Inquiring Minds
Want to Know
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Introductions
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Want To Know

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Hack the Classroom
Where do we begin?
Where do we begin?
NUMERACY AND INQUIRY/RESEARCH SKILLS

The language curriculum builds on, reinforces, and enhances the mathematics curriculum. For example, clear, concise communication of precise information in texts supported by diagrams, charts, tables, and graphs, and the ability to interpret and use graphic texts. Students acquire in their study of graphs and charts in mathematics the ability to interpret and use graphic texts. Inquiry is at the heart of learning in all subject areas. In language, students are encouraged through the grades, they acquire the skills to locate relevant information from a variety of sources, such as books, newspapers, dictionaries, encyclopaedias, interviews, videos, and the Internet. The questioning they practised in the early grades becomes more sophisticated as they learn that all sources of information have a particular point of view and that the recipient of the information has a responsibility to evaluate it, determine its validity and relevance, and use it in appropriate ways. The ability to locate, question, and validate information allows a student to become an independent, lifelong learner.
Inquiry Word Count

Ontario Curriculum

Social Studies: 197
Science: 54
Arts: 17
Math: 6
Language: 5
\[ N = 0 \]

2001
What is inquiry?
What is inquiry?
What is Inquiry?

• a teaching strategy
• a set of student skills
• a process for students
• a character trait: inquisitiveness
• stimulating questions by students
• learning to act like professionals in the field

Source: Journal of Science Teacher Education by Barrow (2006)
Why inquire?

• prepare students academically
• help students prepare for work/careers
• fulfill a personal need
• fulfill societal need
• generate greater awareness
• experience the discipline like a true professional

Source: ZDM Mathematics Education by Artigue and Blomhøj (2013)
Reminds me of... only better.

- Research Projects
- Centres
- KWL Charts
- Teachable Moment
Lisa’s Mini Inquiry
Comprehension and Collaboration: Inquiry Circles in Action
Harvey and Daniels (2009)
## Types of Inquiries
*Harvey and Daniels (2009)*

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<tr>
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| • Big Ideas *(1 unit)*  
• backward design  
• Resources from teacher for research | • Student interests  
• Back mapped to curriculum  
• Teacher as resource  
• Highly structured |
| **Mini-Inquiries**                                                       | **Literature Circle**                              |
| • short term *(1 minute/hour/day/week)*  
• small group  
• research | • More like adult book club  
• Less focus on roles or worksheets |
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**Mini-Inquiries**

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Investigate
- ask questions
- find answers

Immerse
- find
- topics
- wonder

Go Public

Coalesce
- look deeper
- focus
- synthesize

Harvey and Daniels (2009)
Backward Mapping

Harvey and Daniels (2009) p.261

• making connections
• inferring
• supporting answers using textual information and previous experience
• critical thinking and evaluating
• determining purpose, exploring bias
“Inquiry-based learning is an approach to teaching and learning that places students’ questions, ideas and observations at the centre of the learning experience.”

-Ministry of Education, May 2013
Student questions?
But what about the curriculum?
Student’s questions, theories and interests.

Teacher’s agenda: accountability to curriculum and other responsibilities.

Time to reflect and interpret observations of students.
T:S Questions

27:1

?? ?? ?? ?? ??
?? ?? ?? ?? ??
?? ?? ?? ?? ??
?? ?? ?? ?? ??
Interests and Theories
Accessibility
Speak Selection

General

Accessibility

VISION
VoiceOver  Off
Zoom  Off
Invert Colors
Speak Selection  On
Speak Auto-text

Automatically speak auto-corrections and auto-capitalizations.

Accessibility
Speak Selection

Speak Selection
A Speak button will appear when you select text.

Voices

SPEAKING RATE

Highlight Words
Highlight words as they are spoken.
Safari as a Clean Reader
demo
✓ = I knew that
✗ = this contradicts my expectations
★ = this is important
❓ = I have a question
?? = I am confused or puzzled
❗️ = this is surprising or exciting
🔨 = I learned something new
6 Ideas to Get Going

1. Use an interesting fact, artifact or picture to provoke student questions and theories.

2. Improve your responses to students:
   - What makes you say that?
   - Where might we go next?

4. Look for persistent interests.

5. Use previous activities to feed forward.

6. Help students make sense of Non-Fiction Text.
What does it look like?
What does it look like?
What might inquiry look like?

Source: Sadie Hart https://www.flickr.com/photos/sadiehart/7613125774/
Accountability

Documentation of:

- conversation
- observations
- student product
Accountability

Documentation of:

  conversation
  observations
  student product
  student process
Assessing and Evaluating Inquiry

• Evaluate on what they have learned based on day to day assessment.

• Day to day evidence: daily scrub notes, short and long summaries, notebooks.

• Evaluate open ended responses that require students to show their thinking and learning.
Ways to Assess Inquiry

Assessing Thinking and Understanding (Harvey & Daniels, 2009; p.273)

- Listen to students
- Read students work
- Confer with students
- Listen in on conversations and record what they say
- Observe behaviour and expressions
- We capture student responses
Documenting with iPad
Documenting with iPad
Documenting with iPad
Documenting with iPad
Book Creator
demo
Documenting with iPad
Documenting with iPad
4 Ways to Document with iPad
4 Ways to Document with iPad

Photos
4 Ways to Document with iPad

Photos
Screenshots
4 Ways to Document with iPad

Photos
Screenshots
Videos
4 Ways to Document with iPad

Photos
Screenshots
Videos
Screencasts
Screencasts
Barriers and Roadblocks
iPad and independence
iPad and independence
Troubleshooting
Troubleshooting
Rubrics

- **The Challenge:** How to get a report card mark from collaborative inquiry?

- **Potential Solution:** Performance rubrics

  - Combine academic and learning skills
# Rubric – Health Inquiry

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## Health Research

### Healthy Living

- C3.1 Demonstrates a clear understanding of the healthy choices surrounding healthy eating and active living
- C2.1 Demonstrates a sensitivity towards the topic with an understanding of the influences of medical, emotional, practical or societal influences

### Learning Skills:

- **Collaboration** – shares information, resources and expertise and promotes critical thinking to solve problems and make decisions.
- **Initiative** – demonstrates curiosity and interest in learning

### Writing (Skit)

1. **Purpose and Audience** – identify topic, purpose and audience
2. **Organizing Ideas** - identify and order main ideas and supporting details and group them into units that could be used to develop a structured, multi-paragraph piece of writing.
3. **Introduction** - introduce the setting, characters and problem
4. **Body** - include rising action that demonstrates specific character traits and leads to the climax (the point where the healthy choice must be made)
5. **Conclusion** - wrap it up with a clear healthy choice message

### Learning Skills:

- **Self-Regulation** – assesses and reflects critically on own strengths, needs and interests
- **Organization** – identifies, gathers, evaluates and uses information, technology, and resources to complete tasks

## Drama

### Creating and Presenting

- B1.1 Engage actively in drama exploration and role play, with a focus on identifying and examining a range of issues, themes, and ideas
- B1.4 Communicate feelings, thoughts, and ideas to a specific audience, using audio, visual, and/or technological aids to strengthen the impact on the viewer

### Learning Skills:

- **Responsibility** – takes responsibility for and manages own behaviour
- **Collaboration** – builds healthy peer to peer relationships through personal and media assisted interactions

## Media

### Form

- Identify an appropriate form to suit the specific purpose and audience for a media text they plan to create

### Conventions and Techniques

- Identify conventions and techniques appropriate to the form chosen for a media text they plan to create

### Learning Skills:

- **Initiative** – looks for and acts on new ideas and opportunities for learning
- **Organization** – establishes priorities and manages time to complete tasks and achieve goals
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Capturing ideas with iPad
Capturing ideas with iPad
Thank you.

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