PCAP-13 Reading, Mathematics, and Science Assessment (2007)

Handbook for Schools
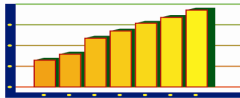
Council of Ministers of Education, Canada

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1. Pan-Canadian Assessment Program

1.1 What Is It?

In 2003, the provincial and territorial ministers of education, through the Council of Ministers of Education, Canada (CMEC), agreed to develop the Pan-Canadian Assessment Program (PCAP) to replace its School Achievement Indicators Program (SAIP). This new program will assess at regular intervals the reading, science, and mathematics knowledge and skills of 13-year-old students from across Canada. The major component of each PCAP assessment will be one of these areas of learning, but each assessment will include minor components of the other two. PCAP will provide an excellent opportunity to show the education community, as well as the general public, the efficacy of our education systems with regard to learning in these subject areas.

The first PCAP assessment is scheduled to be administered in the spring of 2007. Over 30,000 students from more than 1,500 schools across Canada will respond to the assessment either in English or in French.

1.2 PCAP-13 Reading, Mathematics, and Science Assessment (2007)

For the first assessment in 2007, reading will be the major component, and science and mathematics will be the minors.

Between May 14 and June 1, 2007, a random sample of 13-year-old students in schools across Canada will participate in PCAP-13. In jurisdictions where there are small student populations, all students will be tested.

CMEC will report the assessment results at both the provincial/territorial level and the pan-Canadian level, and by language of instruction. Each province or territory will also receive detailed technical information. However, results for individual students, schools, or school board/school district will not be reported by CMEC.

Your school has been selected to participate in this assessment. A sample of 13-year-old students from your school will respond to questions measuring their knowledge and skills in reading, mathematics, and science.

1.3 Overview of the PCAP-13 Assessment

Each province and territory has its own system of education, and school programs differ from one part of the country to another. Nevertheless, all Canadian students learn reading, mathematics, and science. A comparison of provincial and territorial programs in these areas revealed many similarities, and PCAP will focus on assessing elements that are common across all Canadian jurisdictions. In all provinces and territories, 13-year-old students are in a transition stage, having accumulated many years of knowledge and skills while preparing for deeper learning.

1.3.1 The Reading Component

According to pan-Canadian curricula, reading is a dynamic, interactive process whereby the reader constructs meaning from texts. The process of reading effectively involves the interaction of reader,

text, purpose, and context before, during, and after reading. In the light of the interactive process of reader, text, purpose, and context, the PCAP assessment of reading will consider the student reader's
- comprehension and interpretation of text
- response to and reflection on text

This assessment is designed to test students' general competence in reading a variety of texts and in demonstrating their comprehension and interpretation of them. In addition, it will assess students' responses to and reflections on what they have read as an integral part of the reading process. Since the Reading component constitutes the major domain of assessment for PCAP-13, sample Reading items can be found in Appendix D.

1.3.2   The Mathematics Component

Mathematics curricula within the various jurisdictions in Canada are structured on a number of mathematical processes deemed essential to the effective study of the subject. These generally include problem solving, reasoning and justifying thinking, reflecting, using appropriate tools and computational strategies, making connections within and outside the discipline, representing, and communicating mathematically. The processes reflect the manner through which students acquire and apply mathematical knowledge and skills and are not intended to be separated from the knowledge and skills acquired through the curriculum content.

1.3.3   The Science Component

The concept of "scientific literacy" is generally accepted as the overarching goal of science curricula across Canada. As reflected in the curriculum documents, three competencies are associated with demonstrating scientific literacy: science inquiry, problem solving, and decision making. Each of these competencies requires understanding of the nature of science, applying relevant scientific knowledge, using skills, and demonstrating attitudes as a reflection of scientific literacy. All of these reflect the wholeness and interconnectedness of learning and should be considered interrelated and mutually supportive. PCAP will assess the degree to which these have been developed.

The students participating in PCAP-13 will complete either one of the two available forms of the reading assessment or a set of questions combining mathematics and science. All students will also complete the *Student Questionnaire*, which is included in their assessment booklet. This questionnaire is an important part of PCAP as it provides contextual information on how students are learning, as well as other information on their interests and activities.

1.4   Time Frame and Resources

Although most students should be able to complete the assessment and the questionnaire within 2 hours (90 minutes for the assessment itself and 30 minutes for the questionnaire), those requiring more time should be given an additional 10 to 15 minutes to complete their work.

Students are permitted to use any resources that they are accustomed to using in the language arts, mathematics, and science classrooms, including dictionaries, thesauri, calculators (graphing or non-graphing), or manipulatives. Computers, including word processors with spell checkers <u>ARE NOT</u> allowed.

2. Role of the School Coordinator

School coordinators should become familiar with this *Handbook for Schools* prior to the administration of the assessment. It is essential that PCAP-13 be administered in a consistent manner in all schools across the provinces and territories. Jurisdictional coordinators assume overall responsibility for administration of the assessment within each jurisdiction. Each school selected to participate is required to designate a school coordinator who will be responsible for administering the assessment in his or her school, according to the procedures outlined in this handbook.

It is important that as many students from your school as possible participate. Section 2.1.3 describes the acceptable modifications to the assessment procedures for special-needs students. Exemptions are permitted for those students who are truly unable to participate. Braille and large-print versions of the assessment booklets are also available as long as CMEC is notified well in advance of the administration date.

There are three different assessment booklets. Booklet 1 contains reading questions only; Booklet 2 contains different reading questions (with the exception of one passage in common with Booklet 1); and Booklet 3 contains mathematics and science questions only. You will be asked to <u>randomly</u> distribute these assessment booklets to the selected students. Each booklet is numbered to ensure that all assessment materials are returned to the jurisdictional coordinator.

2.1 Prior to Administration of the Assessment

2.1.1 Review student lists

Included with this handbook is a *List of Selected Students* participating in the assessment in your school (see example in Appendix C).

- **Check the *List of Selected Students*.**

- Only those students identified on the student list(s) are permitted to participate. Schools **must not** substitute other students.

- The student names listed should be a selection of those names submitted previously by your school to your jurisdictional coordinator. If a student no longer attends the school or for some other reason cannot participate, he/she will be assigned a particular participation status code (see Appendix B).

> ## Confidentiality
>
> Once all assessment materials have been accounted for, the jurisdictional coordinator will destroy all information that may identify individual students.
>
> For this reason, you do not need to correct any spelling errors on the student lists, as long as you can identify the student selected.

2.1.2   Identify students with special needs

- Students requiring Braille or large-print versions of the assessment booklets should have been previously identified when your school submitted its list of eligible students.

- If a discrepancy exists, notify your jurisdictional coordinator as soon as possible to ensure that these versions are included in your school package.

- You and other school staff must review the *List of Selected Students* **in April** to identify students with additional special needs as well as those to be exempted from participation.

- We appreciate your help in ensuring that as many students as possible participate in the assessment.

2.1.3   Plan support for students with special needs

- As a general guideline, you should use procedures set by your school for administering tests to students with special needs.

- Students with special needs may be given additional time to complete this assessment. As well, administration of the assessment can be spread over several sessions, or students may be placed in a separate location.

- English-as-a-second-language (ESL) students may require varying types of assistance. Some ESL students may require an interpreter to assist in reading the materials provided and to clarify vocabulary.

- Assistance to students should be restricted to helping with reading the materials and explaining the procedures. Do not interpret the materials for a student or guide a student's response.

- **You will be required to describe any modifications made to the administration procedures when completing the *School Coordinator's Report* included with the assessment materials.**

- **For those unable to participate, record the appropriate code on the front cover of the assessment booklet you have assigned to the student (see Appendix B for a list of participation status codes).**

Inclusiveness

The Pan-Canadian Assessment Program is intended to be as inclusive as possible in order to provide a complete picture of the range of performance among 13-year-old students.

ALL 13-year-old students were included in the initial student lists from which the sample of students was selected.

Please make provisions to enable students with special needs to participate in the assessment to the extent possible without jeopardizing the integrity of the assessment.

2.1.4 Identify students with very limited reading, mathematics, or science ability for exemption

- The school can exempt any student in the class with very limited reading, mathematics, or science ability from writing the assessment. Please note that once a test booklet is randomly assigned to a student, this booklet cannot be substituted because of the student's limited ability in the subject area being tested.

- **Record a "D" in the participation status on the front cover of the assessment booklet you have assigned to the exempted student (Appendix B).**

2.1.5 Inform participating students, their families, and school staff

We encourage you to announce the school's participation in this pan-Canadian project and discuss its importance with all teachers and students.

- At least one week before the assessment date, inform participating students about the assessment.

- Distribute copies of the *Information for Parents and Students* brochure.

- A few days before the date set for the assessment session, inform students of its time and location. Students will need a pencil, an eraser, a ruler, a protractor, and a calculator.

2.1.6 Arrange for a suitable time and location

The assessment must be administered between May 14 and June 1, 2007. Find a quiet area with enough desks or table space where the students will have time to complete the assessment without interruption (2 hours). If possible, schedule the administration of the assessment for the morning in order to obtain the best student performance.

2.1.7 Check materials

Please confirm that the following materials were included in your package:

- *School Packing List*

- *List of Selected Students*

- Assessment booklets — one for each student, including those who are exempted; three different versions of the assessment booklet are to be randomly distributed among the students (the *Student Questionnaire* is included in the assessment booklet)

- *Teacher Questionnaire* — one for each language arts teacher of the participating students

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Balancing inclusiveness and student well-being

We want all students to have the opportunity to be represented in this assessment. However, we do not want students with special needs to be overly pressured to participate in the assessment if they would be adversely affected or if appropriate accommodations cannot be made for them.

Doing their best

Since student motivation can have a strong influence on performance levels, it is important that students be encouraged to do their best. Such encouragement can ensure that the results will be a true indication of how well all students are doing in reading, math, and science.

Student ID Numbers

A specific student identification number needs to be assigned to each student selected by the school coordinator.

- *School Questionnaire* — one per school

- *School Coordinator's Report*

If a discrepancy exists, contact the jurisdictional coordinator as soon as possible.

Photocopying and Security

You may photocopy one of the assessment booklets only if there is a shortage and you cannot obtain copies from the jurisdictional coordinator in time for the assessment.

Please keep the assessment booklets secure prior to the administration. **All** copies of the assessment booklet, including any photocopies, must be returned at the completion of the assessment.

2.1.8 Distribute questionnaires to the principal and teachers

- Ask the school principal to complete the *School Questionnaire*.

- Ask selected students to identify their current language arts teacher(s).

- Each questionnaire has an ID number on its cover. Assign a teacher questionnaire ID number to each of the identified teachers and keep a record.

- Distribute the *Teacher Questionnaire* to all teachers currently teaching English Language Arts to any of the students selected to participate in this assessment. Inform them that you will collect the completed questionnaires following the assessment session.

- **Do not forward any teachers' names to us. Destroy any lists containing teachers' names after the assessment.**

Confidentiality

Linking teacher responses to student achievement provides important information to policy makers. The use of teacher names is only for the purpose of linking a *Student Questionnaire* ID to a *Teacher Questionnaire* ID. All references to teachers' names are to be destroyed by the school to ensure confidentiality.

2.2   Administration of the Assessment

2.2.1   Check materials needed

- *Script to be read for the administration of PCAP-13* (see Appendix A)

- For each student, individual copies of the assessment booklet

- Spare pens, pencils, erasers (to be supplied by the school)

- Other resources such as dictionaries, manipulatives, etc.

2.2.2 Carry out introductory procedures

- Prior to arrival of the students, write the names of all language arts teachers and their corresponding questionnaire ID numbers as assigned by you on the board or on a chart.

- Begin reading the *Script to be read for the administration of PCAP-13* (see Appendix A) to the students.

- Distribute the assessment booklets. Make sure that each student's booklet number matches his/her PCAP-13 student ID number on the *List of Selected Students*.

- Ask students to code the front cover of their response booklet with the following:
  - their participation status (students present are <u>participation status code **B** for the regular session or **C** for the make-up session</u>)
  - the teacher questionnaire ID number(s) of **all** the teachers currently teaching them English Language Arts (listed on the board or chart) or French (e.g., in the case of French Immersion students). **Students not currently studying ELA or French should leave this blank**.

2.2.3 Administer the assessment

- Inform students that they will have 90 minutes to complete the assessment. Students may be given an additional 10 to 15 minutes, as required.

- Students have 30 minutes to answer the *Student Questionnaire* after they have completed the test items in the assessment booklet.

- Ask students to begin the assessment.

- For students exempted or absent from the assessment, code their participation status and teacher questionnaire ID on the front cover of all assessment booklets assigned to them. This will enable the verification of the *List of Selected Students* against the assessment booklets (see list of participation status codes in Appendix B).

- Ensure that students have completely filled out the cover page of the assessment booklet.

- At the end of this session, collect and secure all assessment materials.

2.3 Following Administration of the Assessment

- Complete the *List of Selected Students* by recording the following for each student (including those students exempted or absent from the assessment):
  - their participation status code (see list of participation status codes in Appendix B).
  - the questionnaire ID number assigned to each of their current language arts teachers. **If students are not currently studying Language Arts, leave this blank.**

- Secure all assessment booklets until shipping.

- Collect completed *School Questionnaire* and *Teacher Questionnaires* distributed prior to the assessment.

2.3.1 Hold a make-up session (if necessary)

- Calculate the percentage of students who participated in the regular assessment session.

- Count the number of code Bs, As, and Ds that you recorded on the List of Selected Students for the assessment session (ignore all other codes for this calculation).

- Calculate the participation rate using the formula: $\dfrac{(B+D)}{(A+B+D)} \times 100$.

> **If the participation rate for the assessment is less than 85%,**
> **a make-up session must be conducted before June 1, 2007.**

If make-up sessions are necessary (as indicated by the calculations above), schedule an assessment session to include as many of the absent students as possible. If a student completes the assessment during the make-up session, change the participation status code for that student from "**A**" to "**C**" on the *List of Selected Students*.

Ensure that "**C**" is coded on the front cover of the assigned student assessment booklets.

2.3.2 Complete the *School Coordinator's Report*

- Complete the *School Coordinator's Report* included with the assessment materials.

2.3.3 Return materials

- Complete the *School Packing List* to indicate the numbers of each of the items being returned to the jurisdictional coordinator.

- Package the following:
  - *School Packing List*
  - *School Coordinator's Report*
  - Completed *List of Selected Students*
  - Completed *School Questionnaire*
  - All *Teacher Questionnaires* in ascending numerical order
  - All copies of the completed assessment booklet in ascending numerical order
  - All unused copies of the assessment booklet and any photocopies

Return the package to the jurisdictional coordinator as soon as possible after the administration of the assessment and no later than June 6, 2007. Please use the return address label and waybill provided by the jurisdictional coordinator.

If you have any questions, please consult the Frequently Asked Questions in Appendix E or contact your jurisdictional coordinator.

Thank you for participating in PCAP-13.

APPENDIX A

Script to be read for the administration of PCAP-13

The only text to be read to the students is in shaded boxes and must be read word for word. The unshaded text provides background information and instructions for the test administrator.

Introducing the test

Record the start time on the *School Coordinator's Report*.

Introduce yourself if the students do not know you. Then say

> **Good morning/afternoon. You have been chosen to take part in an important national project called the Pan-Canadian Assessment Program (PCAP). It will help us find out what students your age from all the provinces and territories of Canada know about reading, mathematics, and science. It is important that you give your best effort, so that the best possible information is gathered from this project. However, your results on this assessment will not count toward your school marks. The results of all the other students who are writing this test will be used to produce a picture of the achievement of (*province/territory*) students and of Canadian students.**

Distribute the materials, if you have not done so already. Please note that there are three different booklets in the PCAP-13 assessment and that the test booklets are to be distributed randomly to the students. Booklets 1 and 2 assess reading, while Booklet 3 assesses mathematics and science. Then say

> **Take your test booklet. If you don't have a test booklet, please raise your hand now. Please note that there are different versions of this assessment. Some of you will respond to reading questions and others will respond to mathematics and science questions. This means that you may not write the same test as your friends or neighbours.**
>
> **The assessment consists of both multiple-choice and short-answer questions. You may find some parts of the test very easy, and other parts difficult. There may be some questions on things you haven't studied yet. Please do your best to answer as many questions as you can, and see if you can use what you know to figure out the answers to the questions you find difficult.**
>
> **Since this is a test, I can answer questions only about the directions or the questionnaire, but not about what is being tested.**
>
> **Does everyone have a <pen or pencil?> On the booklet cover page, please circle the letter "B" in the box Participation Code at the top of the page.**
>
> **In the box Teacher Questionnaire Number, write the number corresponding to your current language arts teacher. If you have more than one teacher in this list, please write the corresponding number for each of them. If you are not currently taking language arts classes, leave this space blank.**

Give students a **<pen or pencil>** if they do not have one.

Beginning the test session

Booklets 1 and 2 of this assessment are composed of six sections. In the first section, students will be asked to provide a personal response to a short text. This part should last approximately 20 minutes. In the other sections, students will be asked to respond to a series of questions on several texts. Overall, students should take approximately 90 minutes to complete the entire assessment. Depending on students' time management skills, it may be advisable to inform them after 20 minutes that they should move to the next section of the assessment. This should be done for individual students as it does not apply to Booklet 3.

Booklet 3 consists of series of mathematics and science questions based on scenarios. Students should also take 90 minutes to complete the assessment.

You should write on the board the start time, the suggested amount of time to complete the assessment (90 minutes), and the amount of time to complete the questionnaire (30 minutes). Record the *Start Time* and *Finish Time* on the *School Coordinator's Report*. Then say

> **Open your booklet and read carefully the instructions appearing on page 1. Then, respond to each question by writing your responses directly in the test booklet. When you are asked to write a response in words, there is no maximum or minimum number of words for your response; just respond as completely and thoughtfully as possible. Your response will not be graded for grammar, spelling, or punctuation.**
>
> **When you are finished the test, you may begin answering the questionnaire that is at the end of the test booklet.**
>
> **Please adhere to the times I have indicated on the board.**
>
> **Are there any questions?**

Respond to students' queries about recording answers, response times, or the questionnaire. You should not respond to students' questions about the actual content of the test. Then say

> **Use your time carefully and do as much as you can. Please begin the assessment.**

Use a watch or clock to time the session.

Monitor the students.

If appropriate, you may give a short (1-minute) break for students to get up and stretch during the testing session. Students are not allowed to talk.

After 80 minutes, say

> **You have about 10 minutes left to finish the test. Use your time carefully and do as much as you can.**

Prior to the assessment, you should have arranged to have some books or magazines available for students who finish before the full time has passed.

As the end time approaches, watch for students who appear to have finished and remind them to check their work. Once you are satisfied that a student has finished all that he or she can do and has completed the questionnaire, you may give him or her a book or magazine to read.

After a total of 90 minutes of testing, say

> **How many people would like some more time? Please raise your hand.**

If students obviously need more time, give them up to 15 additional minutes. Indicate the number of students requiring this additional time on the *School Coordinator's Report*.

Concluding the test session

After 15 minutes or when most students are finished, say

> **Please stop.**
>
> **If you have not already done so, please turn to the *Student Questionnaire* in your booklet. Read the instructions carefully and answer the questions. You have 30 minutes to complete the questionnaire.**

After 30 minutes,

- Thank the students.

- After you have accounted for all of the assessment booklets, dismiss the students according to the policy of the school.

- Complete the attached *School Coordinator's Report* and follow the directions in Section 2.3.3 of the *Handbook for Schools* to return the test booklets.

We thank you for your cooperation.
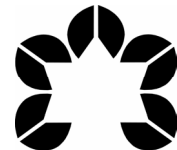
APPENDIX B

Participation Status Codes

A – Absent (and not previously categorized as Codes **D** to **L**)

B – Participated during scheduled session

C – Participated during make-up session

D – Exempted by the school because of low ability

E – Excluded because interpreter not available
(for a student who does not understand English or
French well enough to attempt the assessment)

F – Excluded for emotional reasons

G – Excluded for physical reasons

H – Excluded because appropriate modifications
could not be made (to accommodate the
student's special needs — see Section 2.1.3)

I – Excluded because of wrong birth date (student's birth
date is not between September 1, 1992, and August 31, 1993)

J – No longer enrolled in this school

K– Student refusal: did not participate (school staff is unable to persuade the student to participate)

L – Parent refusal: did not participate (parent of the student demands that the student not participate)

> Tracking the participation status of **all** selected students allows fair sampling from each province and territory. After participation rates have been calculated, **any lists containing student names are destroyed.**

> In some circumstances, the assessment may trigger emotional or physical reactions that a principal may consider harmful for particular students. Participation Status Codes F and G can be used to exclude such students.

APPENDIX C

List of Selected Students
(SAMPLE)

Jurisdictional School ID Number: _105385_____   PCAP School ID Number: _20004_____

School Name: _ I.M. Learning High School _____

Student Name	Sex F/M	PCAP Student ID Number	Participation Status Code*	PCAP *Teacher Questionnaire* ID Number
Adams, R.	M	11313000	B	11211000
Anderson, D.	M	11313001	B	
Bourassa, D.	M	11313002	B	11211001
Brown, J.	F	11313003	B	11211002
Chiasson, F.	M	11313004	A	11211003
Genge, D.	F	11313005	B	11211002,11211003
Gillap, D.	F	11313006	B	11211003
Hall, J.	M	11313007	B	11211002,11211003
Kanerva, E.	F	11313008	D	11211003
Kassen, W.	F	11313009	D	
Lizaire, F.	M	11313010	B	11211004
Ouellet, H.	F	11313011	B	11211002
Pietschmann, F.	F	11313012	A	11211004
Sherwood, P.	M	11313013	B	11211002
Williams, T.	F	11313014	B	11211003

*Transfer the student's participation status code to the top of the front cover of the booklet assigned to the student in the appropriate spaces.

A - Absent
B - Participated during scheduled session
C - Participated during make-up session
D - Exempted by the school because of low ability
E - Excluded because interpreter not available
F - Excluded for emotional reasons

G - Excluded for physical reasons
H - Excluded because appropriate modifications could not be made
I - Excluded because of wrong birth date
J - No longer enrolled in this school
K - Student refusal: did not participate
L - Parent refusal: did not participate

If $\dfrac{(B + D)}{(A + B + D)} \times 100$ **< 85%, then a make-up session is required.**

All participation codes are explained in Appendix B.

APPENDIX D

Sample Items – Reading

How could we have so many ships go to the bottom of the sea?

THE HAZARDS

LEARN ABOUT THE HAZARDS

Introduction
Captain Finn's Seven Tips For Avoiding Shipwrecks
Geography and Navigation
Goods, Trade and Ports
Ripple Rock, Race Rocks and Pachena Point
Weather and Currents
Human Negligence
How to Survive a Shipwreck

RELATED OBJECTS

Video

MediaViewer

Human Negligence

Human error is a factor in almost every shipwreck situation. Even the decision to go on the voyage in the first place might put a vessel and its crew and passengers in danger. Mariners use the terms "failing to follow the common practice of seamen" and "failing to practice due diligence" to indicate that an accident or a shipwreck was caused by negligence on the part of the ship's crew.

Just as there are rules for vehicles on the road, there are rules for vessels on the water. Everyone is expected to understand and follow the *International Regulations for the Prevention of Collision at Sea (IRPCS)*, amended in 1972. These are rules that determine who has the right-of-way and how vessels should turn and overtake each other. They apply to all craft, from the smallest boat to the largest tanker.

It is the responsibility of the captain and crew to make sure that their vessel is seaworthy or safe to take out on ocean waters. This means

that repairs should be made, equipment should be tested and cargo loads should be secured—anything that can come loose and roll around on the decks can tip the balance or stability of the vessel.

Greed has often played a role in needless loss of life and cargo in the waters around the island. The Idaho, which grounded on Rosedale reef in 1889, and the Irene, which was abandoned 30 miles southwest of Cape Flattery in 1887, are notorious examples of grossly over-loaded and unseaworthy vessels attempting to traverse trade routes.

Many wrecks have been caused by mariners who are not keeping a proper watch or who have lost their position and do not know what currents and obstacles they are nearing. Many historic wrecks of the **Graveyard of the Pacific** were caused by ships that lost their course and ran aground, making for what they thought was the Strait of Juan de Fuca. Concentration is important, and when crews are not properly rested, their fatigue can lead them into danger.

Alcohol can cloud judgment and slow reactions. Drinking was the cause of many accidents in the past, and continues to be a concern today. Wreck investigations did not always record when alcohol was a factor as they do today, so it is difficult to determine when this was a primary cause.

"Graveyard of the Pacific" and, more specifically, this webpage, "The Hazards," is excerpted from the www.pacificshipwrecks.ca, a website posted by the Virtual Museum of Canada with content copyrighted (2004) by the Maritime Museum of British Columbia. In particular, it focuses on the "Human Negligence" page of the website. Because the information is published on the Internet, "Graveyard of the Pacific" is classified as public in terms of situation.

It is, however, the type of website and content that might be typically encountered by students in an educational setting and used as a learning resource. The text consists of primarily non-fiction prose.

One reason for its selection as part of a reading assessment instrument is its Canadian content and its focus on a topic considered of interest to the PCAP-13 reading assessment population of 13-year-olds. The content includes a number of features frequently found on websites: text, graphics, images, and a number of additional links.

The ten tasks based on this text include seven selected-response and three constructed-response items. These tasks sample four domains of the PCAP-13 Reading Assessment — comprehension, interpretation, personal response, and critical response.

1. **What is the meaning of the title "Graveyard of the Pacific"?**

    A.   People were buried at sea.
    B.   Many people have died there.
    C.   People are afraid of ghosts at sea.
    D.   There are gravestones marking the wrecks.

Coding

The correct response is option B.

This task intent is classified as **interpretation**. Readers examine a text to develop an understanding of the relationship of discrete elements to develop a broader perspective or interpretation.

One factor that contributes to the difficulty of the task is the process readers need to attend to in arriving at the correct response. First, readers are required to read and comprehend the various individual components. Subsequently, they need to synthesize these components to develop a broader perspective or interpretation about the meaning of the whole. Further, they need to examine their conclusions about the primary focus and purpose of the text in the light of the four options provided and to determine which option provides the best interpretation of the title, "Graveyard of the Pacific."

In field trials, most readers completed the task successfully. Of those readers who did not select the correct answer, the largest proportion selected distractor D— "There are gravestones marking the wrecks." Readers may have selected this option based on their association of gravestones with the word *graveyard* in the title.

2. Why would there be rules for vessels on the water?

    A.   to avoid accidents
    B.   to help make repairs
    C.   to have the same rules for cars and boats
    D.   to keep small boats out of the way of larger boats

Coding

The correct response is option A.

This task intent is classified as **comprehension**. Readers construct meaning using explicit and implicit information provided by a text.

Readers may take account of information about the need for rules to prevent shipwrecks, in particular, the need to "follow the common practice of seamen."

Further, readers could focus on the comparison between the need for rules for road vehicles and for vessels on the water. In exploring this comparison, they might draw upon their prior knowledge that rules for road vehicles are intended to prevent accidents and apply that concept to vessels on water.

Further, they may focus on "International Regulations for the Prevention of Collision at Sea (IRPCS)." Readers are required to comprehend not only the individual words used in the title of the document but also to make meaning of the title as a whole. For example, they need to comprehend that the word *regulations* may be used as a synonym for *rules* and that the phrase "prevention of collision at sea" references "accidents" in option A.

In field trials, most readers completed the task successfully. Of those readers who did not, the largest proportion selected distractor C—"to have the same rules for cars and boats." Readers may have selected this option based on the explicit comparison between rules for vehicles on the road and rules for vessels on the water in paragraph 2.

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3. **What do the *International Regulations for the Prevention of Collision at Sea* show mariners?**

    A.   how to balance a load at sea
    B.   how to test equipment at sea
    C.   the rules for ships on the seas
    D.   the rules if a ship is lost at sea

Coding

The correct response is option C.

This task intent is classified as **comprehension**. Readers construct meaning using explicit and implicit information provided by a text.

To answer this question successfully, readers may refer to the title of the document, "International Regulations for the Prevention of Collision at Sea." In making meaning of it, they are required to comprehend that the word *regulation* refers to a rule or directive for the movement of vessels at sea.

Readers may make meaning from the explicit comparison between rules for "vehicles on the road" and "vessels on the water," and/or they may refer to the explicit statement about the IRPCS: "These are rules that determine who has the right-of-way and how vessels should turn and overtake each other."

In field trials, most readers completed the task successfully. Of those who did not, the largest proportion selected option A—"how to balance a load at sea."

4. **The website mentions several causes for shipwrecks. Which cause or causes can captains and crews avoid most easily? Explain your answer.**

<u>Code 3</u>　　The reader demonstrates an elaborated personal response.
- Identifies one or more factors.
- Based on personal knowledge or experience either explicitly or implicitly stated, the reader provides clearly stated rationale or support for choice of factors, including identification of cause/effect relationship between the ease of acting upon the selected factor and avoiding shipwrecks, connections with contexts beyond the text.

Exemplar #1

Drinking can easily be avoided by the captains and crews because alcohol can make you do really stupid things. Drinking and driving is the same thing as drinking and driving a boat.

Exemplar #2

The types I believe that could be avoided are alcohol and greed. I think that if you are going to be doing something that requires that physically and mentally you need to be at the top of your game alcohol should not be present. Greed could easily be avoided you need to think "What would be best for the crew?" not how much money is in your wallet!

Both exemplars identify factor(s) that may easily be addressed and provide a clear rationale for choice—the effects of alcohol on the judgment of individuals. In the second exemplar, the reader provides an additional rationale for choosing greed as a factor — namely consideration of what is of primary value: crew safety or money.

Code 2   The reader demonstrates an **appropriate** personal response to the question.
- Clearly identifies one or more factors.
- Provides an appropriate explanation of the ease with which the selected factor(s) may be addressed to avoid shipping disasters, including a cause/effect relationship between avoiding shipwrecks and the identified factor(s).

Exemplar #3

the crew getting drunck or not getting enough sleep. because if people dont get there sleep they will have a hard time seeing or they will fell asleep on board

Exemplar #4

I thinking drinking and driving a boat should be stopped because it messes with your judgement and therefore it causes accidents. In my opinion it is the easily easy th easiest most avoided thing way to cause an accident

Both exemplars identify a factor and provide an appropriate/logical explanation.

Code 1   The reader demonstrates **limited** personal response.
- Identifies one or more factors.
- Provides general or vague explanation.

Exemplar #5

> I know one that could be easily avoided at sea by not drinking. And another one is paying closer attention to what is happening.

Exemplar #6

> To make sure all the equiment is working right. I think this is true because if they did go on the sea without cheaking it could hazardous.

Both exemplars identify a factor and provide a valid but simplistic or overly general reason for the selection.

5. **Look at the webpage and complete the chart below.**

Sources of Information on the Website

	Brief Description	Why is it included on the page?
Who put this website on the Web?		
What is the information on the page mainly about?		
What visuals are included?		
What types of web links are there on this page?		

Coding

This task is a constructed-response item and intended or classified as **interpretation**. Readers examine the text to develop an understanding of the relationship of discrete elements to the whole.

Readers demonstrate their comprehension of the text by identifying element(s) and placing them in column 2—"Brief Description" in response to the questions asked in column 1. In column 3—"Why is it included on the page?," readers provide an interpretation or explanation of the item in column 2; that is, they interpret discrete elements in relation to the webpage as a whole.

Readers' interpretations are coded as follows:
Code 0—Readers fail to demonstrate an interpretation of the items that they have identified from the text.
Code 1—Readers demonstrate a limited, general interpretation of the items they have identified from the text.
Code 2—Readers demonstrate a reasonable analysis or interpretation of items that they have selected from the text.
Code 3—Readers demonstrate a thoughtful or insightful interpretation of the items that they have selected from the text.
(For further details, refer to descriptors and examples below.)

In field trials, readers identified a variety of factors or components in column 2—"Brief Description" in response to questions in column 1. The majority of readers provided an interpretation of these in column 3—"Why is it included on the page?" (See examples of the range of these responses below.)

Code 3   The reader demonstrates a **thoughtful** or **insightful** interpretation.
- Provides a valid response (column 2) to the questions posed in column 1.
- Provides an analysis of the website's components and a precise or thoughtful explanation for the inclusion of those identified in column 2.

Exemplar #7

	Brief Description	**Why is it included on the page?**
Who put this website on the web?	Virtual museum of Canada.	To tell who made the website and to show that they are reliable.
What is the information on the page mainly about?	The things that cause shipwrecks and the ways to prevent these.	It shows the main information about why these things happen and how they can be prevented.
What visuals are included?	Pictures of a ship, a lighthouse, map, etc.	The picture of the ship may be one that sank. The lighthouse represents safety for boats. These make the webpage more interesting than just writing.
What types of web links are there on this page?	-Tales of Hope and Courage -The Wrecks -The Hazards -Wrecks game -Saving the wrecks -video -home	These are other places to get more information on the topic and even a game to play.

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Exemplar #8

Sources of Information on the Website

	Brief Description	Why is it included on the page?
Who put this website on the web?	Virtual museum of Cda & Maratime Museum of British Columbie	Included so that people will know where information come from and know its not a false web site.
What is the information on the page mainly about?	the information on this page is mostly about how to avoid so many shipwreks and why they ocur.	Because it is important so you can prevent shipwreks and to be safe at sea. It could warn Captains at sea.
What visuals are included?	Pictures of boats and lighthouses one ship is sort of creepy looking like a ghost ship	Draws your attention to very important information on the webpage & make it more interesting
What types of web links are there on this page?	there are lots of web links for more stuff about sailing. Tales of hope & courage, the wreks & the hazards & more stuff about hazards like Captain Finds Tips, weather & Currents.	Included so there are more options if you want to know more about shipwreks

Both exemplars provide answers to the questions asked in column 1 and an analysis/explanation of why that information is provided on the website.

Code 2   The reader demonstrates a **reasonable** interpretation.

- Provides correct information (column 2) to the questions posed in column 1.
- Provides (in column 3) stated or inferred analysis/explanation for the inclusion of components or information included in column 2.

Exemplar #9

	Brief Description	Why is it included on the page?
Who put this website on the web?	The Virtual museum of Canada	So if there is false information or disrespectful, you know who did it
What is the information on the page mainly about?	Accidents and collisions at sea, and following the book of International regulations for prevention of collision at sea.	So that you know what a ships crew has to know before operating the ship
What visuals are included?	there is a picture of a ship out at sea	So you get an idea of what this is going to be about
What types of web links are there on this page?	Video tips for avoiding accidents, weather, and currents, shipwrecks	To make the website as informative as possible.

Exemplar #10

	Brief Description	Why is it included on the page?
Who put this website on the web?	Virtual museum of Canada; someone who probably cares about ship safety	So that the author is recognized and people could give credit to them if they use the information
What is the information on the page mainly about?	It is mainly about why shipwrecks occure, the main cause for them and what happens	So people know that we need to make are ships safter and what is needed to do that
What visuals are included?	a ship / vessel, Lighthouse	To give more excitement to it and to show what the page is about
What types of web links are there on this page?	Videos, site map, other pages — Hazards, Wrecks, Home	So people know where to click for more information and stories

Both exemplars provide answers to the questions asked in column 1 and a reasonable analysis/explanation of why that information is provided on the website.

Code 1 The reader demonstrates **limited** interpretation.
- Provides a simple or limited response (column 2) to the questions posed in column 1.
- Provides vague generalities or simplistic analysis/explanation for the inclusion of factors included in column 2.

Exemplar #11

	Brief Description	Why is it included on the page?
Who put this website on the web?	Nersone Virtual Museum Canada	So you know who posted the website
What is the information on the page mainly about?	Shipwrecks and what causes them.	So people know the rules and can be safe
What visuals are included?	Ships, lighthouses, maps, people	So that people know what the link is about.
What types of web links are there on this page?	Introduction Captain Finn's... Geography & Navigation Goods Trade & part Ripple rock... Weather & currents How to survive a shipwreck	So you can go to different places and learn more about it.

Exemplar #12

	Brief Description	Why is it included on the page?
Who put this website on the web?	The Virtual Museum of Canada.	So people know who has made the site.
What is the information on the page mainly about?	It is mainly about boat accidents.	To try to have People understand the seriousness.
What visuals are included?	lighthouses and boats and maps.	So people know about lighthouses, and such.
What types of web links are there on this page?	Tips for boats, the weather Navagation and stuff like how to survive a shipwreak.	So people know these Kinds of things.

Both exemplars provide answers for column 1 questions and general (sometimes simple and vague) interpretation or explanation for their inclusion.

6. **Select the source of information which tells us that we can trust this website. Explain why the source of information is likely to be trustworthy.**

Coding

This task is a constructed-response item and intended or classified as **critical response**. Readers take a critical stance, evaluating the source of the website information and providing an explanation/rationale for their position.

Readers identify source(s) and/or factor(s) they consider of importance in determining the credibility of the website. Further, they provide an explanation or rationale for their choice based on their knowledge of factors that contribute to the credibility of information sources.

Readers' critical responses are coded as follows:
Code 0—Readers fail to demonstrate an evaluation of the factor(s) or source(s) that they have identified from the text.
Code 1—Readers demonstrate a limited, general evaluation of the factor(s) or source(s) that they have identified from the text.
Code 2—Readers demonstrate appropriate analysis or evaluation of factor(s) or source(s) that they have identified from the text.
Code 3—Readers demonstrate a significant evaluation of the factor(s) or source(s) that they have identified from the text.
(For further details, refer to descriptors and examples below.)

In field trials, readers identified a variety of factor(s) or source(s) of information that lent to the credibility of the website. The majority identified the Virtual Museum Canada and provided an appropriate explanation for their choice. (See examples of the range of these responses below.)

Code 3   The reader demonstrates a **significant** critical response**.**
- Identifies a significant or principal source of information on the website.
- Provides a clearly articulated rationale or explanation based on factors related to credibility of information sources.

Exemplar #13

This website is trustworthy because it was made by a museum and museums have tons of trustworthy information. at the bottom of page 2 it says (C) Maritime Museum of BC. It shows a reliable close date and it is copyrighted. And it shows the actual business and location "Maritime museum" and "BC."

Exemplar #14

We can trust this website because they have based some parts of the information on real-life things so we know it's true. It's likely to be trustworthy because the list of rules and names of real ships that have had shipwrecks tells that it's real. Also how it was copywrited by placed close to the ... a museum.

Both exemplars identify factors that make the website credible and provide a rationale or explanation for those factors making it credible.

Code 2   The reader demonstrates an **appropriate** critical response.
- Identifies a major source of the information included on the website.
- Provides a logical rationale that may reference the credibility of various sources of information.

Exemplar #15

The virtual museam of canada, and it is a gourment site and that is trustworthy.

Exemplar #16

It is from Canada's virtual museum. It is likely to be trustworthy because museum's do research to provide with information.

Both exemplars identify the major source for the website and provide a reasonable explanation why that source is credible.

Code 1   The reader demonstrates **tangential** or **simplistic** critical response.
- Identifies a source of information on the website (Sources may be general, simple, secondary, etc.)
- Provides general or vague rationale or explanation.

Exemplar #17

It is likely to be trustworthy because It was put on the website by people that follow the regulations, and know what "not" and "to" do.

Exemplar #18

It seems trustworthy because it tells alot of true information and wat happens on the sea.

Both exemplars identify website content (rather than an organization or institution) as the source and use that content to indicate the credibility of the site.

7. **What does it mean if a vessel is "unseaworthy"?**
   (paragraph 4, line 7)

   A. The ship is unsafe.
   B. The crew are inexperienced.
   C. The ship is just out of dry dock.
   D. The captain has just been appointed.

Coding

The correct response is option A.

The task intent is classified as **comprehension**. Readers construct meaning using explicit and implicit information provided by the text.

To answer the question successfully, readers may draw upon either their prior knowledge of the term *unseaworthy* or the explanation of the term *seaworthy* in paragraph 3, line 2—a vessel that is "safe to take out on ocean waters." Further, they will need to understand that the prefix *un* signals a reversal: *seaworthy*—safe; *unseaworthy*—unsafe.

In field trials, most readers completed this task successfully.

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8. **What word could replace 'position' in "lost their position"?**
   (paragraph 5, lines 2-3)

   A. job
   B. rank
   C. vessel
   D. location

Coding

The correct answer is option D.

This task intent is classified as **comprehension**. Readers construct meaning using explicit and implicit information provided by a text.

One factor that contributed to the difficulty of this task is that three of the options are synonyms for the target word, *position*. Readers' prior knowledge of the meaning of the word is not sufficient. Readers were required to comprehend the meaning of the word as it is used in the phrase "lost their position" and the context of that phrase in paragraph 5, lines 2-3.

In field trials, of those readers who did not select the correct answer, the largest proportion chose either distractor A—"job" or B—"rank." Each of these two words may be selected as a synonym for *position*, but neither is appropriate in this context. Readers who selected distractor A or B may have relied solely on the use of the word in the phrase quoted in the question rather than in its broader context in paragraph 5, lines 2-3.

9. Why would a picture of a lighthouse be placed close to the title "The Hazards"?

    A. To signal danger
    B. To show where shipwrecks are
    C. To give a scenic appearance to the page
    D. To include a symbol of mariner's culture

Coding

The correct response is option A.

The task intent is classified as **critical response**. Readers stand apart from a text, considering it objectively and evaluating elements of style.

Readers are required to examine two components: the title of this sub-section of the website and the image of a lighthouse. Readers are also required to attribute intention to the website designer; that is, readers assume that the juxtaposition of the title and image is not random but purposeful. Further, readers are required to provide a logical explanation for that connection between the image and the title and, then, to select the option that provides the best reasonable explanation. Readers who know that lighthouses are most frequently situated to signal the presence of dangers or hazards for ships at sea will likely connect that knowledge to the title, "The Hazards," and select option A.

In field trials, those readers who did not select the correct answer most frequently chose distractor D—"To include a symbol of mariner's culture."

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10. **What overall message can be drawn from this webpage?**

    A.   Never go to sea.
    B.   Alcohol has no place at sea.
    C.   It is essential to be responsible.
    D.   It is important to weight cargo.

Coding

The correct response is option C.

The task intent is classified as **critical response**. Readers stand apart from a text, considering it objectively and evaluating elements.

This task requires readers to comprehend the component parts of this webpage and to determine their interrelationship. Further, the reader is required to develop a central focus/purpose for this webpage and to determine which of the four options most clearly and logically identifies the central concept.

In field trials, most readers completed this task successfully.

END OF SAMPLE ITEMS

APPENDIX E

Frequently Asked Questions

Is PCAP-13 a valid and authentic assessment for our students?

PCAP-13 is designed to assess students' knowledge and skills in reading, mathematics, and science in a large-scale setting and represents a snapshot of their ability at a pan-Canadian level. Although different provinces and territories have different curricula, all have approved the conceptual framework and criteria of this assessment. Moreover, the various components of this assessment have been reviewed by provincial and territorial education personnel and have been field tested throughout the country to verify their suitability.

Why do 13-year-old students write this assessment?

One important goal of PCAP is to provide comparative data on student achievement between provinces and territories. It is designed to measure the cumulative effect of schooling up to the end of primary years. Ministries and departments of education will use PCAP results, in conjunction with other data available at the provincial/territorial level, to review their curriculum. Getting information on achievement in the core subject areas for this particular age group makes it possible to measure the effect of several years of schooling while still leaving enough time to address identified deficiencies in future years.

How do our students and the school benefit from participating in the assessment?

Jurisdictional results will help educators and other decision makers in planning initiatives to enhance teaching and learning for all students. Participating students and schools do not, however, receive individual results. Nonetheless, the assessment, designed by a pan-Canadian consortium of teachers and consultants, is itself a valid learning activity, and students stand to benefit from the experience. Provinces and territories may also conduct secondary analysis of the PCAP data and share findings with school districts/school boards and schools as they see fit.

Can students find out how well they did in this assessment? Can our school find out how well our students did in the assessment?

Principles of anonymity and confidentiality do not allow individual results to be shared with students. Lists linking student names with assessment booklet numbers remain in the province or territory where the student resides; they are not sent to the marking centre. Once all assessment materials have been scored, it will be impossible to report individual results.

Each province and territory determines whether they can share PCAP results at the school district/school board or school level. This can be done only if it is deemed that the sample is sufficient to accurately represent the achievement levels of students in a particular school or school district.

What if the sample for our school does not represent the range of ability evident in our school?

At a pan-Canadian level, the sample is not intended to represent the range of student ability in reading, mathematics, and science in a particular school or school district. It is intended to provide a jurisdictional picture of student achievement in these subject areas. It is quite possible that a given sample from a school may have a disproportionate number of low-level or high-level students. However, such disproportion balances out when results are compiled from the many schools that

contribute to the jurisdictional profile of reading, mathematics and science achievement. Only ministries and departments of education can determine whether a given sample is representative of their various subpopulations.

What if students with poor skills in reading, mathematics, or science are chosen as part of the sample?

It is anticipated that most 13-year-old students will experience some success on this assessment. **We suggest that you encourage as many as possible of the students selected in your school to write the assessment.** Nonetheless, certain students may have such limited skills that they would experience great frustration in even attempting to complete the assessment. For these few students, school personnel can predetermine that the assessment is not suitable for them, and they can be exempted from the assessment. During data analysis, they will be reported separately as having been "exempted because of low ability."

Why not have an intact class write this assessment instead of pulling out students from several classes?

The goal of the assessment is to provide a snapshot of the full range of student ability. Sampling theory suggests that this is best achieved by sampling from the pool of all age-appropriate students, not by using intact classes that might have some homogeneous grouping. We realize this may cause a disruption to school schedules similar to that experienced when students from a school team are absent from class for a tournament. We know your involvement as school coordinator requires time and effort in this regard, and we appreciate your contribution to this project.

Are individual results and questionnaire answers kept confidential?

Yes. Any links that identify student, teacher, or school responses are removed after all provincial or territorial data have been collected and before any data are forwarded for analysis at the pan-Canadian level.

What can be done to encourage students to do their best?

Individual students are motivated in different ways, some responding better to extrinsic motivational factors and rewards and some to intrinsic factors. You probably know what is best in your situation. In the past, teachers have reported doing the following:

- giving public recognition of students' participation through announcements at school; awarding certificates of appreciation from school principals or directors of education

- appealing to students' pride in representing their province or territory so as to benefit education across the country

- providing a breakfast before the assessment or offering a celebration with snacks or a pizza party afterward

Are there suggestions for organizing and running the administration of the assessment?

This handbook contains directions for administering the assessment. Here are two commonly used ways of distributing the materials to ensure each student has the correct booklet(s):

1. The *List of Selected Students* has booklet numbers corresponding to each student's name. Place a nametag along with a corresponding booklet at each workspace. When students enter the room, ask them to find the workspace labelled with their name and to await further instructions.

2. After all students have arrived, ask them to be seated at any workspace. From the *List of Selected Students*, read out the name of each student and ask them to come and receive the booklet assigned to them. Have them return to their workspace to await further instruction.

A script (Appendix A) has been prepared to help you introduce the assessment and guide the students.

Is there a time limit for the assessment?

The assessment session is two hours in length. For most students, this should provide ample time to complete the assessment and the *Student Questionnaire*. However, some students may require extra time. We suggest allowing an extra 10 to 15 minutes for these students.

Can students take breaks during the assessment?

We invite you to make the appropriate arrangement in your circumstances so as to ensure an orderly administration. The session is long, and students may require washroom or stretching/relaxation breaks. You should decide on the number of breaks (if any) and whether students should leave individually, in groups, or all together for these breaks.

How can I help students prepare for the assessment?

Prior to the assessment, you might provide copies of sample questions from this *Handbook for Schools* and encourage students to work together or individually responding to the questions. This might prepare them for what to expect when writing the assessment.

During the assessment, you may answer student questions to clarify wording on the test or questionnaire items, but you may not provide any help in remembering, understanding, or applying reading, mathematics, or science concepts and problem-solving strategies.