Educating Young Men

Language Arts/Mathematics

Grades 4 Resource- Unit 2
Young Men’s Leadership Academy
Academic Philosophy

Our philosophy is built upon research that indicates that boys and girls learn differently. We recognize that boys have varied academic, social, and emotional needs. We will address those needs through instruction that is tailored to the male learner and delivered in an environment that promotes academic success while instilling a strong culture of brotherhood and camaraderie.
Teaching Young Men

The goal of educators is to provide equitable learning opportunities for all students in the classroom. Research indicates that boys and girls develop literacy skills differently; resulting in disparate academic outcomes. As a result, providing equitable access to positive classroom experiences is an issue that has increased in urgency.

Past and current research report consistent findings:

- Gender is a significant factor in both reading materials and reading achievement for boys and girls
- On the US National Assessment of Educational Progress (NAEP) boys have scored significantly lower that girls in reading at all grade levels every year since 1992 (the first year NAEP scores were available)
- Boys are more likely than girls to be placed in special education programs
- Boys are less likely than girls to go to college
- Dropout rates are higher for boys than for girls

So, what causes this achievement gap?

Some researchers argue that the gender gap originates in biological, developmental, or environmental differences between boys and girls. Offering yet another perspective, sources such as ASCD and Psychology Today propose that the gap may be due to the way literacy is taught; suggesting that educational strategies that are more mindful of the way male brains develop would help close the gap.

So, what can educators do?

The encouraging news is that none of the findings above are irreversible. Recent studies focused on how boys learn suggest that if their academic needs are properly addressed, boys can obtain academic success equal to their female counterparts. A key component of their academic success lies in ensuring that boys are provided with classroom experiences that address their interests, needs, and learning styles.

Extracted from *Me Read? No Way!* Copyright Ontario Educat
Teaching Young Men

**Boy smarts**
Boys are the masters of minimalism and the practitioners of “just–in-time” management. Asked to do almost any task, their immediate response is “later”. If they are asked to write a 50-word essay, they will count the words and if they write 51 words most of them will think they have overdone it. If you have predominantly boys in your class, there are several things that you can do to improve behavior and learning. These methods are likely to work with most boys.

**Respect**
Boys are constantly checking to see if you respect them. They respond well to people who have expectations of them and respect them as capable of meeting those goals. As the TV character Ali G. would say “respect!” If a boy has a sense that you respect him, he will walk over coals for you. Never ask a boy who is a poor reader to read out loud in front of his peers. He will be humiliated and will never do anything for you ever again.

**Have clear signals about who is in charge**
Boys need boundaries. They need to know who is in charge here. They respond to teachers who are fair, funny and respect their points of view and they generally do better with teacher led learning. Open spaced learning areas where no one clearly owns the space can be quite anxiety provoking for boys and that anxiety converts into expressions of low motivation and clowning type behaviors.

**Value them and they will be heroes**
Boys are tuned into hierarchies. This means the predominant values of a classroom, family or school will play a powerful role in determining their actions. Have a couple of core values (e.g. compassion, generosity, being part of a team). Live by them and insist upon them. Help boys to learn that they can be heroes and victorious but that winning doesn’t mean someone else has to lose.

**Use knowledge from computer games as an inspiration for learning**
Boys’ attraction to competition will override almost any disadvantage or loss of motivation. They generally love competitive games especially when there is not an ultimate winner. Quick fire quizzes with several rounds are a successful way of engaging boys. Computer game designers have cleverly used the principles of engagement to captivate boys:

- Make success challenging but attainable by breaking it down into stages.
- Make success more likely than failure. The most motivating games have players succeed about 80% of the time initially before building up to 100% before moving to the next level.
- Give people the opportunity to try again.
• Try to create a sense of moratorium where boys and girls can try to out new activities in a setting where there are no consequences.
• Use lots of movement.

Pay attention to less competitive, sensitive boys. Assisting them to attain personal bests can be useful.
Give boys more time to answer and to assemble the words and give them a chance to phone a friend (the friend cannot answer the question but can make helpful suggestions).

**Boys need quiet times**
To reflect and re-energize boys need quiet times to think, read and at times quietly chat with others. Arrange schools so that there are quiet spots for thinking.

**Know about anger**
Anger and shame can stop boys learning and once boys are angry, it is harder for them to get over it. If they feel you are going to shame them in front of their peers, they will fight you tooth and nail. Most boys will do silly, self-defeating things rather than lose the respect of their peers. Take your sail out of their winds. Deal with issues at a time of **your** choosing not when the boy wants to deal with it. If you really must pick a battle with a boy, see him after class (for your own protection, always keep doors open for boys and girls when you see them in private). There are also decision-making differences between girls and boys when involved in dispute resolution. Girls are often more able to see the effect of their actions on other students so asking, “how you think she felt?” type questions may pay off. In contrast boys may be less cued into other students’ emotions and a more successful strategy may be reinforce a rule such as, “I wouldn’t let him do that to you and I’m not going to let you do it to him.”

**Give them a whiff of success**
Most men and boys waste an incredible amount of time completing tasks that don’t need to be done and avoiding tasks that don’t need to be avoided. Help them to structure tasks and to improve on early attempts so that they gain mastery and success. Once a boy believes he can be successful, he’ll almost always live up to it.

**Use a physical signal when you want silence**
Boys need more signals than girls partly because they are less tuned into facial cues. Boys are more able to screen out white noise. (Teachers requesting quiet equals white noise!) Therefore, deliver instructions in silence. Use visual cues, raising hand, turning lights off and on, and moving to a part of the room. Never, ever yell.

**Fewer rules and fewer words is better**
Have a couple (no more than three) clear rules that you apply fairly and consistently. Base your classroom management on the idea of, “I won’t let this happen to you and I won’t let you do it to anyone else”. When you make an instruction use a back-up visual that you
can point to for boys who have difficulty listening.

**Move regularly**
Teaching boys is like being a cross between a matador and a traffic cop. Keep on the move and mingle with the crowd. Boys see things best in motion. Use visuals and animations as often as you can. As James (2009) notes boys love targeting. If you have ever watched boys place rubbish into bins you will see that they don’t place it, they take a shot. For this reason, movement and aiming to achieve a set target are powerful strategies with boys.

**Control where they sit**
Move boys who do not appear to be paying attention to the front. Proactively shift the seating of boys who seem unsettled or distracted. They will often be playing up to impress their local audience. Boys need quiet times. To reflect and re-energize boys need quiet times to think, read and at times quietly chat with others. Arrange schools so that there are quiet spots for thinking.

**Boys are loyal and funny**
Boys love the inside word; the cheat sheet and they love to score. Giving them hints suggestions and a way to succeed builds their loyalty to you. Boys buy popularity through achievement, jokes and skills. Humor is an essential quality. Make it smart to be smart.

**Boys generally learn through doing-thinking-talking**
Boys like movement and are generally more active than girls. They are also more concerned with performance. While some boys will be inherently interested in the material, almost all boys engage when there is a competitive spirit. The more that you mimic a game show format the more boys will be engaged.

Extracted from the *Brain Based Learning Manual* Copyright Andrew Fuller
Teaching Young Men

Model of a Boy-Friendly Curriculum

**BOYS NEED CURRICULUM THAT PROVIDES**
- “Safe” classes that foster discussion
- Tasks that are open-ended and require interchange with others
- Subjects that mandate exploration of “the self”
- Teachers who “facilitate”
- Subjects that accept alternative truths

**BOYS NEED CURRICULUM THAT PROVIDES**
- A wide variation of courses and activities.
- Teachers with “passion”
- “Disciplined freedom”
- Avenues to be impulsive
- Tasks that are “relevant” - can be explored through boys’ culture
- Problem-based learning (“doing it”)
- Hands-on activities with practical solutions

**BOYS NEED CURRICULUM THAT PROVIDES**
- Small class sizes
- Pedagogy that counters fear of ridicule or embarrassment
- Skills to enable expression
- A vocabulary to discuss masculinity
- A mandate to explore individuality
- Opportunity to engage “a passion”
- Opportunity to be a risk-taker
- A level playing field between types of masculinities

**BOYS NEED CURRICULUM THAT PROVIDES**
- Teachers skilled at facilitating boys’ exchange of ideas.
- A range of tools to express ideas
- A range of outcomes to set tasks
- Criticism skills
- A mandate for the expression and an exchange of ideas
- Subjects with “non-binary” epistemologies
- Subjects that are non-competitive and allow access

Adapted from Imms, 2003
Teaching Young Men

COURAGEOUS CONVERSATIONS

According to the Ontario Ministry of Education, boys respond well to real-world themes that offer them authentic learning experiences – that is, experiences they have had or could have in their own lives. Exploring real-world themes typically involves a combination of resources and activities. Real-world themes have a clear focus on one or more meaningful, key concepts and authentic learning experiences that involve both direct instruction and students’ discovery of things on their own.

In addition to authentic real-world experiences, students need opportunities to engage in courageous conversations about race and issues of discrimination. This work is critical for students and teachers to engage in because outside school experiences are quite inconsistent with the expectations that are inside of school. It is the school’s responsibility to take on the onus of understanding what students experience outside of school.

For example, if students read kinds of books outside of school, and if they engage in social media outside of school, then teachers must figure out how to utilize that as an anchor for what happens inside of school. It is the teacher’s responsibility to develop learner lenses to understand what’s happening with the student outside of school so that he or she can be responsive to that reality. As teachers and students engage in courageous conversations within the classroom, it is imperative that all members are aware of the four agreements.

The Four Agreements of Courageous Conversations:

1. Stay engaged: Staying engaged means “remaining morally, emotionally, intellectually, and socially involved in the dialogue”
2. Experience discomfort: This norm acknowledges that discomfort is inevitable, especially, in dialogue about race, and that participants make a commitment to bring issues into the open.
3. Speak your truth: This means being open about thoughts and feelings and not just saying what you think others want to hear.
4. Expect and accept non-closure: This agreement asks participants to “hang out in uncertainty” and not rush to quick solutions, especially in relation to racial understanding, which requires ongoing dialogue (pp.58-65).
**Language Arts**  
**Grade 4**

**Theory:** *Read between the Lines-Bringing critical-literacy skills into the classroom*

Critical literacy means that boys adopt a critical or questioning stance regarding what they are reading, hearing, or viewing. All students need to acquire more than the ability to decode words and make meaning from text. They need to be helped to exercise their critical thoughts and perceptions and understand how texts are constructed and how texts try to inform, persuade, entertain, and influence the reader. Particularly boys need to learn to have deep conversations around how texts present particular views of the world, and through these conversations, they should come to understand that they have the power and responsibility to make a difference in the world.

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| **NJSLSA.R1.**    | Read the text closely (questioning, determining importance, looking for patterns) to make meaning of what was read | Selected stories from Wonders:  
  - Ranita, The Frog Princess  
  - The Moonlight Concert Mystery  
  - The Sandpiper  
  - Fog | Teachers will create text-dependent questions, which require students to cite textual evidence and make logical inferences. Teachers will provide students with APE strategy as a guide for responding to text-dependent questions. |
| **SLO RL.4.1.**   | Make personal connections, make connections to other texts, and/or make global connections when relevant |                                                                           | **APE Strategy:** Teachers will model the “APE” (answer, prove, extend) strategy to assist students with answering text-dependent questions. |
|                   | Use quotes or references from a text when explaining what the text says explicitly and/or when explaining inferences drawn from the text |                                                                           |                                                                           |
**Language Arts**
**Grade 4**

**Theory:** Explicit teaching offers good comprehension skills
Research indicates that good readers are strategic in their reading, and that the explicit teaching of comprehension strategies can foster the development of comprehension skills. For many boys, literature appears to involve a secret code, one that is understood by authors, teachers, and some students, especially girls. Not surprisingly, the fact that these “insiders” all understand the code and are able to interpret “deep” or “hidden” meanings. Boys need to be let in on the “secret” of what happens when we read and write. We need to examine processes that are often hidden or left unspoken and make them clear and explicit.

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<tr>
<td>NJSLSA.R2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.</td>
<td>Provide direct, explicit mini-lessons on:  - Monitoring one’s understanding of a text and making adjustments (e.g., rereading a passage) as needed  - Using relevant prior knowledge (e.g., to make predictions)  - Generating questions about the text  - Thinking aloud  - Paying attention to and determining or “uncovering” a text’s structure  - Drawing inferences from a text</td>
<td>Selected stories from Wonders:  - Ranita, The Frog Princess  - The Moonlight Concert Mystery  - The Ant and the Grasshopper  - Anansi and the Birds  - The Cricket in Times Square</td>
<td>Use graphic organizers to examine similarities and differences between characters or between various literary forms, such as poems, stories, and novels, or to contrast two different texts on the same topic. Create questions related to the theme of a story. Allow students to share their thinking through talk prior to a written assignment.</td>
</tr>
<tr>
<td>SLO RL.4.2. Determine a theme of a story, drama, or poem from details in the text; summarize the text.</td>
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Language Arts  
Grade 4

**Theory:** Teachers increase the use of graphics, pictures, and storyboards in math-related classes and assignments. When teachers use pictures and graphics more often (even well into high school), boys write with more detail, retain more information, and get better grades on written work across the curriculum. Teachers should provide repeated opportunities for students to play games, then let the mathematical ideas emerge as students notice new patterns, relationships, and strategies.

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| **SLO # 2:** Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers; represent and explain calculations using equations, rectangular arrays, and area models.  
**NJSLS:** 4.NBT.B.5: Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.  
[Grade 4 expectations](https://readworks.org/content/standard-4-4nbtb5) | Teachers use multisensory learning where the student can use multiple pathways to the brain at one time in learning. He or she will not only hear the concept explained but will also be using hands/body in learning, will see visuals that carry the meaning of the lesson.  
The teacher needs to understand how place value helps students find the product in multi-digit multiplication problems. It is important to use multi-digit multiplication problems to reinforce place value. Example: “Four ten times three tens is twelve tens. Regroup and put one | Interactive Multi-Digit Multiplication Area Model (4th Grade)  
[https://learnzillion.com/resources/73077-multiply-multi-digit-whole-numbers-4-nbt-b-5](https://learnzillion.com/resources/73077-multiply-multi-digit-whole-numbers-4-nbt-b-5) | **Multiplication: Double-Digit x Double-Digit Partial Product Box**  
1. Break apart (expanded form) [30 = 30+2].  
2. Draw a box and split it into 4.  
3. Write the first expanded number on top and write the second number expanded vertically on the left.  
4. Find each product in the aligned box. |
in this domain are limited to whole numbers less than or equal to 1,000,000.

Students who develop flexibility in breaking numbers apart have a better understanding of the importance of place value and the distributive property in multi-digit multiplication.

5. Add all partial products.

\[
\begin{array}{c}
32 \\
30 \\
10 \\
\hline
2 \times 21 \\
30 + 60 \\
\hline
672 \\
\end{array}
\]

www.theteacherscafe.com/Worksheets/Math/Multiplication-Double-Digit-X%27s-Double-Digit-Box.htm

**Student Video Lessons**
- Learn Zillion – Multiply Multi-Digit Whole Numbers
- Learn Zillion – Solve multiplication problems
- Study Jams – Distributive Property
- Virtual Nerd – Multiplication

**Online Problems, Games, and Assessments**
- Khan Academy – Questions and Video Lessons
  - Multiply 1-digit numbers by 2-digit numbers
<table>
<thead>
<tr>
<th>Multiply 1-digit numbers by 3-digit or 4-digit numbers</th>
<th>Multiplication patterns over increasing place values</th>
<th>Properties of multiplication</th>
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</thead>
<tbody>
<tr>
<td>Distributive property: find the missing factor</td>
<td>Multiply using the distributive property</td>
<td>Multiply a 2-digit number by a 2-digit number: complete the missing steps</td>
</tr>
<tr>
<td>Multiply a 2-digit number by a 2-digit number</td>
<td>Multiply numbers ending in zeroes</td>
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## Mathematics
### Grade 4

**Theory:** Teachers increase the use of graphics, pictures, and storyboards in math-related classes and assignments. When teachers use pictures and graphics more often (even well into high school), boys write with more detail, retain more information, and get better grades on written work across the curriculum. Teachers should provide repeated opportunities for students to play games, then let the mathematical ideas emerge as students notice new patterns, relationships, and strategies.

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| **SLO #2:** Multiply and divide to solve word problems involving multiplicative comparisons and represent these problems with drawings and equations. | • Appeal to the gaming culture by writing instructions for games and offering students the opportunity to respectfully compete.  
• Students can discover practical, real-life ways to apply math skills.  
• Students who have differing levels of skills and ways of thinking can learn from each other.  
• Students can explore math in formats they know and enjoy (like on The Great Chase Race) | **The Great Chase Race**  
• The Great Chase Race game board  
• Number cube  
• one game piece per player  
• white board and marker (or journal)  
• calculator | **The Great Chase Race**  
1. Each mathematician places his/her game piece at the start. To determine who goes first, roll the number cube. The person with the greatest number goes first and the game will continue with the person to the left.  
2. Roll the number cube and move that number of spaces.  
3. Solve the multiplication expression on that space.  
• Have your partner use the calculator to check your work. |
| **NJSLA: 4.NBT.5** Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers; represent and explain calculations using equations, rectangular arrays, and area models. | file://C:/Users/User/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d8bbwe/TempState/Downloads/4NBT5_The_Great_Chase_Race%20(3).pdf |
- Students can test new strategies and ideas without feeling the pressure of being graded.

### Recommended Links

- **Tic Tac Times** (HCPSS-adapted print resource)
- **Dicey Operations Links to an external site.** (enrich math game, pictured)
- **Arithmetic Connect Four Links to an external site.** (online resource)
- **Count downlinks to an external site.** (enrich game)
- **Products GameLinks to an external site.** (NCTM Illuminations Game)
- **Number FactoryLinks to an external site.** (online resource)
- **Games with DominoesLinks to an external site.** (enrich math games)
- **Rectangle Multiplication Links to an external site.** (virtual manipulative)
- **Partial Products Tutorial** (resource)

- If you solve it correctly, you may stay on that space.
- If you do not solve it correctly, you must move back to the space you were at the beginning of your turn.

4. The first person who gets to the end, wins the race!
**Mathematics**  
**Grade 4**

**Theory:** Teachers increase the use of graphics, pictures, and storyboards in math-related classes and assignments. When teachers use pictures and graphics more often (even well into high school), boys write with more detail, retain more information, and get better grades on written work across the curriculum. Teachers should provide repeated opportunities for students to play games, then let the mathematical ideas emerge as students notice new patterns, relationships, and strategies.

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| SLO #7: Compare two fractions with different numerators or different denominators, recording comparison with >, =, or <, and justifying the conclusion using visual fraction models | **Gamify Lessons**  
- Appeal to the gaming culture by writing instructions for games and offering students the opportunity to respectfully compete.  
- Students can discover practical, real-life ways to apply math skills.  
- Students who have differing levels of skills and ways of thinking can learn from each other.  
- Students can explore math in formats they know and enjoy (like on video game systems).  
- Students can test new | **Games & Tools**  
- Smart Board  
- white board and marker (or journal)  
- link to the game: jeopardyfractions.ppt | **Jeopardy Fractions Games**  
In this lesson, students play a jeopardy game using a smart board, to review important fraction concepts. Students will complete a fraction assessment in the near future, so this is an important lesson for me to gauge students' abilities and skills.  
**WARM UP**  
Teachers may utilize the warm up questions below and guide students through a discussion on student’s solution pathways, some of which are shared in the video below.  
https://youtu.be/7hCqtlmn3MM |
when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model. [Grade 4 expectations in this domain are limited to denominators of 2, 3, 4, 5, 6, 8, 10, 12 and 100.]

| strategies and ideas without feeling the pressure of being graded. |
| Understanding how the value of a digit changes depending on where it is in a number is essential. In a base ten system, multiplying or dividing a number by 10 changes the value of the digit by one whole place value position. |
| Students complete at least one game applying concepts of place-value to use as an exemplar. Students create a math game that relates to place value essential understandings learned in 4.NBT.1. |
# References

(i.e. scholarly journals)

- Amanjot Toor, Joyce Mgombelo. Teaching mathematics through storytelling: Engaging the ‘being’ of a student in mathematics. Konrad Krainer; Naďa Vondrová. CERME 9 - Ninth Congress of the European Society for Research in Mathematics Education, Feb 2015, Prague, Czech Republic. pp.3276-3282, Proceedings of the Ninth Congress of the European Society for Research in Mathematics Education. [hal-01289881](https://hal.inria.fr/hal-01289881)