Module 4:
Invention Convention: The Student As Inventor

This module is the culmination of the *Inventions, Innovations, and Discoveries* interdisciplinary unit. Through the learning experiences (LEs) in this unit, students have learned about processes leading to the creation of their own invention. They now find out what is involved in applying for a patent, and create promotional logos, posters, pamphlets, jingles, and electronic advertisements. They proudly market their achievements to a wide audience through an event called "Invention Convention." Finally, they reflect upon the success of their marketing campaign.

The five LEs that comprise Module 4: Invention Convention: The Student As Inventor are described below.

LE Title	Estimated Time	Overview
Mod.4.1: Design Your Own Invention OR Build a Better…	300 (5 x 60) minutes	Students design and build their own invention, based on a "need" they have identified that could fulfill a specific "want," or they improve on a current invention (innovation). **Note:** The learning experiences in Mod.4.2: Design a Logo/Business Card and Mod.4.3: Promotion can be started while students continue to build the final version of their invention in Mod.4.1: Design Your Own Invention OR Build a Better...
Mod.4.2: Design a Logo/ Business Card	120 minutes	Students use graphics software to design their own logo and create a catchphrase to promote their invention. They create a business card that incorporates their logo and catchphrase. **Note:** Mod.4.2: Design a Logo/Business Card may be introduced while students are building the final version of their invention.
Mod.4.3: Promotion	300 (5 x 60) minutes	Students review a variety of advertising strategies used to promote products and services. They rotate through learning centres to create a promotional poster, a commercial, a pamphlet, a jingle, and a multimedia presentation or website to promote their invention.
Mod.4.4: Showtime	300 (5 x 60) minutes (including 120 minutes for Invention Convention event itself)	Students are now ready to showcase their inventions. They plan, promote, set up, and hold an Invention Convention. **Note:** Since some of the work, such as contacting the media and making various bookings, needs to be done ahead of time, Mod.4.4: Showtime may be introduced before Mod.4.3: Promotion and revisited when needed according to the planning timeline students set up.
Mod.4.5: Mission Accomplished: A Reflection	90 minutes	Students reflect upon the Invention Convention. They note what worked well and what could be improved upon in general for the event. They reflect on their own display, on the feedback they received for their invention, and on the suggestions that were made. **Note:** Mod.4.5: Mission Accomplished: A Reflection should take place within a few days following the Invention Convention event.

Design Your Own Invention OR Build a Better… **Mod.4.1**

TIME
300 (5 x 60) minutes

OVERVIEW
Students design and build their own invention, based on a "need" they have identified that could fulfill a specific "want," or they improve on a current invention (innovation).

Note: The learning experiences in Mod.4.2: Design a Logo/Business Card and Mod.4.3: Promotion can be started while students continue to build the final version of their invention in Mod.4.1: Design Your Own Invention OR Build a Better...

LEARNING OUTCOMES
Through this learning experience (LE), students will achieve specific learning outcomes (SLOs) in various subject areas. Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified.

English Language Arts
Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified below:
- 2.3.5 *Create Original Texts* — Create original texts [such as letters, short stories, media broadcasts, plays, poems, video presentations, Readers Theatre…] to communicate and demonstrate understanding of forms and techniques.
- 3.1.1 *Use Personal Knowledge* — Summarize and focus personal knowledge of a topic to determine information needs.
- 3.1.4 *Create and Follow a Plan* — Create and follow a plan to collect and record information within a pre-established time frame.
- 3.3.2 *Record Information* — Make notes on a topic, combining information from more than one source; reference sources appropriately.
- 4.2.5 *Enhance Presentation* — Prepare detailed and organized compositions, presentations, reports, and inquiry or research projects using templates or pre-established organizers.

Science
Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified below:
- SLOs related to Scientific Inquiry or the Design Process in Cluster 0: Overall Skills and Attitudes.

ICT LITERACY SKILLS AND COMPETENCIES
Consider the intent of this LE and your choice of instructional and assessment strategies to determine which skills and competencies students may achieve, in addition to those identified below:
- basic operating skills
- concept mapping

- graphics creation
- spreadsheet analysis
- word processing

SUGGESTED LEARNING RESOURCES

Software

- concept mapping
- word processor
- graphics
- spreadsheet

Internet

- IMYM Links Database: <http://www.edu.gov.mb.ca/ks4/tech/imym/resources/links.html>

Print

- Appendix C: Index of Teaching and Learning Strategies and Tools
- Manitoba Education and Training. *Grades 5 to 8 English Language Arts: A Foundation for Implementation.* Winnipeg, MB: Manitoba Education and Training, 1998. (See Desk-O-Matic, Grade 5, 162.)

BLMs

- BLM Mod.4.1#1: Timeline for Developing Your Invention
- BLM Mod.4.1#2: Inventor Logbook
- BLM Mod.4.1#3: Patent Application
- BLM Mod.4.1#4: Patent FAQs
- BLM Mod.4.1#5: Patent Application Checklist
- BLM Mod.4.1#6: Personal Goal Setting

TBLM

- TBLM Mod.4.1#1: Patent Certificate

SUGGESTIONS FOR INSTRUCTION

Preparation and Set-up

- Post the list of needs that have been brainstormed so far throughout this interdisciplinary unit.
- Provide students with several copies of BLM Mod.4.1#2: Inventor Logbook for their use.
- Make copies of Desk-O-Matic for each student (see Print in Suggested Learning Resources).

Activating Strategies

- Give copies of Desk-O-Matic to students. In Think-Pair-Share groups, students discuss the invention described on the handout.
- Students review the list of needs that have been identified throughout this interdisciplinary unit (see survey results from Mod.2.6: Customer Service Department).
- Students brainstorm and list any additional needs, based on their own wants.
- Students review and discuss each suggestion on the list, considering feasibility, safety, cost efficiency of production, availability of materials, and so on, and cross out unsuitable or unachievable suggestions. Explain that students will have to provide their own supplies as they build their own invention.

Acquiring Strategies

- Give each student a copy of BLM Mod.4.1#4: Patent FAQs. Clarify concepts addressed in the questions and answers regarding patents. Explain that students are expected to file a patent for their invention.
- Each student chooses an invention to develop or to improve and fills out BLM Mod.4.1#1: Timeline for Developing Your Invention. Students can use the BLM as a template to set up a timeline, using spreadsheet or concept-mapping software.
- Explain that throughout the invention process, each student keeps an Inventor Logbook. Review and explain the content of BLM Mod.4.1#2: Inventor Logbook.
- Students draw a plan/blueprint for their invention. Students can use graphics software to create their plan/blueprint, which should include descriptions of parts of the invention and their purpose, as well as measurements. Students confer with peers and the teacher to review their plan/blueprint and make modifications.
- As an alternative way to assess goals and involvement in the task at hand, ask students to complete BLM Mod.4.1#6: Personal Goal Setting.

Applying Strategies

- Students build a prototype of their invention. Emphasize the importance of keeping accurate daily logs, and remind students to
  - include drawings of their invention from different angles, noting any changes
  - provide accurate measurements, ensuring that the drawings are made to scale
- Students form test teams. They test each other's prototype and make improvements based on observations of performance or suggestions from team members.
- Students build the final version of their invention.
- Students complete BLM Mod.4.1#3: Patent Application and file a formal Application for Grant of a Patent for their invention.
- Students fill out BLM Mod.4.1#5: Patent Application Checklist and submit it to the teacher, along with their completed BLM Mod.4.1#3: Patent Application.
- As Commissioner of Patents, prepare a duly signed Patent Certificate for the successful student applicant (see TBLM Mod.4.1#1: Patent Certificate).

SUGGESTIONS FOR ASSESSMENT

- Review students' BLM Mod.4.1#1: Timeline for Developing Your Invention. Confer with students about realistic expectations and goal achievement.
- Review students' BLM Mod.4.1#2: Inventor Logbook and take note of their progress.
- Observe each student's level of
  - participation within the test team
  - commitment in the invention development process
- Review BLM Mod.4.1#5: Patent Application Checklist to ensure each student's application is complete. Comment on the application contents in the space provided.

BLM Mod.4.1#1: Timeline for Developing Your Invention

Name _____

Create a plan for designing and building your invention. Set a specific goal for each day, describing what outcome will be achieved by the end of the day. Keep in mind that if a goal is not achieved, your timeline will become inaccurate. Set realistic goals for yourself, based on what the class has discussed during the *Inventions, Innovations, and Discoveries* interdisciplinary unit, and the time it has taken to achieve other goals and complete other projects so far.

Invention _____

Goals for Designing and Building Invention	
Day 1 Goal	
Day 2 Goal	
Day 3 Goal	
Day 4 Goal	
Day 5 Goal	
Day 6 Goal	
Day 7 Goal	
Day 8 Goal: Final Invention Product	

BLM Mod.4.1#2: Inventor Logbook

Complete as many categories as apply to today's work.

Name _____ Date _____ Day # _____

<table>
<tr><td colspan="4">My goal to achieve today:</td></tr>
<tr><td>Am I on schedule?</td><td>Yes</td><td>No</td><td rowspan="5"></td><td>Draw prototype adjustments.</td></tr>
<tr><td colspan="3">Ideas for improvement:</td><td rowspan="4"></td></tr>
<tr><td colspan="3">Testing:</td></tr>
<tr><td colspan="3">Suggestions from test team:</td></tr>
<tr><td colspan="3">What I achieved today:</td></tr>
<tr><td colspan="5">Goals for next day:</td></tr>
<tr><td colspan="5">What needs to be done to achieve my set goal:</td></tr>
</table>

Witness _____ Date _____

BLM Mod.4.1#3: Patent Application

Application for Grant of a Patent

The applicant _____

requests the grant of a patent for an invention entitled

_____

which is described and claimed in the accompanying specification.

Declaration

- I do not know and do not believe that the invention was ever known or used in Canada before I invented it.
- I do not know and do not believe that the invention was ever patented or described in any book, magazine, newspaper, or on the Internet in any country before I invented it.
- I am the sole inventor.
- I own the whole interest of the invention.

Name of Inventor _____

School Name _____

School Address _____

_____

Name of Teacher _____

Signature of Inventor _____

Date of Application _____

BLM Mod.4.1#4: Patent FAQs

For definitions of terms used in the following questions and answers, refer to the Canadian Intellectual Property Office (CIPO) website at: <http://strategis.ic.gc.ca/sc_mrksv/cipo/patents/e-filing/gloss.htm>.

Q. What is the difference between copyright and a patent?

A. The Canadian Intellectual Property Office website defines the terms as follows:

Copyright: "legal protection for literary, artistic, dramatic, or musical works, computer programs, performer's performances, sound recordings and communication signals." (CIPO, Glossary: <http://strategis.ic.gc.ca/sc_mrksv/cipo/patents/e-filing/gloss.htm>)

Patents: "Patents are government grants that give inventors exclusive rights to their inventions. Patent protection applies in the country that issues the patent… Patents are granted for products or processes that are new, workable and ingenious (novel, useful and inventive). In this way, patents serve as a reward for ingenuity…

In Canada, a patent is given to the inventor who first files an application. It's therefore wise to file as soon as possible after completing your invention because someone else may be on the same track."
(CIPO, Frequently Asked Questions: <http://strategis.gc.ca/sc_mrksv/cipo/patents/faq_pt-e.html>)

Q. Why obtain a patent?

A. If you do not have a patent, you can protect your invention only if you do not share it in public. The moment that you show your invention to anyone else, you run the risk that this person can use it without your consent, market it, and claim rights to it by obtaining a patent.

Q. Who can apply for a patent?

A. The legal owner of an invention can obtain the patent. Usually, the owner is the person who invented something.

Q. How long does it take to obtain a patent?

A. It may take up to three years.

Q. How long is a patent effective?

A. In Canada, the "life" of a patent is 20 years from the date the application was first filed. During that time, the invention is protected from being copied. A fee must be paid yearly to keep it in force.

Q. Are patent laws the same around the world?

A. Patent laws are national and can differ from one country to another. When applying for a patent in Canada, ensure that you read and understand Canadian patent information and laws.

Q. Where is my patent protected?

A. A patent obtained in Canada protects your invention in Canada. To be protected in other countries, you must also file a patent application in each country in which you want protection.

(continued)

Q. What happens if an invention with a patent is copied?

A. The owner of the patent can claim rights infringement and ask for compensation. A famous example is the sewing machine.

Elias Howe (1819-1867), an American, invented a sewing machine and was granted a patent in 1846. Isaac Merrit Singer (1811-1875), also an American, invented a continuous-stitch sewing machine in 1851. Others also made copies of Howe's invention. After much time in courts of law, it was determined in 1854 that Howe was the rightful inventor of the sewing machine. By the time his patent expired in 1867, he had made about $2,000,000 from his invention.

However, Singer's greatest "invention" was the marketing of his sewing machine. He started a company that became world famous. To this day, the Singer name is most widely associated with the invention of the sewing machine.

Q. How do I know whether a patent for my invention already exists?

A. While you may think that your invention is original, it may, in fact, have been invented and patented by someone before you. By doing a preliminary search, you may determine that there is another invention like yours already patented, thereby saving yourself time and money.

Q. What needs to be included in a patent application?

A. The following documents must be included in a patent application:

- a petition or application
- a detailed description of the invention
- an abstract, which is a brief summary of your invention
- a claim, which determines exactly what part(s) or aspect(s) of your invention, or how much of your invention, the patent will protect. If the invention uses objects already invented, the claim can only include the original or new aspects.
- any drawing referred to in the description
- a filing fee

BLM Mod.4.1#5: Patent Application Checklist

Name _____ Date _____

Contents of Patent Application	Student ✓	Teacher ✓
❑ Petition or application is completed. Dated: _____		
The application includes		
❑ a detailed description of the invention, including its purpose, the needs it fulfills, and its use		
❑ an abstract, or a brief summary of the invention (two or three sentences)		
❑ a claim that explains which aspects of the invention are to be protected with the patent		
❑ all drawings portraying the invention from different angles and labelled accordingly		
Teacher Comments		

BLM Mod.4.1#6: Personal Goal Setting

Name _____

My goal is:
The steps I need to take to reach my goal: • • • •
The resources I need to use to achieve my goal (who and what): • • • •
Starting Date: Completion Date:
Outcome:
Next step:
Date: Signature:

Personal Goal Setting: Reproduced from Grades *5 to 8 English Language Arts* (Manitoba Education and Training BLM-46).

TBLM Mod.4.1#1: Patent Certificate

Patent Certificate

_____

(Name of Inventor)

_____

(Name of Invention)

Whereas an application for a new and useful invention has been received and

Whereas application requirements have been complied with

Therefore this patent grants to the person named above, having title to the invention named above, the right to exclude others from making, using, or selling this invention for the term of the patent.

This _____ in the year _____

_____

(Commissioner of Patents)

Design a Logo/Business Card **Mod.4.2**

TIME
120 minutes

OVERVIEW
Students use graphics software to design their own logo and create a catchphrase to promote their invention. They create a business card that incorporates their logo and catchphrase.

Note: Mod.4.2: Design a Logo/Business Card may be introduced while students are building the final version of their invention.

LEARNING OUTCOMES
Through this learning experience (LE), students will achieve specific learning outcomes (SLOs) in various subject areas. Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified.

English Language Arts
Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified below:

- 1.2.4 *Extend Understanding* — Appraise ideas for clarity and ask extending questions; select from others' experiences and ideas to extend ways of knowing the world.
- 2.3.1 *Forms and Genres* — Recognize key characteristics of various forms and genres of oral, literary, and media texts [such as novels, biographies, autobiographies, myths, poetry, drawings and prints…].
- 2.3.4 *Experiment with Language* — Alter words, forms, and sentence patterns to create new versions of texts for a variety of purposes [such as humour…]; explain ways in which figures of speech [such as similes, metaphors…] clarify and enhance meaning.
- 2.3.5 *Create Original Texts* — Create original texts [such as letters, short stories, media broadcasts, plays, poems, video presentations, Readers Theatre…] to communicate and demonstrate understanding of forms and techniques.
- 4.1.1 *Generate Ideas* — Focus a topic for oral, written, and visual texts integrating ideas from experiences and a variety of other sources.
- 4.2.4 *Enhance Artistry* — Choose language, sounds, and images [including transitional devices] to enhance meaning and emphasis.

Mathematics
Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified below:

- N-IV.1.6 Demonstrate and explain the meaning of ratio and the meaning of percentage, concretely, pictorially, and symbolically.
  (**Note:** At this point, introduce this concept, but do not assess it.)

ICT LITERACY SKILLS AND COMPETENCIES
Consider the intent of this LE and your choice of instructional and assessment strategies to determine which skills and competencies students may achieve, in addition to those identified below:

- basic operating skills
- graphics creation

- inquiry using electronic sources
- spreadsheet analysis

SUGGESTED LEARNING RESOURCES

Software

- graphics
- spreadsheet
- concept mapping
- word processing

Internet

- business websites (e.g., toy companies, software or hardware companies, bookstores, music industries, movie industries)

Print

- Appendix C: Index of Teaching and Learning Strategies and Tools

Materials

- business cards, product packaging, flyers, newspapers, and magazines
- drawing supplies

SUGGESTIONS FOR INSTRUCTION

Preparation and Set-up

- **Note:** Logos, trademarks, and catchphrases are used by companies to create brand recognition and inspire customer loyalty. They gradually become synonymous with well-known products.
- Collect samples of logos from business cards, product packaging, flyers, newspapers, and magazines, and/or ask students to bring them to class.

Activating Strategies

- In collaborative groups, students collect at least 12 logos with the corresponding company names from business cards, product packaging, flyers, newspapers, and magazines. They separate the business logos from the company names and then make
  - a Picture Splash poster with the business logos
  - a complementary Word Splash poster with the company names

  Using spreadsheet software, the collaborative groups make a form with a grid that other groups can use to match company names and logos from the two posters. Groups exchange posters and forms, and try to match the logos with the corresponding names.
- As a class, using concept-mapping or word-processing software, students brainstorm to create a Word Splash of catchphrases used by companies to sell their products (e.g., “It keeps going and going and going…”—Energizer Bunny).

Acquiring Strategies

- In collaborative groups, students search the Internet to find and print at least 12 logos from a variety of products and services. They organize the logos in groups according to those that they find most effective, most appealing, and most easy or difficult to recognize or identify. Students list the characteristics they think make a logo most effective. (Consider attributes such as size, font, colour, clarity, shape, number of components, or any other suitable attributes).

- In small groups, students examine product catchphrases. They should note that catchphrases are short, to the point, and catch the reader's attention, often with a "play on words."
- Based on their list of characteristics of an effective logo, students create a checklist for assessing the effectiveness of logos and catchphrases.

Applying Strategies

- Based on the student-generated checklist of characteristics of effective logos and catchphrases, students design a logo for their invention using a graphics program. The original logo should measure approximately 15 cm square. Advise students that the logo will be reduced to about 2.5 cm square. Therefore, the lines should be clear, the content simple and uncluttered, and the colours crisp.
- If students are working with paper, they use white paper, pencils, and drawing tools to help with lines and curves. They go over the design in ink and colour it in.
- Students reduce their logo to 2.5 cm square and enhance it to make it clean and clear.
- Students place their logo and catchphrase on their Invention web page on the class website.
- Using their observations of business cards, students design their own business card, including their logo and catchphrase, as well as their name, school address, school telephone number, and email address.

Variation/Extension

- Students design packaging for their invention.

SUGGESTIONS FOR ASSESSMENT

- Examine students' logos and catchphrases to assess how well they meet the attributes identified in the student-generated checklist.
- Verify that students' business cards include all the required components.

Promotion **Mod.4.3**

TIME
300 (5 x 60) minutes

OVERVIEW
Students review a variety of advertising strategies used to promote products and services. They rotate through learning centres to create a promotional poster, a commercial, a pamphlet, a jingle, and a multimedia presentation or website to promote their invention.

LEARNING OUTCOMES
Through this learning experience (LE), students will achieve specific learning outcomes (SLOs) in various subject areas. Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified.

English Language Arts
Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified below:

- 1.2.1 *Develop Understanding* — Reflect on prior knowledge and experiences to arrive at new understanding.
- 1.2.2 *Explain Opinions* — Explain personal viewpoints in clear and meaningful ways and revise previous understanding.
- 1.2.3 *Combine Ideas* — Search for ways to reorganize ideas and information to extend understanding.
- 1.2.4 *Extend Understanding* — Appraise ideas for clarity and ask extending questions; select from others' experiences and ideas to extend ways of knowing the world.
- 2.3.1 *Forms and Genres* — Recognize key characteristics of various forms and genres of oral, literary, and media texts [such as novels, biographies, autobiographies, myths, poetry, drawings and prints…].
- 2.3.3 *Vocabulary* — Experiment with ambiguity in language [such as puns, jokes based on multiple meanings, poetry…] in a variety of contexts.
- 2.3.4 *Experiment with Language* — Alter words, forms, and sentence patterns to create new versions of texts for a variety of purposes [such as humour…]; explain ways in which figures of speech [such as similes, metaphors…] clarify and enhance meaning.
- 2.3.5 *Create Original Texts* — Create original texts [such as letters, short stories, media broadcasts, plays, poems, video presentations, Readers Theatre…] to communicate and demonstrate understanding of forms and techniques.
- 4.2.4 *Enhance Artistry* — Choose language, sounds, and images [including transitional devices] to enhance meaning and emphasis.
- 4.2.5 *Enhance Presentation* — Prepare detailed and organized compositions, presentations, reports, and inquiry or research projects using templates or pre-established organizers.
- 4.4.2 *Effective Oral Communication* — Use appropriate volume, phrasing, intonation, non-verbal cues [such as body language, facial expression...], and presentation space to enhance communication.
- 5.2.1 *Cooperate with Others* — Assist group members to maintain focus and complete tasks; identify and solve group process issues.
- 5.2.2 *Work in Groups* — Select and assume roles to assist in the achievement of group goals; engage in ongoing feedback.

ICT LITERACY SKILLS AND COMPETENCIES

Consider the intent of this LE and your choice of instructional and assessment strategies to determine which skills and competencies students may achieve, in addition to those identified below:

- basic operating skills
- graphics creation
- electronic publishing
- sound recording
- video production
- web page authoring
- word processing

SUGGESTED LEARNING RESOURCES

Software

- word processing
- desktop publishing
- multimedia presentation
- web page authoring

Internet

- miscellaneous websites (businesses, companies, corporations, services)

Print

- Appendix C: Index of Teaching and Learning Strategies and Tools

BLMs

- BLM Mod.2.4#1: Peer Assessment of an Advertisement
- BLM Mod.2.4#2: Advertisement Planning

TBLM

- TBLM Mod.2.6#1: Steps for Developing a Survey

Materials

- flyers, pamphlets, magazines, and other promotional materials
- manila paper, bristol board, or chart paper

SUGGESTIONS FOR INSTRUCTION

Preparation and Set-up

- All resources, notes, and brainstorming charts created so far in the *Inventions, Innovations, and Discoveries* interdisciplinary unit could be useful to students in this LE.
- Adapt BLM Mod.2.4#1: Peer Assessment of an Advertisement and BLM 2.4#2: Advertisement Planning to suit the needs of this LE.

Activating Strategies

- Review advertising strategies discussed in Mod.2.4: Chindogu: Useless Inventions.
- Review survey design, as discussed in Mod.2.6: Customer Service Department (see TBLM Mod.2.6#1: Steps for Developing a Survey).

- Look at advertisements in magazines for teenagers and magazines for adults. If possible, find advertisements for the same products (e.g., computers, electronic devices, clothing, sports equipment). Discuss how advertisements for the same product differ in the teen and adult magazines. Students should be able to see that advertisements directed at them use actors their own age in pictures, use vocabulary they use, feature events of interest to them, and so on.
- Students brainstorm about advertisements they see on television when they watch a channel targeted for a specific audience. How do the advertisers target an audience for their age group?

Acquiring Strategies

- In pairs, students design a survey to determine what makes young people purchase a product. Using teen products, such as lipstick, running shoes, chewing gum, or other products of their choice, students conduct their survey with students from another classroom to determine which factors influence the teen buyer most (e.g., cost, packaging, name brand, flavour).
- A pair of students sets up a spreadsheet to record the survey information. Pairs take turns entering their survey data into the spreadsheet. Students graph results to show which factors are the most important for teen buyers when purchasing a product. They print and post the graph.
- Students scan the Internet and/or examine flyers, pamphlets, and other promotional materials to determine which information they need to include on the promotional materials they will create (e.g., cost, availability, warranties, target audience). A pair of students makes a checklist on chart paper. Pairs take turns adding information to the checklist. Post the completed list in the classroom.
- Students fill out the adapted BLM Mod.2.4#2: Advertisement Planning.

Applying Strategies

- Using their survey results, students design a promotional campaign aimed at best reaching the potential consumers of their invention.
- Students rotate through the following learning centres in groups.

  Centre 1: Promotional Poster
  - Each student creates a promotional poster using a large sheet of manila paper, bristol board, or chart paper. Students incorporate the logo they designed, their catchphrase, and a representative illustration of their invention being used by a satisfied customer.
  - The poster will be used later as a backdrop at the Invention Convention.

  Centre 2: Promotional Television Commercial
  - Students help one another videotape a 30-second commercial about their invention. The inventor acts as the spokesperson for his or her product.

  Centre 3: Promotional Pamphlet
  - Students review the checklist they created earlier for the kind of information they need to include in promotional materials.
  - Students create a three-fold promotional pamphlet similar to the poster, incorporating the information from the checklist. They may use word-processing or desktop-publishing software.

  Centre 4: Promotional Jingle
  - Students create a promotional jingle to promote their invention, using the catchphrase they have previously created. They can use a familiar tune, or they can create original music for their jingle.

Centre 5: Promotional Multimedia Presentation or Website

— Students create a multimedia presentation, containing five screens, designed to promote their invention and to give purchasing information. This presentation can be played during the Invention Convention.
OR
— Students create a website to promote their invention and to give purchasing information. The website can be accessed during the Invention Convention.

SUGGESTIONS FOR ASSESSMENT

- Review students' completed copies of BLM Mod.2.4#2: Advertisement Planning to assess their planning process. Confer with them and make suggestions to improve their planned promotional package.
- Review the student-generated checklist for promoting/advertising a product and note how well each student planned and executed his or her promotional package. Consider whether students have followed suggestions for improvements.

Showtime **Mod.4.4**

TIME
300 (5 x 60) minutes
(including 120 minutes for the Invention Convention event itself)

OVERVIEW
Students are now ready to showcase their inventions. They plan, promote, set up, and hold an Invention Convention.

Note: Since some of the work, such as contacting the media and making various bookings, needs to be done ahead of time, Mod.4.4: Showtime may be introduced before Mod.4.3: Promotion and revisited when needed according to the planning timeline students set up.

LEARNING OUTCOMES
Through this learning experience (LE), students will achieve specific learning outcomes (SLOs) in various subject areas. Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified.

English Language Arts
Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified below:
- 3.1.1 *Use Personal Knowledge* — Summarize and focus personal knowledge of a topic to determine information needs.
- 3.1.2 *Ask Questions* — Formulate relevant questions to focus information needs for an inquiry.
- 3.1.3 *Contribute to Group Inquiry* — Contribute to group knowledge of topics to help identify and focus information needs, sources, and purposes for group inquiry or research.
- 3.1.4 *Create and Follow a Plan* — Create and follow a plan to collect and record information within a pre-established time frame.
- 4.1.3 *Organize Ideas* — Adapt models from listening, reading, and viewing experiences to enhance own oral, written, and visual texts using organizational patterns [such as stanzas, chronological order, paragraphs...].
- 4.2.3 *Enhance Legibility* — Write legibly and at a pace appropriate to context and purpose when composing and revising; select and use a variety of formatting options [such as spacing, graphics, titles and headings, variety of font sizes and styles...] when appropriate.
- 4.2.4 *Enhance Artistry* — Choose language, sounds, and images [including transitional devices] to enhance meaning and emphasis.
- 5.2.1 *Cooperate with Others* — Assist group members to maintain focus and complete tasks; identify and solve group process issues.
- 5.2.2 *Work in Groups* — Select and assume roles to assist in the achievement of group goals; engage in ongoing feedback.

ICT LITERACY SKILLS AND COMPETENCIES
Consider the intent of this LE and your choice of instructional and assessment strategies to determine which skills and competencies students may achieve, in addition to those identified below:
- basic operating skills
- concept mapping

- graphics creation
- web page authoring
- word processing

SUGGESTED LEARNING RESOURCES

Software

- word processor
- concept mapping
- graphics
- web page authoring

Internet

- IMYM Links Database: <http://www.edu.gov.mb.ca/ks4/tech/imym/resources/links.html>
- SPIN (Strategic Press Information Network) Project. Strategic Media Plans: <http://www.spinproject.org/resources/strategic_media_plans/index.html>

Print

- Appendix C: Index of Teaching and Learning Strategies and Tools

BLMs

- BLM ICT.1#4: How Was Our Group Work?
- BLM ICT.1#5: Group Work Reflection
- BLM Mod.1.2#3: Solving Problems in Group Work
- BLM Mod.4.4#1: Invention Convention Planning Timeline

TBLMs

- TBLM Mod.2.6#1: Steps for Developing a Survey
- TBLM Mod.4.4#1: Invention Convention Planning Committees
- TBLM Mod.4.4#2: Invention Convention Press Release
- TBLM Mod.4.4#3: Considerations for Participant Satisfaction Survey
- TBLM Mod.4.4#4: Observations of Student Participation and Behaviour

Materials

- tables and chairs
- extension cords
- television and VCR
- poster paper

SUGGESTIONS FOR INSTRUCTION

Preparation and Set-up

- Become familiar with the contents of the Strategic Media Plans on the SPIN Project website.
- Read TBLM Mod.4.4#1: Invention Convention Planning Committees to determine which information will be helpful to find ahead of time, to answer student questions as they arise, or to pass on suggestions.
- Inform guests whom students would like in attendance at the Invention Convention event to expect an invitation from students.

Activating Strategies

- Talk about an event that students have witnessed or in which they have participated, such as a school Book Fair, Science Fair, or Music Festival. Students discuss whether they thought the event was well organized and make a class list of what they think contributed to its success (considering aspects such as planning and hosting the event).
- Review questioning skills from Mod.2.6: Customer Service Department.
- Students design a questionnaire based on their class-generated list of elements of success for planning and hosting an event. Students interview persons responsible for organizing events in their school in order to
  - verify that their observations about an event were accurate
  - ask for further details and gather suggestions for planning
  - discuss timelines
  - clarify points of which they are unsure

Acquiring Strategies

- Students discuss what kind of event could be held to showcase their inventions.
- Students brainstorm what would be needed to hold an Invention Convention. Use concept-mapping software to make a wall chart, using the following categories:
  - Timing
  - Facility
  - Guests
  - Invitations
  - Internal Promotion
  - Media Relations
  - Furnishings

  Use these categories to form committees, keeping in mind that some will require more members than others (see TBLM Mod.4.4#1: Invention Convention Planning Committees). Review the tasks listed and explain to students what each entails.
- As a class, students establish a work schedule and deadlines for the Invention Convention, using BLM Mod.4.4#1: Invention Convention Planning Timeline. Offer suggestions for setting realistic goals.

Applying Strategies

- Groups of students take charge of each of the Invention Convention committees.
- **Note:** Each student should have a responsibility on the day of the event.
- Students select a leader for each committee. Student groups confer with their teacher, who acts as project manager to oversee the planning process.
- Students advertise their Invention Convention on the class website. They include the URL in any publicity sent out.
- Students meet regularly in committees, at times scheduled for that purpose, to review their collaboration in planning the Invention Convention. They assess the progress of their committee using a BLM appropriate for circumstances brought up at meetings (for example, see BLM Mod.1.2#3: Solving Problems in Group Work, BLM ICT.1#4: How Was Our Group Work?, or BLM ICT.1#5: Group Work Reflection).
- Review the contents of TBLM Mod.2.6#1: Steps for Developing a Survey. Students design a Participant Satisfaction Survey based on each committee's responsibilities in preparing for the Invention Convention event. TBLM Mod.4.4#3: Considerations for Participant Satisfaction Survey lists points to consider in preparing such a survey.
- Students prepare a note-taking sheet, using categories similar to those used in their Participant Satisfaction Survey, to take notes during the Invention Convention event.

SUGGESTIONS FOR ASSESSMENT

- Read the reflections and BLMs emerging from Invention Convention committee work to assess how each group functions and deals with difficulties that may arise.
- Take notes of student work and behaviour during the Invention Convention event, using TBLM Mod.4.4#4: Observations of Student Participation and Behaviour.
- Assessment of the Invention Convention event occurs in Mod.4.5: Mission Accomplished: A Reflection.

BLM Mod.4.4#1: Invention Convention Planning Timeline

Brainstorm for tasks to be undertaken at various points prior to the Invention Convention and add to the list as needed. Establish a realistic work schedule and deadlines.

One Month before Event

- Make a guest list. Consider parents, colleagues from your school and from other schools, superintendents, trustees, local politicians, school benefactors (present and prospective).
- Set a date for the event, as well as an alternate date (check that it does not conflict with other school or community events).
- Reserve facility (e.g., classroom, science room, gymnasium, multipurpose room, library).
-

Two Weeks before Event

- Contact media.
- Make and distribute posters.
- Prepare and send invitations.
-
-

One Week before Event

- Set up touring schedules for other classrooms.
-
-
-
-

Three Days before Event

- Verify attendance of invited guests.
- Prepare welcoming speeches accordingly.
-
-
-

Night before Event

- Set up facility.
-
-
-
-

Day of Invention Convention

-
-
-
-
-

TBLM Mod.4.4#1: Invention Convention Planning Committees

Timing Committee
- Consider scheduling the Invention Convention event to correspond with parent-teacher interviews, a previously planned visit by a politician (e.g., a cabinet minister, MLA, or MP) councillor, or other well-known individual.
- If other classes are invited to attend, set up a touring schedule so that teachers can sign up.

Facility Committee
- Decide on a place to hold the Invention Convention, such as a classroom, science room, gymnasium, multipurpose room, or library (plan with the teacher-librarian).
- Reserve the facility for the event's chosen date.

Guest List Committee
- Prepare a guest list a month before the event. Present the list to the school principal for input.
- Consider inviting parents, colleagues from your school and other schools, superintendents, trustees, local politicians, and school benefactors (present and prospective).
- Consider inviting a class with whom students have exchanged email throughout the *Inventions, Innovations, and Discoveries* interdisciplinary unit.

Invitation Committee
- Create invitations using graphics software. Students can create their own graphics to represent the Invention Convention event. Interesting paper can be purchased at business retail stores.
- Mail invitations well ahead of the event. Keep in mind that politicians and trustees have schedules booked long in advance.
- Write a bulletin for inclusion in the school newsletter during the month preceding the event.
- Prepare a reminder to send home with students one week before the event.
- Make name tags for guests. (Use a digital camera to make personalized photo name tags on the spot.)
- Designate an escort for each guest (coordinate with Media Relations Committee).

Internal Promotion Committee
- Promote the Invention Convention inside the school.
- Make posters and display them on school walls at least one week ahead of the event.
- Visit classrooms in the school to make a five-minute presentation about the event.

Media Relations Committee
- Invite newspaper, radio, and television reporters to record the event for the community.
- Use TBLM Mod.4.4#2: Invention Convention Press Release for suggestions on publicizing the event through a press release.
- Designate a contact person for each media representative for the day of the event (coordinate with Invitation Committee).
- Plan to videotape the event for assessment purposes (see Mod.4.5: Mission Accomplished: A Reflection) and future reference.

Furnishings Committee
- Determine whether extra tables and chairs will be needed in the facility selected for the Invention Convention event. (This is likely if the event includes a sit-down portion with speeches).
- Check whether the extra furnishings are available for loan from the local school division. Request them in plenty of time.
- Have the furniture delivered one day before the event.
- Set up the furniture the day before the event (if possible).

TBLM Mod.4.4#2: Invention Convention Press Release

A press release should include the five Ws (Who, What, Where, When, and Why). Use the sample below to create a short catchy text. Focus on why the Invention Convention is something unique that is worth featuring in the media.

Local newspapers or community inserts in major weekly newspapers usually go to press several days before delivery. They should be contacted three weeks before the event. Dailies may have more latitude with time, and a notice of two weeks is probably sufficient.

To be most effective, find the name of a contact person in the media to whom you should direct the press release. This may be the community reporter or the school events reporter. Better yet, find out whether a parent in your school has ties to the media.

Allow for a delivery time of three or more days, depending on the season. Then telephone the person to whom the press release was addressed. Be prepared to answer questions about why the advertised event is worthy of media attention. If the reporter does not make a commitment when first contacted, call back one week later.

Invention Convention

The Grade 6 students at (school) _____

and their teacher, M_____ , are hosting an Invention Convention.

The students showed much creativity in surveying needs
and in developing, testing, and promoting their own inventions.

This event is the culmination of a six-week interdisciplinary project called
Inventions, Innovations, and Discoveries,
which is based on the Manitoba Grade 6 curriculum.

The Invention Convention will take place on (date, time):_____

at (school name, address, location): _____

_____

For more information, contact:
(Name and school telephone number)

_____

TBLM Mod.4.4#3: Considerations for Participant Satisfaction Survey

When designing a Participant Satisfaction Survey, students may want to ask questions such as the following:

- How did you find out about today's event?
- What did you think the event was about?
- Did it meet your expectations?
- Was the information you saw or received clear and complete?
- Was the size of the room appropriate for such an event?
- Did the layout facilitate the flow of traffic?
- Was the timing of "tours" appropriate?
- Was a host/hostess assigned to you? Please comment on the behaviour of that person.
- Did you notice a "happening" that was positive?
- Did you notice an incident that needs to be addressed?
- What is your opinion on having such an event?
- What do you think of the inventions created by students?
- How would you describe the behaviour of students?

Refer to TBLM Mod.2.6#1: Steps for Developing a Survey to decide what kind of survey would be suitable for this situation.

TBLM Mod.4.4#4: Observations of Student Participation and Behaviour

Take notes of student work and behaviour during the Invention Convention event, using this TBLM. Make as many copies as needed.

Student Name and Responsibility for Invention Convention	**Is Task-Oriented**	**Solves Problems**	**Is Attentive to Audience**	**Is Attentive to Others**
	• Is at assigned location. • Carries out responsibility. • Remains on task.	• Anticipates needs. • Troubleshoots.	• Is courteous. • Gives proper explanations. • Shares information.	• Collaborates with others. • Demonstrates effective interpersonal relations.
Name: Responsibility:				
Name: Responsibility:				
Name: Responsibility:				
Name: Responsibility:				
Name: Responsibility:				

Mission Accomplished: A Reflection **Mod.4.5**

TIME
90 minutes

OVERVIEW
Students reflect upon the Invention Convention. They note what worked well and what could be improved upon in general for the event. They reflect on their own display, on the feedback they received for their invention, and on the suggestions that were made.

Note: Mod.4.5: Mission Accomplished: A Reflection should take place within a few days following the Invention Convention event.

LEARNING OUTCOMES
Through this learning experience (LE), students will achieve specific learning outcomes (SLOs) in various subject areas. Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified.

English Language Arts
Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified below:
- 5.1.1 *Compare Responses* — Compare personal ways of responding and thinking with those of others.
- 5.1.4 *Celebrate Special Occasions* — Explore and experiment with various ways in which language is used across cultures, age groups, and genders to honour and celebrate people and events.
- 5.2.1 *Cooperate with Others* — Assist group members to maintain focus and complete tasks; identify and solve group process issues.
- 5.2.2 *Work in Groups* — Select and assume roles to assist in the achievement of group goals; engage in ongoing feedback.
- 5.2.3 *Use Language to Show Respect* — Demonstrate sensitivity to appropriate language use and tone when communicating orally.
- 5.2.4 *Evaluate Group Process* — Assess own contributions to group process, set personal goals for enhancing work with others, monitor group process using checklists, and set group goals.

ICT LITERACY SKILLS AND COMPETENCIES
Consider the intent of this LE and your choice of instructional and assessment strategies to determine which skills and competencies students may achieve, in addition to those identified below:
- basic operating skills
- electronic publishing
- video production
- word processing

SUGGESTED LEARNING RESOURCES
Software
- video editing
- word processing

Internet
- IMYM Links Database: <http://www.edu.gov.mb.ca/ks4/tech/imym/resources/links.html>

Video(s)
- video(s) taken on the day of the Invention Convention event

Print
- Appendix C: Index on Teaching and Learning Strategies and Tools

BLMs
- BLM ICT.1#4: How Was Our Group Work?
- BLM ICT.1#5: Group Work Reflection
- BLM Mod.1.2#2: Solving Problems in Group Work
- BLM Mod.4.5#1: Review Notes of Invention Convention
- BLM Mod.4.5#2: Metacognitive Reflection on Invention Convention
- BLM Mod.4.5#3: How Was My Group Work?

Materials
- concept map made in Mod.4.4: Showtime.
- surveys, photographs, notes, and other useful information from the Invention Convention event

SUGGESTIONS FOR INSTRUCTION
Preparation and Set-up
- Gather pertinent photographs, feedback forms, Participant Satisfaction Surveys, videos, and other useful information for assessing the Invention Convention event.
- Compile information from the Participant Satisfaction Surveys completed during the event.

Activating Strategies
- Students read the personal notes they took during the Invention Convention event.
- Students read the compilation of the Participant Satisfaction Survey results.
- Students are likely aware that athletes and sports teams, for example, regularly review the video of an event to evaluate their performance. Advise students that they will be watching the video of the Invention Convention and that the purpose is to assess the day's event and take notes to improve similar events in the future.
- Students brainstorm for things (such as "happenings" or behaviours) to which they should be attentive when they view the video.
- Using the class computer and projection system, take note of students' suggestions of points to look for while watching the video. Prepare a list that students may use to assist them in taking notes while watching the video or taking a Gallery Walk.
- Watch the video of the Invention Convention event. Students take notes using BLM Mod.4.5#1: Review Notes of Invention Convention or a similar form.
- Display photographs of the event around the classroom. Students do a Gallery Walk. They take notes using BLM Mod.4.5#1: Review Notes of Invention Convention or a similar form.

Acquiring Strategies

- Students gather in their Invention Convention committees, as established in Mod.4.4: Showtime. Using their completed BLM Mod.4.5#1: Review Notes of Invention Convention or another similar form, students share with their committee one thing that worked well for their committee and one thing that could be improved upon. Each committee member should mention something that has not been discussed previously.
- Each committee decides collectively what worked well that should be retained for a future event. A committee-appointed secretary takes notes of the comments and records them on a class computer.
- Each committee brainstorms possible suggestions for improvements. The secretary notes the suggestions for a future event. Students reach a consensus about which suggestions they will put forward for future consideration and add them to the class concept map (see Mod.4.4: Showtime). Each committee member fills out BLM Mod.1.2#2: Solving Problems in Group Work individually to assess the committee's ability to find solutions to a problem.

Applying Strategies

- Students assess their group work using a form such as BLM ICT.1#4: How Was Our Group Work? or BLM ICT.1#5: Group Work Reflection.
- Students self-assess their participation and work in the Invention Convention using a form such as BLM Mod.4.5#2: Metacognitive Reflection on Invention Convention or BLM Mod.4.5#3: How Was My Group Work?
- In a Talking Circle, students take turns commenting on the event or using prompts such as the following:
  - One thing that worked well…
  - One thing that we need to improve upon…
  - One thing I liked about the class collaborating to make this event work…
  - One positive thing we accomplished…
- Students make suggestions for similar events for the future.
- Students celebrate their successful event with a special happening (e.g., a pizza party).

Variations/Extensions

- Students post an announcement about the success of their event on their class website. They may include tips for success, quotes from guest dignitaries about their satisfaction, pictures, and so on. (**Note:** Refer to school/division policy about posting student pictures on the Internet.)
- Students send a press release to the media that were invited to the Invention Convention, but did not attend the event, to inform them of the success of the event. The release includes a wish that the media will be able to attend any such event in the future.

SUGGESTIONS FOR ASSESSMENT

- Review each student's self-assessment and group work assessment (completed on the applicable BLMs and/or forms) and note strengths, points for improvement, and suggestions or questions.
- Confer with each student to review observations made, using TBLM Mod.4.4#4: Observations of Student Participation and Behaviour and notes made from the assessment BLMs, about the student's participation and behaviour during the Invention Convention event, as well as comments and suggestions made during committee work and during the Talking Circle session.

BLM Mod.4.5#1: Review Notes of Invention Convention

Name _____ Date _____

I was a member of (name of committee) _____

1. What worked well during the Invention Convention event:
   -
   -
   -
   -
2. What did not work so well during the event:
   -
   -
   -
   -
3. What my committee did that worked well:
   -
   -
   -
   -
4. What my committee did that could be improved upon:
   -
   -
   -
   -

BLM Mod.4.5#2: Metacognitive Reflection on Invention Convention

Name _____ Date _____

My responsibility at the Invention Convention _____

Please think about the work that you completed at the Invention Convention event and finish the following sentence frames:

1. I am proud of

2. I would like to learn more about

3. I wish I had

4. Next time I will

5. I am curious about

6. I was interested to learn

7. My biggest challenge was

8. When I did not understand what I was expected to do, I

9. When I had difficulty doing what I was expected to do, I

10. The most rewarding thing that happened to me was

Metacognitive Reflection on Invention Convention: Adapted from *Grades 5 to 8 English Language Arts: A Foundation for Implementation* (Manitoba Education and Training BLM-92).

BLM Mod.4.5#3: How Was My Group Work?

Name _____ Date _____

Group Members _____ _____ _____

_____ _____ _____

Self-Assessment of My Group Work	Yes	No
• I contributed ideas.		
• I listened to others.		
• I asked questions.		
• I encouraged others.		
• I disagreed politely.		
• I stayed on task.		
• I paraphrased others' ideas.		
• I elaborated others' ideas.		
• I summarized our ideas.		
• I reflected on my progress in group work.		
• I set new goals.		

Reflection on My Group Work

In my group, I did very well in:

-
-
-
-

My goals for the next time are:

-
-
-
-

The steps I need to take to reach my goals are:

-
-
-
-

The resources (whom and what) I need to achieve my goals are:

-
-
-
-

How Was My Group Work? Adapted from *Grades 5 to 8 English Language Arts: A Foundation for Implementation* (Manitoba Education and Training BLM-42).