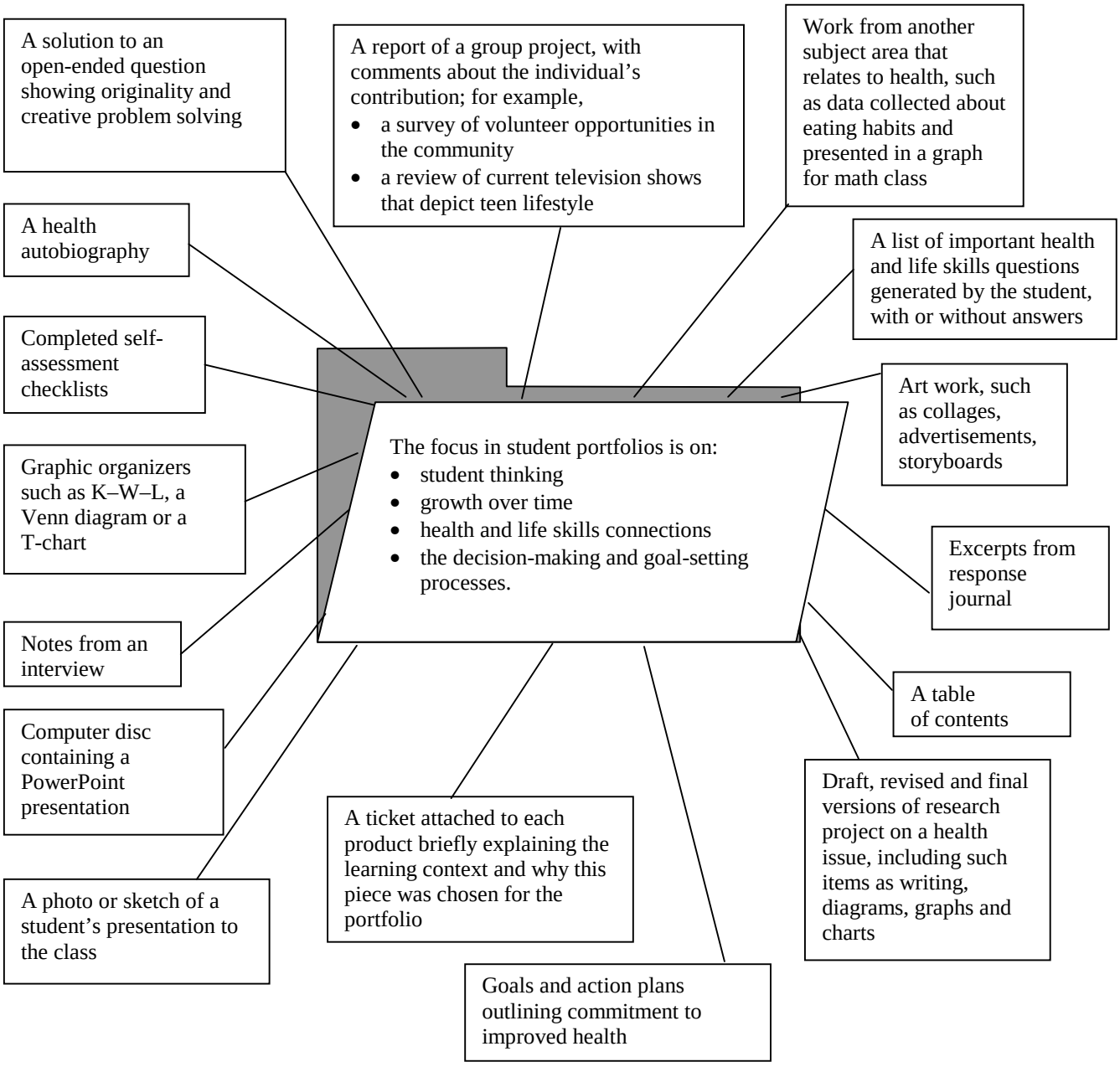
Inside a sample health and life skills portfolio



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Journals and learning logs

Journals and learning logs provide students with opportunities to record their thoughts, feelings and reflections on a variety of topics or experiences. Journals allow students to explore ideas and clarify their own thinking.

In the health and life skills classroom, use journals to:[10]

- record key ideas from presentations, lectures or reading assignments
- make predictions about what will happen next in school, national or world events
- record questions
- summarize the main ideas of a book, film or reading
- connect the ideas presented to other subject areas or students' personal lives
- monitor change in an experiment or event over time
- respond to questions
- brainstorm ideas
- help identify problems and issues
- identify solutions and alternatives
- keep track of the number of problems solved or articles read.

Journals are useful tools in the health curriculum because they give students an ongoing opportunity to reflect on their learning. Students need opportunities to process what they have just learned and reflect on how that learning affects their lives.[11] Keeping logs and journals are two strategies that reinforce reflective teaching and learning by helping students construct knowledge for themselves.

Process new information

Learning logs and journals can be used to process new information during class time. Teachers can give direct instruction in 10- to 15-minute segments, and then ask students to write down key ideas, questions, connections or reflections. This gives students an opportunity to think about new materials, clarify confusion, discuss key ideas and process information before moving on to new material.[12]

Learning log

Name _____ Topic _____ Date _____

Key ideas:
Connections:
Questions:

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There are a number of benefits learning logs offer.[13]

- They provide students with a format for identifying and remembering key ideas.
- They allow students more time to process information.
- They can be used to review for quizzes and tests.
- They can be included in portfolios.
- They allow students who miss a class to borrow logs from friends to keep up with class work.
- They allow teachers to identify confusion or misunderstandings during the lesson and make adjustments to instruction.
- They allow students to connect ideas they are learning to real-life experiences and concerns.

Promote reflection and higher-level thinking

The following journal format uses questions to encourage students to reflect on what they learned at the beginning of a lesson, in the middle and at the end.[14]

At the beginning of the lesson

- What questions do you have from yesterday?
- Write two important points from yesterday's discussion.

In the middle

- What do you want to know more about?
- How is this like something else?
- Is this easy or difficult for you? Explain why.

At the end

- Something you heard that surprised you …
- How could you use this outside class?

A related journal format encourages students to reflect on their learning by looking back, looking in and looking forward.[15]

Looking back

- What activities did we do?
- What did I learn?
- How does what I learned relate to the real world?

Looking in

- What did I like or dislike about the learning experience?
- How do I feel about what I learned?
- What questions or concerns do I have about what I learned?

Looking forward

- What would I like to learn more about?
- What goal could I set for myself?
- How might what I learned help me in the future?

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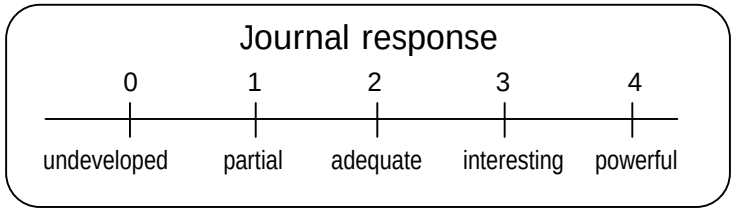
Self-assessment

Work with students to develop self-assessment tools that encourage them to set higher goals in their journal writing. Two interesting formats from Kay Burke's *How to Assess Authentic Learning* look at the level of thoughtfulness, depth and personalization of students' responses.[16]



Journal response

Little evidence of thoughtfulness 1	**Some evidence of thoughtfulness 2**	**Strong evidence of thoughtfulness 3**
Response only	Response supported by *specific examples*	Response supported by *examples* and *personal reflections*

Management tips

Consider the following suggestions for using journals in the health and life skills classroom.

- Allow students to mark any entry "private." Entries marked private are read only by the teacher. They will not be shared with others without students' permission.
- Respond to journal entries by asking questions that guide students' decision-making or problem-solving process.
- Focus on expression of ideas rather than mechanics of spelling and neatness.
- Throughout the term, ask students to revisit their journal entries and identify how their thoughts and ideas have changed.

Role-playing

Important objectives of the Health and Life Skills Program of Studies include helping students build communication skills, express feelings and increase awareness of how others think and feel. Role-playing provides students with opportunities to explore and practise new communication skills in a safe, nonthreatening environment, express feelings, and take on the role of another person by "walking in another's shoes."

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Role-playing is the spontaneous acting out of situations, without costumes or scripts. The context for the role-play is presented and roles are selected. Students have minimal planning time to discuss the situation, choose different alternatives or reactions and plan a basic scenario. At the conclusion, students have an opportunity to discuss how they felt and what they learned about that particular situation. The most important part of role-play is the follow-up discussion.

When using role-plays in the health and life skills classroom:

- always have students role-play the positive aspects of a skill or situation
- if it is necessary to role-play a negative situation, the teacher should take on the negative role
- provide a specific situation
- provide a limited time for students to develop and practise their role-plays (5 to 10 minutes is usually sufficient)
- limit the use of costumes and props
- provide students with tips for participating and observing.

Tips for participating

Share the following tips with role-play participants.

- Face the audience, and speak loudly and clearly.
- Don't rely on props or costumes. Use body language to communicate your message.
- Focus on your role-play partners and the message you want to communicate.

Encourage students to assess their participation by asking themselves the following questions.

- Am I identifying with the people involved?
- Are all the important aspects of the situation portrayed?
- Are the ideas from the planning session used in the role-play?
- Are new skills or concepts used accurately?

Tips for observing

Share and discuss the following tips for being a supportive observer.

- Demonstrate good listening by being quiet and attentive during the role-play.
- Show support by clapping and using positive words of encouragement and feedback.
- Laugh at the appropriate moments. Do not laugh at role-play participants.

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Ongoing assessment

During role-play, observe how students handle the situations represented and consider the following questions.

- Are concepts being expressed accurately in language and action?
- Are any students confused or uncertain about the purpose of the role-play, the situation or their roles?
- Should space or materials be changed?

To extend the learning from role-plays, consider the following questions.

- What issues were clarified through the role-play?
- What misconceptions might have been presented?
- What questions did the role-play raise?
- What new information is needed?
- What links does this role-play have to future tasks that extend or broaden the topic?

Role-playing can be an effective strategy for practising new skills and exploring new ideas in the health and life skills classroom. It addresses several of the multiple intelligences, and can be a motivating and memorable learning activity.

Cognitive organizers

Cognitive organizers (also known as key visuals or graphic organizers) are formats for organizing information and ideas graphically or visually. Just as cooperative learning groups make student thinking audible, cognitive organizers make student thinking visible.

Students can use cognitive organizers to generate ideas, record and reorganize information, and see relationships. They demonstrate not only *what* students are thinking but also *how* they are thinking as they work through learning tasks. Examples of cognitive organizers include Idea builders, T-charts, Venn diagrams, P–M–I charts, decision-making models, K–W–L charts and mind maps.

To teach students how to use cognitive organizers:

- use cognitive organizers to plan and introduce your lessons
- show examples of new organizers, and describe their purpose and form
- use easy or familiar material to model how to use organizers
- model organizers on the board, overhead or chart paper, using a "think-aloud" format
- give students opportunities to practise using the format with easy material
- coach them at various points in the process
- share final products; discuss what worked and what didn't, and give students an opportunity to revise information
- provide students with many opportunities to practise using cognitive organizers

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- use cognitive organizers with a range of topics and issues
- encourage students to evaluate which organizers work best in which learning situations.

Cognitive organizers work well in the health and life skills classroom because they give students an opportunity to apply their learning and give teachers information about what students are thinking.

Look for opportunities throughout the health and life skills curriculum to create new graphic organizers that fit the needs of different learner outcomes and activities.

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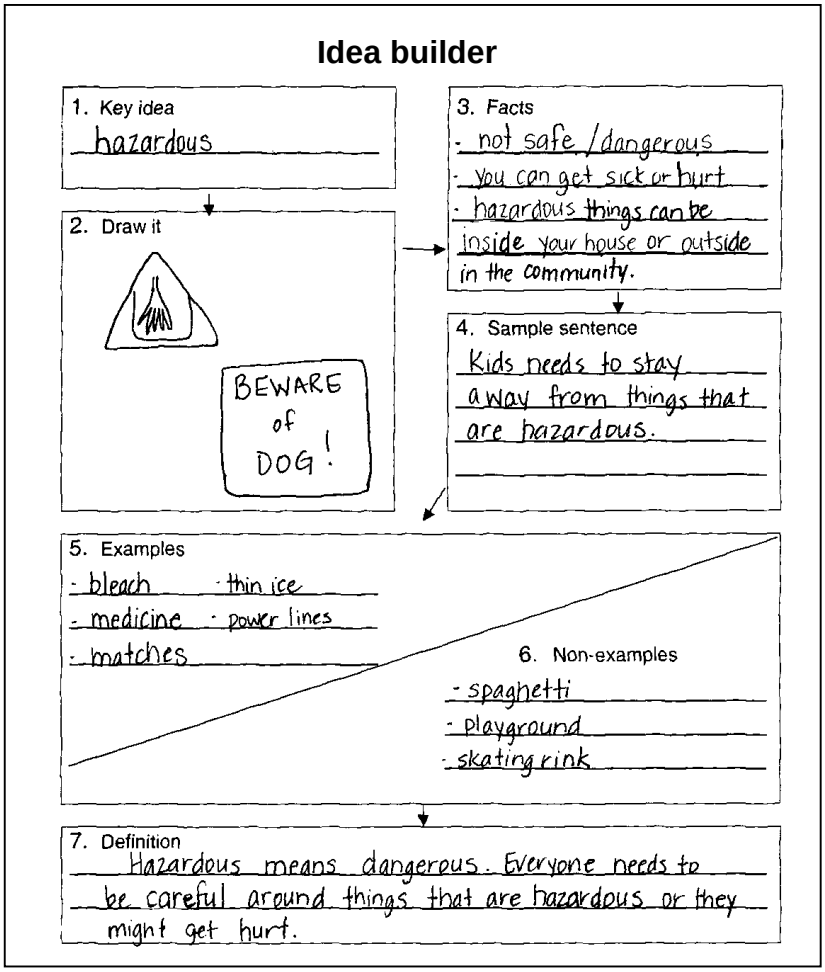
Idea builders

Idea builders create a context for introducing and/or clarifying new concepts or ideas. They help students make connections between what they know and what they will be learning. They help students gather information related to a concept by identifying essential and nonessential characteristics, examples and nonexamples. They encourage students to examine concepts from multiple perspectives, to develop inductive and divergent thinking, and to focus their attention on relevant details.



In health and life skills instruction, Idea builders can be used for basic concepts, such as immunization, assertiveness or hazardous materials. They are especially helpful for English as a Second Language (ESL) students or students with special needs who require support in understanding new concepts.

For a template of this tool, see *Student activity master 2: Idea builder* on page 2 of Appendix C.

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T-charts

T-charts help students organize their knowledge and ideas, and see relationships between pieces of information. T-charts can have two, three or more columns.

As students explore many feelings and behaviours within the health curriculum, T-charts can be valuable tools for creating visual pictures of what target behaviours (such as cooperation or resiliency) look, sound and feel like. They can also be used to compare and contrast different situations.

Triple T-chart

Title/Topic: Things you need to be healthy and happy at each stage of your life.

Infant	Young child	Adolescent
hugs / kisses	food / drink	friends
food / drink	exercise	food
toys	sleep	goals
routine	toys	exercise
fresh air	friends	responsibility
sleep	routine	acceptance
	hugs / kisses	

For a template of this tool, see *Student activity master 3: T-chart* on page 3 of Appendix C.

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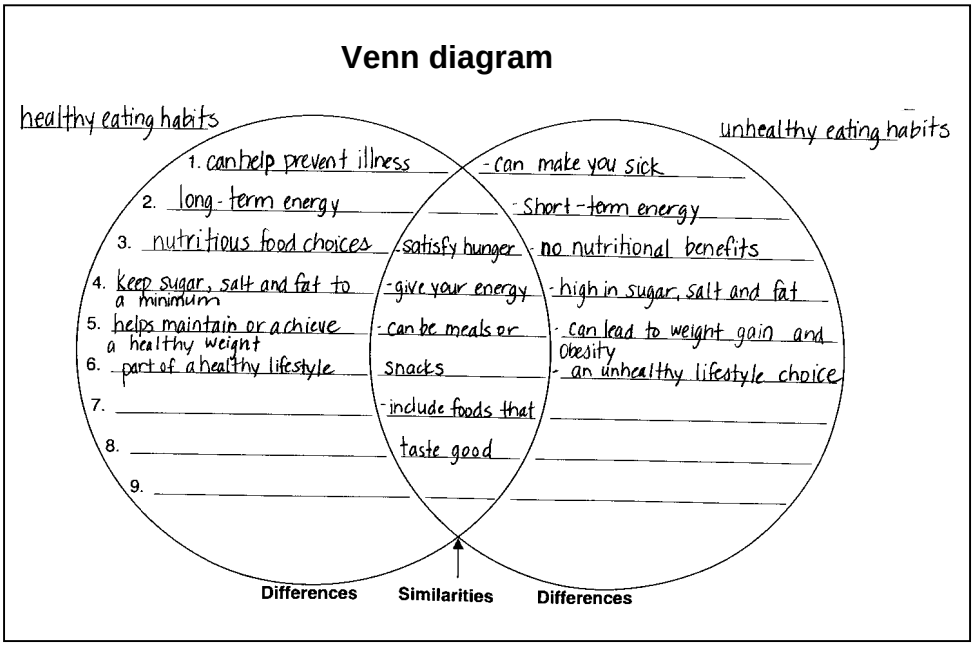
Venn diagrams

Venn diagrams compare and contrast information about two or more objects, concepts or ideas. They help students organize information and see relationships. They can be used after such activities as reading text, listening to a speaker or viewing a film.

There are many opportunities for comparing and contrasting behaviours or practices in the health and life skills program. For example, students could use Venn diagrams to compare and contrast safe and unsafe, or healthy and unhealthy habits, like the example below. Venn diagrams can also be expanded to three or more interlocking circles in order to compare a number of issues or concepts.



For a template of this tool, see *Student activity master 4: Venn diagram* on page 4 of Appendix C.

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P–M–I charts

Students can use Plus, Minus and Interesting (P–M–I) charts to compare and contrast situations, ideas or positions. P–M–I charts give students a format for organizing information, and evaluating their knowledge and ideas. Students can use this activity as a precursor to for making informed decisions.

P–M–I Decision-making chart

Question: I have been offered the answers to the Science midterm. Should I take them?

Choice 1: Take the answers.		Choice 2: Say "Thanks, but no thanks."	
Plus	**Minus**	**Plus**	**Minus**
- I could ace the midterm. - I would raise my average. - I wouldn't have to study as hard.	- I might get caught. - I'll feel guilty - I won't really know the material for the final exam.	- I feel good about myself - I'll be better prepared for the final exam	- I might not do as well on the test - The friend who offered me the answers might be upset with me
Interesting (Give reasons why) - a number of my friends have taken the answers to avoid studying - if I cheat once it might be easier to cheat again		**Interesting** (Give reasons why) Ms. Johnson is my favourite teacher and I know her exam will be fair.	

My Decision

I'll say "No, thank you." and prove I can do just as well on the test by using my study strategies to help me prepare for it.

For a template of this tool, see *Student activity master 5: P–M–I Decision-making chart* on page 5 of Appendix C.

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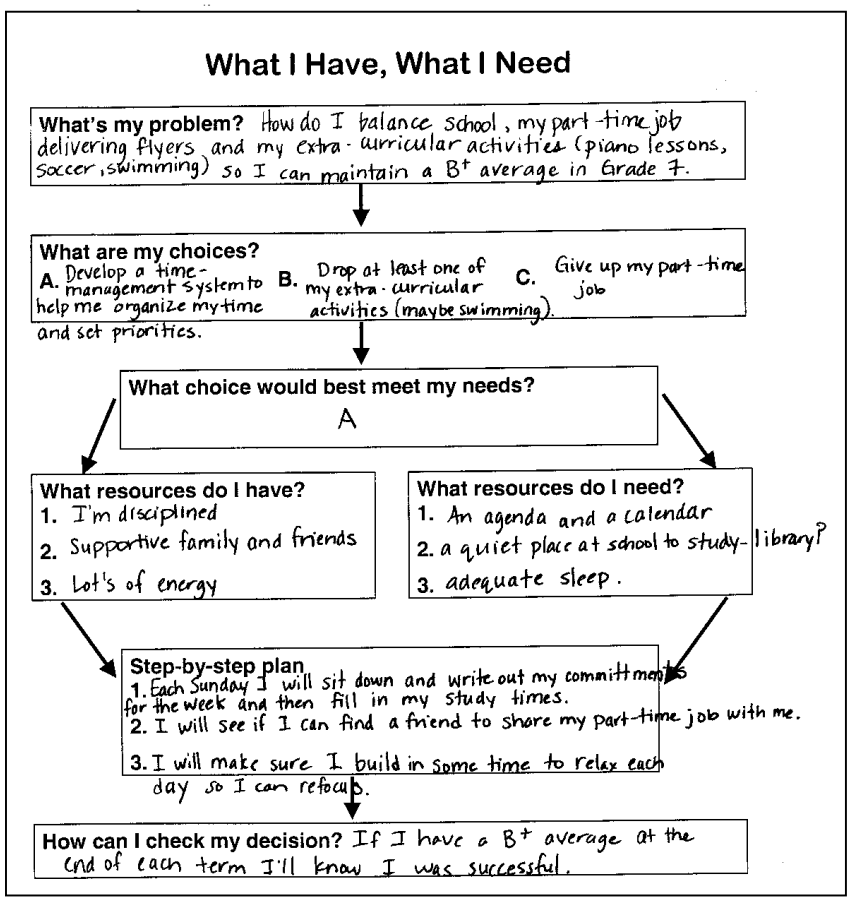
Decision-making models

Decision-making models are a step-by-step process that encourages students to look for more than one solution, choose the best alternative and develop an action plan for solving a problem or making a decision. By breaking problem solving into a step-by-step process and generating alternate solutions, students can become better and more creative problem solvers.

What I have, What I need is an example of a decision-making model.[18]



For a template of this model, see *Student activity master 6: What I have, What I need* on page 6 of Appendix C.

There are many opportunities in the health curriculum to use problem-solving and decision-making skills. For other decision-making models to use across grade levels, see *Student activity master 22: Use your decision-making steps* on page 23 of Appendix C and *Student activity master 24: Decision-making tree* on page 25 of Appendix C.

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K–W–L charts[17]

K–W–L charts help students understand what they *know* (K), what they *want to know* (W) and what they *learne*d (L) about a certain topic or issue. They are an effective visual tool to tap into students' prior knowledge and generate questions that create a purpose for learning. K–W–L charts can be used to introduce new topics or concepts, or when reading, viewing videos, preparing for guest speakers or going on field trips. They can also be a guide for research projects.

K–W–L chart

K	W	L
(List what you already **know** about the topic.)	(List questions about what you **want to know** about the topic.)	(Using your questions as a guide, write all the information you **learned**.)

For a template of this tool, see *Student activity master 7: K–W–L chart* on page 7 of Appendix C.

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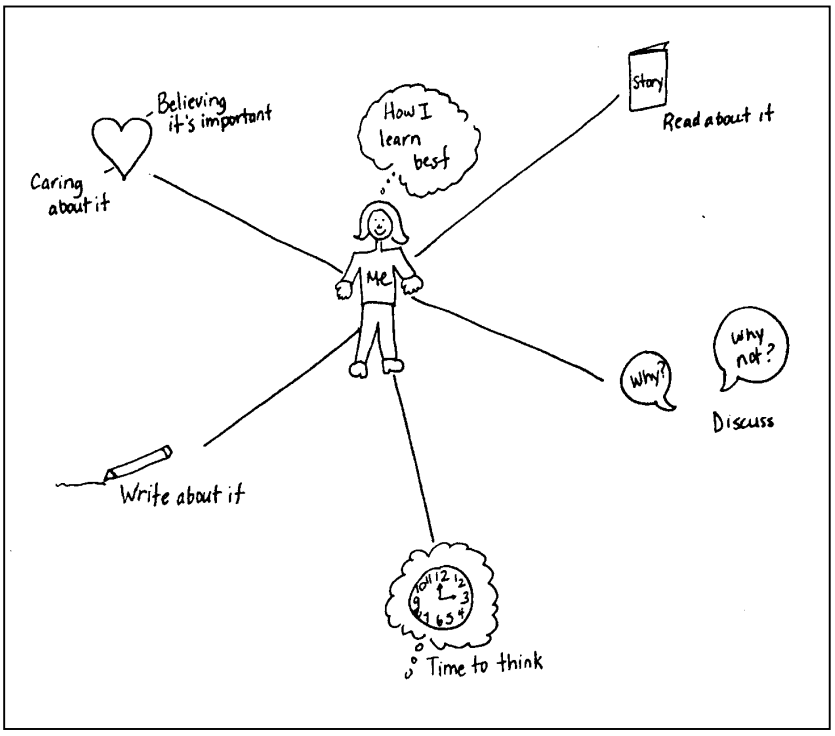
Mind maps

Mind mapping was developed in the early 1970s by British author and brain researcher Tony Buzan. It is an easy way to represent ideas using keywords, colours and imagery. Its nonlinear format helps students generate and organize ideas. Students can record a large amount of information on one piece of paper. Mind mapping allows students to show connections between ideas. Mind mapping integrates logical and imaginative thinking, and provides an overview of what students know and think about a particular topic.

Webs are simple mind maps. Adding pictures, colours and key words transforms them into a more powerful learning, memory and idea-generating tools. The following example is a mind map illustrating one student's personal learning style.[18]



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Literature response

Using literature in the health and life skills classroom allows students to increase their knowledge and understanding of the world and themselves. Literature allows students to vicariously experience new situations and identify with the experiences of characters.

Literature can also foster cross-curricular collaboration. Find out what novels students are reading in language arts and look for authentic ways to link health outcomes with themes in those novels.

Literature responses, including journals, allow students to examine ways they connect with the story and the characters, explore their ideas and beliefs, develop problem-solving skills, and incorporate hopeful strategies to draw upon in the future.

Responding to literature may take place at any stage of reading. Students can make predictions prior to reading a story. They can stop at various points in the story to make a comment, respond to what is happening or make further predictions. Finally, they can respond to what they read through a variety of post-reading activities.

While keeping a journal is a common way to have students respond to what they read, there are many other ways. These include:

- writing a letter to a character
- drawing (for example, various options a character might have, a personal experience evoked by the story)
- developing a role-play based on a story
- writing a different ending or a sequel to the story.

Service learning

Service learning is a goal-setting and action process that positively affects others. All students can participate in service learning. Service learning provides benefits for everyone involved.[19]

For students, benefits include:

- strengthening academic knowledge and skills by applying them to real problems
- building positive relationships with a variety of people
- getting to know people from different backgrounds
- discovering new interests and abilities
- setting goals and working through steps to achieve them
- working cooperatively
- taking on leadership roles
- learning the value of helping and caring for others.

For teachers, benefits include:

- having meaningful, close involvement with students
- reaching students who have difficulty with standard curriculum
- establishing home/school/community partnerships
- helping the school become more visible in the community
- promoting school spirit and pride
- building collegiality with other school staff.

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For the school and community, benefits include:

- increased connectedness between students, their schools and their communities
- improved school climate as students work together in positive ways
- more positive view of young people by the community, leading to stronger support for youth and schools
- greater awareness of community needs and concerns
- increased community mobilization to address key issues.

Sample service learning projects[20]

Goal*:* To make school a positive place for everyone.

Possible projects

- Create posters with positive messages on friendship, cooperation, crosscultural understanding, school spirit and other topics.
- Start school-wide campaigns to eliminate put-downs. Make posters, organize noon-hour events and involve school staff.
- Begin campaigns using posters, buttons and bulletin boards to encourage students to strive toward higher academic achievement. Develop special awards for improvement. Organize mini-workshops and tutoring programs.
- Plan appreciation days for school staff.
- Plan appreciation days for school volunteers.

Goal: To beautify the school.

Possible projects

- Organize school clean-up campaigns.
- Plant flowers and trees around schools.
- Organize halls of fame with photos of outstanding graduates.
- Sponsor campaigns to keep schools litter-free.
- Paint murals on hallways or walls.

Goal: To make a positive contribution to seniors in the community.

Possible projects

- Write letters to house-bound seniors who would enjoy receiving mail.
- Adopt grandparents in the community.
- Plan holiday dinners for senior citizens at nursing homes.
- Invite senior citizens for special days of sharing and discussion.
- Create handmade gifts for special occasions.
- Send handmade birthday cards to people celebrating 80+ birthdays.

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Goal: To contribute to young families in the community.

Possible projects

- Plan special parties for children in day care.
- Present puppet shows in an elementary school.
- Teach simple craft projects to children in after-school programs.
- Read stories to children in elementary school.
- Organize on-site babysitting services for special parent and community meetings held at the school.

Goal: To improve living conditions for people struggling in the community.

Possible projects

- Cook and serve meals at community centres.
- Collect food, clothing and toys for distribution at local shelters.
- Learn about the local homelessness situation and write letters of concern to community officials suggesting strategies for improving the living situations of people who are homeless.

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Turning service projects into service learning

Service learning moves beyond service projects. Sometimes, in completing service projects, students remain detached from the experience and fail to believe that their efforts are worthwhile. Service learning offers students opportunities to better understand the purpose and value of their efforts. Students who complete all the following five steps of service learning become aware that their actions make a difference.

Five steps of service learning

Step 1: Prepare

With guidance, students determine needs to address in the school and community. Students list questions they have about the issues and research the answers. Students need to clearly understand why their project is significant and how it will benefit their community. Students need to define desired outcomes and goals, choose projects that respond to authentic needs in the school or community, and consider how they can collaborate with parents and community partners to address these needs.

Choosing a service project

Identified Need: _____

1. List reasons this is an important need for the class to address.

2. What is one short-term project the class could do to address this need?

3. What is needed for this project? (Think about expenses, materials, adult help, transportation.)

4. What challenges or barriers might keep this project from being successful?

5. What are *two* long-term projects the class might carry out to address this need?

Adapted with permission from *Changes and Challenges: Becoming the Best You Can Be* (Newark, OH: Lions-Quest/Lions Clubs International, 1985, 1988, 1992), p. 65. *Skills for Adolescence* is a program sponsored by Lions Clubs International.

(See *Student activity master 8: Choosing a service project* on page 8 of Appendix C.)

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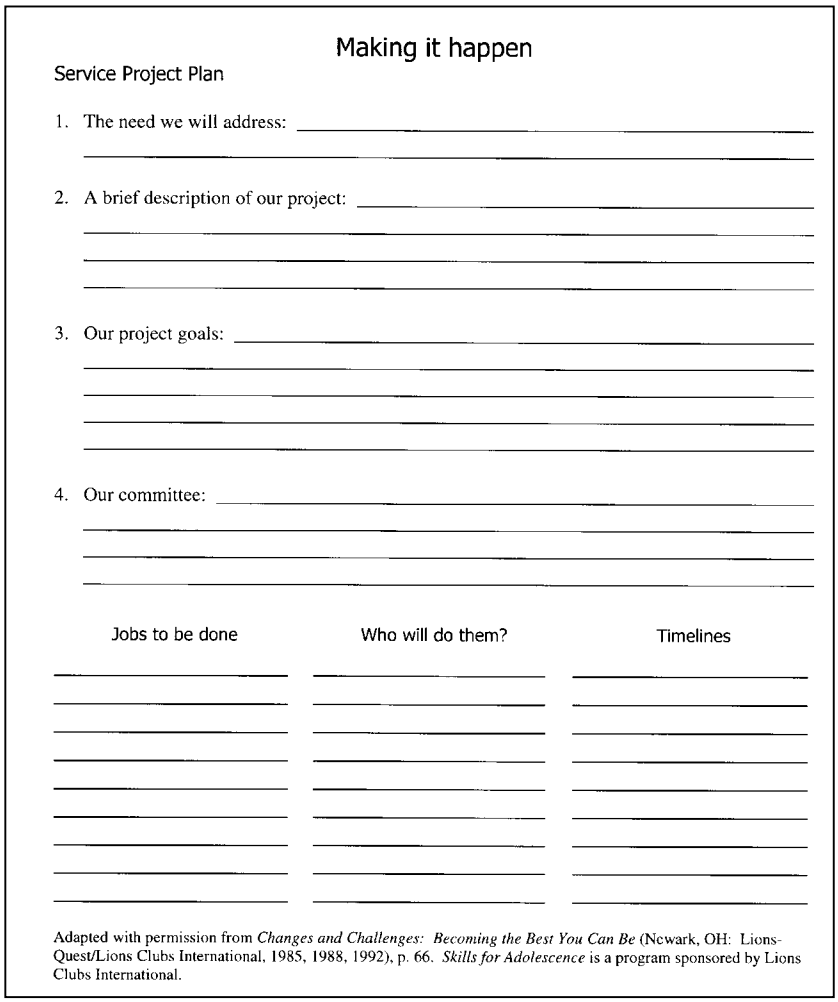
Step 2: Plan

Students develop a step-by-step plan and timeline. Each student needs to be responsible for part of the project. Encourage students to consider ways to communicate effectively with the school community, parents and the community at large. Providing information about the project encourages others to participate. Consider possible challenges and roadblocks and how they might be overcome. Teachers need to ensure that the learning provides meaningful service and real consequences.



Making it happen

Service Project Plan

1. The need we will address: _____

2. A brief description of our project: _____

3. Our project goals: _____

4. Our committee: _____

Jobs to be done	Who will do them?	Timelines

Adapted with permission from *Changes and Challenges: Becoming the Best You Can Be* (Newark, OH: Lions-Quest/Lions Clubs International, 1985, 1988, 1992), p. 66. *Skills for Adolescence* is a program sponsored by Lions Clubs International.

(See *Student activity master 9: Making it happen* on page 9 of Appendix C.)

Step 3: Put the plan into action

Ensure students assume as much responsibility as possible. Service learning needs to occur in an environment that is safe, and allows for mistakes and successes. Involve parents and screened community volunteers. Monitor performance and safety on a regular basis.

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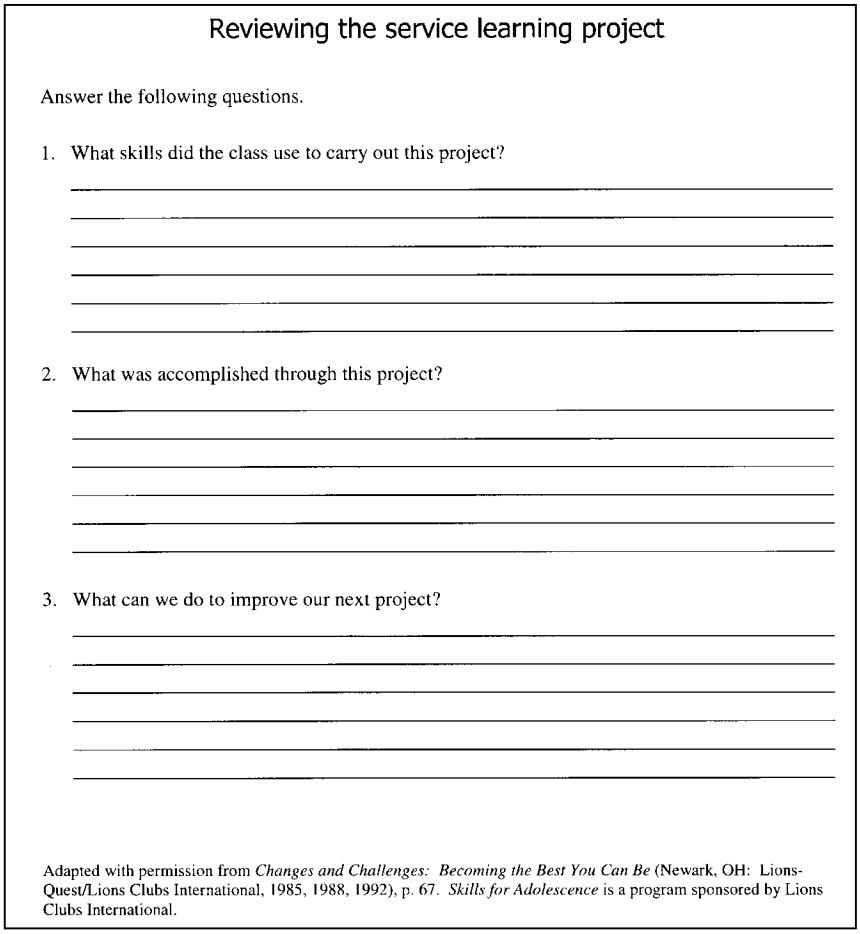
Step 4: Review and reflect

Acknowledge and celebrate the participation of everyone involved. Guide the process of systematic reflection, using various methods, such as role-plays, discussion and journal writing. Have students describe what happened, record the contribution made, discuss thoughts and feelings, and place the experience in the larger context of the community and society.



Reviewing the service learning project

Answer the following questions.

1. What skills did the class use to carry out this project?

2. What was accomplished through this project?

3. What can we do to improve our next project?

Adapted with permission from *Changes and Challenges: Becoming the Best You Can Be* (Newark, OH: Lions-Quest/Lions Clubs International, 1985, 1988, 1992), p. 67. *Skills for Adolescence* is a program sponsored by Lions Clubs International.

(See *Student activity master 10: Reviewing the service learning project* on page 10 of Appendix C.)

Step 5: Demonstrate

To reinforce learning, students must demonstrate mastery of skills, insights and outcomes by reporting to their peers, families and communities. Students could write articles or letters to local newspapers regarding local issues, or extend their experience to develop future projects in the community.

Successful service learning projects:

- create awareness of issues for students and for community members
- create awareness that youth are a resource in the community

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- involve community members—guest speakers from a variety of sources are often willing to support service learning projects
- use existing resources—find ways to use what is in the classroom rather than raise or spend money on the project. For example, student art can decorate the walls of a drop-in centre or be laminated for place mats in a kindergarten snack program.

It is essential that at the end of service learning projects, students have opportunities to privately and publicly reflect on what they contributed and learned through the project.

Issue-based inquiry

The world offers many complex social and health issues. It is essential that students have opportunities to develop their abilities to think clearly and make decisions about them. One way to create these opportunities is through issue-based inquiry with real-life issues.

In the teacher resource *Controversy as a Teaching Tool*, MacInnis, MacDonald and Scott outline a six-step social action model to help students examine issues and conduct an issue-based inquiry.[21] The steps are:

- identify the issue
- investigate the issue
- make a decision
- defend a position
- take action
- evaluate results.

This step-by-step approach creates opportunities for students to examine issues systematically in a hands-on way. This model, or selected activities within the model, can be used in a variety of ways and with a variety of topics within the health and life skills classroom.

Identifying issues

Real issues are meaningful and valid to students because they face them on a daily basis. The more controversial the issue, the greater the risk of bias. However, this is the very type of issue that needs to be examined.

Work with students to generate a list of real issues that align with the health and life skills curriculum, are relevant to the community, and are of interest to students.

An effective issue-based inquiry:

- focuses on an important theme or issue
- begins with an experience that all students have in common—in this way, new knowledge can be built on past experience
- allows for students to be involved in decision making.

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When choosing an issue, be sensitive to the social and political realities of the community. Consider how examining a particular issue could potentially affect the life of a student, a family and/or the community. For example, debating certain environmental issues in certain communities could serve to escalate bitterness between family members and/or community members.

Regardless of the issue selected, ensure there are sufficient resources available to address the issue in a comprehensive and bias-balanced manner.

Sample health-related issues for inquiry-based learning activities

These issues can be adapted for case studies, debates, role-plays, discussions, position papers or special projects.

Kindergarten

- What kind of snacks should be allowed at recess?
- Should children have to share toys they bring to school?
- How can Kindergarten children help older children?

Grade 1

- Is a 15-minute recess long enough for children to be physically active during the school day?
- Should all bike riders have to wear helmets?
- What kind of volunteer jobs should students do in the classroom?

Grade 2

- Should all junk food be banned as recess snacks?
- Should all children riding their bikes to school be required to wear a bicycle helmet?
- What kind of volunteer jobs should students do in the school?

Grade 3

- Do all students need water bottles at their desks?
- Should students be allowed to choose their own learning groups?
- Should parents limit the television viewing and computer time of their children?

Grade 4

- Should smoking be banned in all public places?
- Are Grade 4 students ready to use the Internet on their own?
- Do you have a responsibility to be a role model to younger children?

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Grade 5

- How could we ensure children brush their teeth at school after lunch?
- If there is a child with peanut allergies in the school, should all peanut products be banned?
- Should students try to mediate conflicts between other students?
- Should caffeine be banned as an additive to snacks and drinks for children?

Grade 6

- Should schools have dress codes?
- Should children be paid for doing chores at home?
- Should all tattoo and body piercing establishments be supervised by health-care professionals?
- Who is responsible for people's safety? Should it be an individual's sole responsibility or does the community need to enforce rules and laws to keep people safe?

Grade 7

- Should junior high students have part-time jobs?
- Should students be expected to do things they are uncomfortable doing, such as public speaking, as part of course requirements?
- Should there be tighter controls on advertisements aimed at junior high students?
- Should there be tighter controls on the portrayal of violence in the media? How could this be done? Who would do it?

Grade 8

- Should it be illegal to drink alcohol during pregnancy?
- Should school start time be changed to later in the morning to adjust to the typical teenager's sleep patterns?
- Are employers responsible for the safety of their employees or is it an individual responsibility?
- Should fast food restaurants be required to post nutritional information for all food sold in their restaurants?

Grade 9

- Should pop and junk food be sold in schools?
- How can Internet health information be monitored and controlled for accuracy and reliability?
- Should alternative health practices and treatments be monitored by the government? Should the cost of alternative health treatment be covered by public health plans?
- Should all students be required to take physical education classes in each year of high school?
- Is it always necessary to manage your feelings? How do you balance the need to express yourself with the need to maintain self-control?

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Controversy and bias

Bring any group of people together and sooner or later a disagreement will break out on some issue. Issues become controversial when differing positions are taken. The degree of controversy depends upon the intensity of the emotions aroused.

The examination of controversial issues is an important part of the democratic process and has an important place in the classroom. Dealing with controversial issues is essential in order to view and weigh multiple perspectives effectively, and enhance conflict resolution skills.

What is controversy?

Define controversy.

_____

_____

_____

_____

Describe three ***causes*** of controversy.

1. _____
2. _____
3. _____

Describe three possible ***benefits*** which can result from controversy.

1. _____
2. _____
3. _____

Describe three ***dangers*** which can result from controversy.

1. _____
2. _____
3. _____

Adapted with permission from Eric MacInnis, Ross MacDonald and Lynn Scott, *Controversy as a Teaching Tool* (Rocky Mountain House, AB: Parks Canada, 1997), p. 15.

(See *Student activity master 11: What is controversy* on page 11 of Appendix C.)

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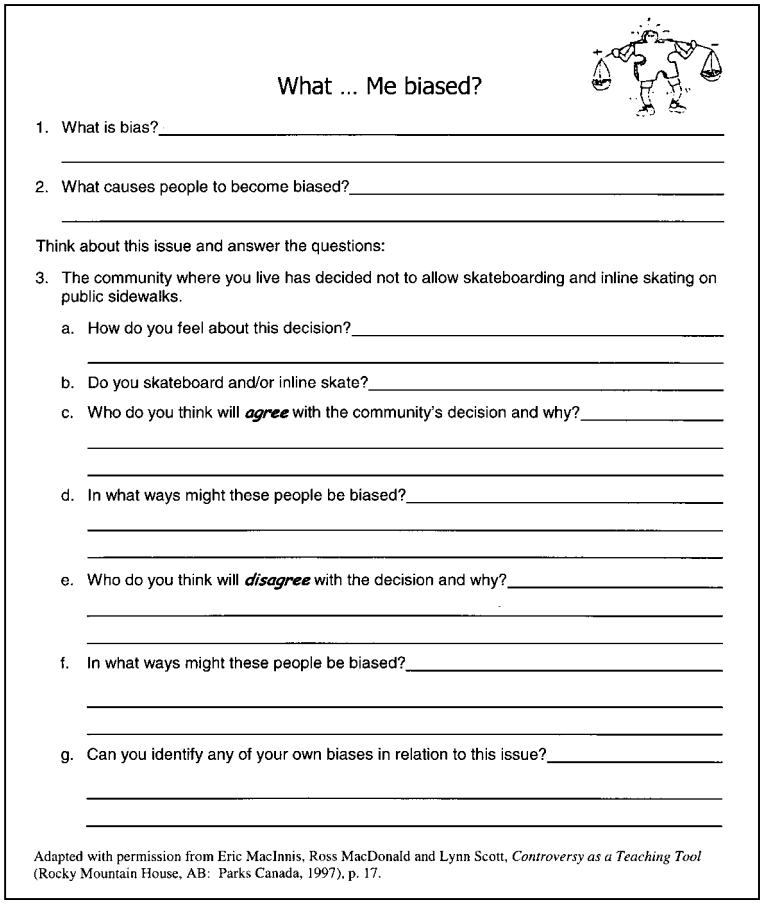
Whether bias is a result of attitudes, emotions, values or stakeholder interests, everyone is influenced by bias to some extent. An issue becomes controversial when people take opposing and strongly held positions on a desired outcome. With this in mind, it is necessary that students develop effective strategies for identifying and classifying their own biases, and those of others.



What ... Me biased?

1. What is bias?_____

2. What causes people to become biased?_____

Think about this issue and answer the questions:

3. The community where you live has decided not to allow skateboarding and inline skating on public sidewalks.

   a. How do you feel about this decision?_____

   b. Do you skateboard and/or inline skate?_____

   c. Who do you think will ***agree*** with the community's decision and why?_____

   d. In what ways might these people be biased?_____

   e. Who do you think will ***disagree*** with the decision and why?_____

   f. In what ways might these people be biased?_____

   g. Can you identify any of your own biases in relation to this issue?_____

Adapted with permission from Eric MacInnis, Ross MacDonald and Lynn Scott, *Controversy as a Teaching Tool* (Rocky Mountain House, AB: Parks Canada, 1997), p. 17.

(See *Student activity master 12: What … Me biased?* on page 12 of Appendix C.)

Introducing the issue

An engaging and motivating introduction is key to the success of an issue-based inquiry. One strategy is to show a taped newscast of the issue with students assuming the role of reporters interpreting the issue. Related newspaper clippings could be displayed and discussed. Or, the topic could be introduced by a guest speaker or a small group of students.

Having someone else introduce the issue allows teachers to remain in a neutral, unbiased position and facilitate the process. Students should assume the primary role of responsible citizens involved in a controversial issue in which action is ultimately required. Teachers need to be aware of school and district guidelines for speakers and controversial issues.

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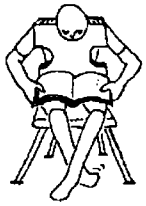
Investigating the issue

Students need opportunities to research and discover information about the issue. Distribute printed materials, bring in guest speakers and if possible, arrange for a relevant field trip. Help students develop frameworks for gathering and analyzing new information.

Research record



Issue/topic: _____

Source: _____

_____

Important information: _____

_____

_____

_____

_____

_____

_____

_____

Biased (circle your answer)? YES NO

If yes, in which way(s)? _____

_____

_____

My thoughts:
(How does this information relate to the issue? Use the back of this sheet if you need to.)

_____

_____

_____

_____

_____

_____

_____

_____

Adapted with permission from Eric MacInnis, Ross MacDonald and Lynn Scott, *Controversy as a Teaching Tool* (Rocky Mountain House, AB: Parks Canada, 1997), p. 51.

(See *Student activity master 13: Research record* on page 13 of Appendix C.)

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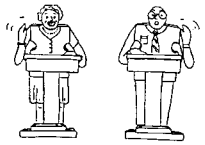
Talking the talk—Guest speaker report

Issue: _____

Name of speaker: _____

Occupation: _____

Source of information (check one or both):
Primary _____ Secondary _____



Notes:

Space for drawing/illustrations:

Adapted with permission from Eric MacInnis, Ross MacDonald and Lynn Scott, *Controversy as a Teaching Tool* (Rocky Mountain House, AB: Parks Canada, 1997), pp. 53–54.

BIASED: In your opinion, is this speaker influenced by personal bias?

Is the information based more on the speaker's opinion about the issue, or on facts?

How do you know?

How has this information affected your opinion?

What is your position on this issue now and why?

(See *Student activity master 14: Talking the talk—Guest speaker report* on pages 14–15 of Appendix C.)

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Making a decision

Students can use the *Making a decision* chart to compile information throughout the inquiry.

Making a decision

Issue: _____

Option: _____

	PROS +	CONS –
Facts:		
Feelings:		
My new ideas:		
My decision on this option:		
My reasons for decision:		

Adapted with permission from Eric MacInnis, Ross MacDonald and Lynn Scott, *Controversy as a Teaching Tool* (Rocky Mountain House, AB: Parks Canada, 1997), p. 61.

(See *Student activity master 15: Making a decision* on page 16 of Appendix C.)

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Defending a position

Students can present their decisions in position papers. This may be done individually, in pairs or in small groups. Alternatively, students could communicate their positions through oral presentations or design posters.

Position paper – Here's what I think

Title: _____

After examining the different sides of this issue, I have decided that the best option at this time is:

I consider my option to be the best choice because:

Adapted with permission from Eric MacInnis, Ross MacDonald and Lynn Scott, *Controversy as a Teaching Tool* (Rocky Mountain House, AB: Parks Canada, 1997), p. 64.

(See *Student activity master 16: Position paper—Here's what I think* on page 17 of Appendix C.)

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Taking action

The action component of a unit may be the most rewarding for both students and teachers. In this phase, students use all they have learned about an issue to develop action plans. To minimize risks and make this as positive an experience as possible for all participants, consider the following suggestions.

- Encourage students to discuss projects with their parents.
- Ensure that the issue itself remains secondary to the process that students are learning.
- Set reasonable expectations. Students may become disappointed or disillusioned if their actions do not achieve desired results.
- Encourage specific actions within a specified time frame and focus on actions that have a likelihood of positive outcomes.
- Encourage students to engage in cooperative, positively structured actions, such as debates.
- Resist pressure to become personally involved in the issue.
- Keep your school administration informed from the beginning to ensure the necessary support for student actions.
- Help students become aware of the fact that choosing to do nothing is also an action.
- Set clear parameters in relation to actions.

Encourage students to share their positions and solutions. Classify the actions into categories and discuss the characteristics of each.

Action categories include the following.

Research/information gathering—includes actions intended to increase knowledge of the event itself.

Public awareness/media—includes actions designed to receive media attention, and influence the audience and decision makers; for example, letters to the editor, press conferences, public awareness campaigns.

Direct—includes actions of a nonpolitical direct nature, such as picketing, boycotting, meeting with involved parties.

Legal—includes litigation and participation in public hearings.

Organizational—includes fund-raising or formation of a special interest group.

Political—includes actions that are designed to influence or gain the assistance of elected officials; for example, petitions and letters.

Civil disobedience/illegal—exclude these actions but discuss the implications of these choices.

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As a group, decide which actions fall within the scope and time limitations of the unit. Encourage students to develop a plan of action.

Planning to take action

What do you hope to achieve? _____

_____

What is your plan of action? _____

_____

_____

Can you stop or change your proposed action once it is started? _____

_____

_____

Examples of actions

- attend meetings
- begin (and/or sign) a petition
- conduct a public awareness campaign
- create displays, posters, brochures, media-related material
- discussions with parents, other students, teachers, others
- goods or services boycotts
- join or form a group
- learn more about issues, who makes decisions and how
- make a presentation
- make phone calls
- write a report
- write letters to: editors, politicians, decision makers, and other influential people

Brainstorm additional examples of actions:

_____

_____

_____

_____

Adapted with permission from Eric MacInnis, Ross MacDonald and Lynn Scott, *Controversy as a Teaching Tool* (Rocky Mountain House, AB: Parks Canada, 1997), p. 70.

(See *Student activity master 17: Planning to take action* on page 18 of Appendix C.)

Let's do it—Defining your actions

Issue: _____

My position: _____

_____

Action planning table

Action	Type of action	Resources to be used	Group or individual	Dates for action	Anticipated results of action

My chosen action: _____

_____

Adapted with permission from Eric MacInnis, Ross MacDonald and Lynn Scott, *Controversy as a Teaching Tool* (Rocky Mountain House, AB: Parks Canada, 1997), p. 71.

(See *Student activity master 18: Let's do it—Defining your actions* on page 19 of Appendix C.)

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Evaluating results

It is essential that students have the opportunity to review the steps in the process so they are able to apply them again when examining other issues. Reflecting on the experience lets students identify new understandings and assess their own learning.

Did I make a difference? Evaluating your actions

Issue: _____

What did I (we) do?	What were the results?
What could we do now?	
What are the most important things I learned from this unit?	
How could I use the new information and skills from this unit in the future?	

Adapted with permission from Eric MacInnis, Ross MacDonald and Lynn Scott, *Controversy as a Teaching Tool* (Rocky Mountain House, AB: Parks Canada, 1997), pp. 74, 75.

(See *Student activity master 19: Did I make a difference? Evaluating your actions* on page 20 in Appendix C.)

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Endnotes

3. Bennett, Rolheiser-Bennett and Stevahn, 1991.

4. Adapted with permission from Four Worlds Development Project, *The Sacred Tree Curriculum Guide* (Lethbridge, AB: Four World Development Project, 1988), pp. 21–22.

5. Adapted from *Change for Children: Ideas and Activities for Individualizing Learning* (pp. 169, 170) by Sandra Nina Kaplan, Jo Ann Butom Kaplan, Sheila Kunishima Madsen & Bette Taylor Gould © 1980 by Scott Foresman. Published by Good Year Books. Used by permission of Pearson Education, Inc.

6. Adapted from Carol Ann Tomlinson, "Independent Study: A Flexible Tool for Encouraging Academic and Personal Growth," *Middle School Journal* 25, 1 (1993), pp. 78, 79, 80, 81, 82. Reproduced and adapted from the original article appearing in the September 1993 *Middle School Journal*. Permission granted by National Middle School Association.

7. Adapted, by permission, from Manitoba Education and Training, *Success for All Learners: A Handbook on Differentiating Instruction* (Winnipeg, MB: Manitoba Education and Training, 1996), p. 11.15.

8. Ibid., pp. 11.11–11.12.

9. From Kay Burke, Robin Fogarty and Susan Belgrad, *The Mindful School: The Portfolio Connection* (Arlington Heights, IL: IRI/Skylight Training and Publishing, Inc., 1994), p. 73. Used with permission from Skylight Professional Development.

10. Adapted from Kay Burke, *The Mindful School: How to Assess Authentic Learning*, 3rd ed. (Arlington Heights, IL: Skylight Professional Development, 1999), p. 117. Adapted with permission from Skylight Professional Development.

11. Ibid., p. 116.

12. Ibid., p. 115.

13. Ibid., p. 116.

14. Ibid., pp. 117–118.

15. Adapted with permission from Edmonton Public Schools, *Combined Grades Manual 4/5* (Edmonton, AB: Resource Development Services, Edmonton Public Schools, 1999), p. 32.

16. Adapted from Kay Burke, *The Mindful School: How to Assess Authentic Learning*, 3rd ed. (Arlington Heights, IL: Skylight Professional Development, 1999), pp. 118–119. Adapted with permission from Skylight Professional Development.

17. Ogle, 1986.

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18. Used with permission from Edmonton Public Schools, *Thinking Tools for Kids: Practical Organizers* (Edmonton, AB: Resource Development Services, Edmonton Public Schools, 1999), p. 80.

19. Used with permission from *Lions-Quest Skills for Adolescence Curriculum Manual* (Newark, OH: Lions-Quest/Lions Clubs International, 1992), pp. 3–4. *Skills for Adolescenc*e is a program sponsored by Lions Clubs International.

20. Adapted with permission from *Changes and Challenges: Becoming the Best You Can Be* (Newark, OH: Lions-Quest/Lions Clubs International, 1992), pp. 62–63. *Skills for Adolescenc*e is a program sponsored by Lions Clubs International.

21. Adapted with permission from Eric MacInnis, Ross MacDonald and Lynn Scott, *Controversy as a Teaching Tool* (Rocky Mountain House, AB: Parks Canada, 1997), pp. 13, 14, 16, 18, 19, 22, 48, 67, 68, 69, 73.

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