

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

PROMOTION OF PEACE

Pope John Paul II: *"Peace is not just the absence of war. It involves mutual respect and confidence between peoples and nations. It involves collaboration and binding agreements."*

Peace is much more than the absence of war; it represents the fullness of life. It is predicated on a vision of all things being rightly ordered, of all persons living with dignity and in harmony with one another and with God. To promote peace, we are called to be peacemakers as a requirement of our faith.

Sample Lessons Using the Promotion of Peace Framework

Grade and Subject Code	Lesson Summary
Grade 12 English Eng3C/U Blessed are the Peacemakers	This lesson will introduce students to the Catholic Social Teaching, Promotion of Peace. Learners will read a couple of articles (create meaning) and orally share their thinking using protocols that structure their conversations to negotiate their understanding of peacemakers.
Grade 12 Physics SPH4U Modern Physics - Mass and Energy	This lesson will introduce students to the Catholic Social Teaching, Promotion of Peace, as a positive, action-oriented concept. Scientists must use their knowledge and skills not only for technological advancement but as active promoters of peace when scientific advancement (atomic energy) can be used as weapons. There is a close relationship in Catholic teaching between peace and justice. Peace is the fruit of justice and is dependent upon right order among human beings.

NOTE: These lessons are provided as cross-curricular examples of how our Catholic Social Teachings can guide our teaching and bring the lens of faith to Equity and Inclusion in our classroom. These exemplars are only a beginning. The framework can be used by teachers to develop lessons of their own by selecting guiding questions with their students while addressing and assessing other curriculum expectations.

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Guiding Questions: The Promotion of Peace

“With her social doctrine the Church proclaims God and the mystery of salvation in Christ to every human being” (Compendium of Social Doctrine 67)

The Catholic Social Teachings

- What is the relationship between peace as the fruit of justice and all things being rightfully ordered?
- What are the threats to peace and why?
- How do we promote peace within ourselves?
- What actions promote peace?
- How are we called to be peacemakers?
- How can we be builders of peace in my home, school and community?

The Equity and Inclusive Education Strategy

- How do we make everyone in our classroom feel respected, safe, and included to provide the best opportunity for growth and student achievement?
- What gifts do you bring to share with your classmates and how will you use these gifts to support your learning and the learning of others?
- How can we recognize and value the gifts of others?
- How do you see yourself as a valued and contributing member of this class, school, community, and society?
- In building a welcoming learning environment, what words and actions demonstrate respect for the dignity of all?

**PROMOTION OF
PEACE**

Critical Literacy

- What kinds of issues of equity, power and social justice are relevant to the topic?
- How can we analyze the information presented for bias, reliability, fairness, and validity?
- How can we challenge our assumptions?
- What types of actions and/or responses are appropriate in the subject?
- How does our faith (age, culture, life experiences, values, etc.) influence how the message is interpreted?
- How might the text be changed to offer alternative perspectives or recognize and include missing voices, such as the marginalized?

The Ontario Catholic Graduate Expectations

- What scriptural reference might guide our thinking in this Catholic Social Teaching?
- How does the Catholic Social Teaching, Promotion of Peace, call us to respond or act:
 - As a discerning believer?
 - As an effective communicator?
 - As a reflective, creative, holistic thinker?
 - As a self-directed responsible life-long learner?
 - As a collaborative contributor?
 - As a caring family member?
 - As a responsible citizen?

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

GRADE 11

<p>Equity and Inclusive Education: From the Lens of the Catholic Social Teachings</p>	<p>Subject: English Code: Eng3C/U</p> <p>Lesson Title: Blessed are the Peacemakers</p> <p>Suggested length of time: approximately 140 minutes</p>
	<p>Lesson Overview</p> <p>This lesson will introduce students to the Catholic Social Teaching, Promotion of Peace. Learners will read a couple of articles (create meaning) and orally share their thinking using protocols that structure their conversations to negotiate their understanding of peacemakers and write a response.</p>

CURRICULUM CONNECTIONS	CATHOLIC SOCIAL TEACHINGS & ONTARIO CATHOLIC SCHOOL GRADUATE EXPECTATIONS
<p>English 3C/U</p> <p>Overall and Specific Expectations:</p> <p>Oral Communication:</p> <p>2. Speaking to Communicate: use speaking skills and strategies appropriately to communicate with different audiences for a variety of purposes;</p> <p>2.1 communicate orally for several different purposes, using language suitable for the intended audience</p> <p>2.2 demonstrate an understanding of several different interpersonal speaking strategies and adapt them to suit the purpose, situation, and audience, exhibiting sensitivity to cultural</p>	<p>The Catholic Social Teaching evident in this lesson: Promotion of Peace</p> <p>The Ontario Catholic School Graduate Expectations evident in this lesson include:</p> <p>A Discerning Believer Formed in the Catholic Faith Community Who:</p> <p>1 (d) Develops attitudes and values founded on Catholic Social Teaching and acts to promote social responsibility, human solidarity and the Common Good.</p>

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

	<p>differences</p> <p>Reading:</p> <p>1. Reading for Meaning: read and demonstrate an understanding of a variety of informational, literary, and graphic texts, using a range of strategies to construct meaning;</p> <p>1.3 identify the most important ideas and supporting details in texts, including increasingly complex texts</p> <p>1.5 extend understanding of texts, including increasingly complex texts, by making appropriate connections between the ideas in them and personal knowledge, experience, and insights; other texts; and the world around them</p> <p>1.8 identify and analyse the perspectives and/or biases evident in texts, including increasingly complex texts, and comment on any questions they may raise about beliefs, values, identity, and power</p> <p>Writing:</p> <p>2. Using Knowledge of Form and Style: draft and revise their writing, using a variety of informational, literary, and graphic forms and stylistic elements appropriate for the purpose and audience;</p> <p>2.2 establish an identifiable voice in their writing, modifying language and tone to suit the form, audience, and purpose for writing</p>	<p>An Effective Communicator Who:</p> <p>2 (a) Listens actively and critically to understand and learn in light of gospel values</p> <p>2 (b) Reads, understands and uses written materials effectively.</p> <p>A Collaborative Contributor Who:</p> <p>5 (a) works effectively as an interdependent team member</p> <p>5 (e) Respects the rights, responsibilities and contributions of self and others.</p> <p>A Responsible Citizen Who:</p> <p>7 (b) accepts accountability for one’s own actions</p>
--	--	--

	<p>Guiding Questions from the Framework</p>
	<p>These guiding questions have been selected from the framework focusing on:</p> <p>Equity and Inclusive Education:</p> <ul style="list-style-type: none"> • In building a welcoming learning environment, what words and actions demonstrate respect for the dignity of all? <p>Catholic Social Teaching:</p> <ul style="list-style-type: none"> • What are the threats to peace and why? • How do we promote peace within ourselves? • What actions promote peace?

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Ontario Catholic Graduate Expectations:

- What scriptural reference might guide our thinking in this Catholic Social Teaching?
The Beatitudes (Mathew 5)
- How does the Catholic Social Teaching, Promotion of Peace, call us to respond or act:
 - As an effective communicator?
 - As a reflective, creative, holistic thinker?
 - As a collaborative contributor?
 - As a responsible citizen?

Critical Literacy:

- What kinds of issues of equity, power and social justice are relevant to the topic?
- How does our faith (age, culture, life experiences, values, etc.) influence how the message is interpreted?

Teachers and students may select additional questions from the framework to guide their learning inquiry.

LEARNING GOALS

By the end of this lesson, students will know, understand and/or be able to:

- Identify and analyse the perspectives and/or biases evident in a variety of texts;
- Explain how the Promotion of Peace calls each of us to action as peacemakers in our daily lives;
- Read for meaning and orally communicate thinking (questions, knowledge, experiences and insights) in small group conversations using protocols;
- Write a reflection that establishes an identifiable voice around the Promotion of Peace.

Success Criteria, based on the Learning Goals, can be co-constructed as a class in language meaningful to students. The success criteria help students understand what to look for during the learning and what it looks like once they have learned. They identify the significant aspects of student performance that are assessed and/or evaluated (i.e., the “look-fors”) in relation to curriculum expectations.

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

INSTRUCTIONAL COMPONENTS AND CONTEXT	
<p>Prior Learning:</p> <ul style="list-style-type: none"> • some background knowledge of Catholic Social Teaching, especially human dignity and the promotion of peace • collaborative / productive group work elements and skills • knowledge of reading comprehension strategies <p>Teacher Readiness: Prior to this lesson, the teacher will have to:</p> <ul style="list-style-type: none"> • make sure students are familiar with a variety of reading comprehension strategies (predicting, asking questions, clarifying meaning/understanding, making connections, visualizing, comparing and contrasting, summarizing, recognizing the author’s purpose) • teach/review collaborative/productive group work skills <p>Student Readiness: Prior to this lesson, students will have to:</p> <ul style="list-style-type: none"> • learn about the purpose and use of protocols <p>Terminology: Catholic Social Teaching, negative and positive peace, structural violence, protocol, anticipation guide, voice</p>	<p>Materials:</p> <p>Appendix A Comparison List & Anticipation Guide</p> <p>Appendix B What Do We Mean by “Peace” Anyway?</p> <p>Appendix C Significant-Connect-Question (SCQ) Protocol</p> <p>Appendix D Penny for Your Thoughts Protocol</p> <p>Appendix E The Seville Statement</p> <p>Appendix F It Says, I Say and So Protocol</p> <p>Penny for Your Thoughts—requires 3 pennies (or other small discs/items) per student</p> <p>Internet Resources:</p> <p>www.educationforjustice.org</p> <p>http://www.cultivatingpeace.ca/pdfs/CP TakingActionEN.pdf</p> <p>http://www.unesco.org/cpp/uk/declarations/seville.pdf</p> <p>http://www.edugains.ca/resourcesLIT/AdolescentLiteracy/AL Resources/ALG FacilitatorsGuide.pdf (Protocols)</p> <p>Resources:</p> <p>Choose Your Voice: Antisemitism in Canada Education Program FAST-Fighting Antisemitism Together 2011</p>

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

MINDS ON	CONNECTIONS
<p>Independent:</p> <p>Hand out Appendix A Comparison List and Anticipation Guide and ask students to independently complete the top chart (Lists 1 and 2)</p> <p>Pairs:</p> <p>When most students are finished their lists, display the following questions so that pairs of students can discuss their responses. Ask each pair to identify themselves as A or B (Awesome and Brilliant) to help ensure that both partners talk about each question. The teacher may need to assign time for Awesome to speak and then Brilliant to make certain all students are participating.</p> <p>Follow up questions:</p> <ul style="list-style-type: none"> ● <i>Were there any differences in the amount of information you were able to fill in on each list?</i> ● <i>How do you think these messages about violence influence our everyday actions?</i> ● <i>What do your responses reflect about our culture?</i> ● <i>Does the absence of war or violence mean that we have peace? Why or why not?</i> ● <i>Do you think that students should study peace and the underlying causes of violence in school? Why or why not?</i> ● <i>What do you think is needed for our country or our world to create a culture of peace?</i> ● <i>Do you think that violence and aggression are a natural part of human behaviour and therefore will always be part of our culture?</i> <p>Whole Class:</p> <p>Initiate a popcorn discussion after students have had time to discuss the above questions. Randomly picking out popsicle sticks (with all students names) is a quick way to boost individual accountability.</p> <p>Independent:</p> <p>Ask students to complete the first 3 columns of the anticipation guide on the bottom half of Appendix A, Anticipation Guide. Encourage students to record their reasons (thinking) before we proceed and hopefully deepen our understanding of Promotion of Peace.</p>	<div data-bbox="1117 491 1182 548" data-label="Image"> </div> <p>Differentiation of learning:</p> <ul style="list-style-type: none"> — Purposeful consideration of pairs <p>Assessment for learning:</p> <ul style="list-style-type: none"> — Observe student behaviour and listen to what they say in both small and large groups in order to know what the next step should be (e.g. taking turns, active listening, making connections, gaps in understanding, etc.)

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

	<p>Whole Class:</p> <p>Initiate a popcorn discussion after students have had time to work on their anticipation guide. Randomly choose students.</p>	
--	---	--

ACTION	CONNECTIONS
	<p>Whole Class:</p> <p>Remind students that being a Catholic requires us to live out our faith through action-not just being a believer. Introduce the term Catholic Social Teaching (see introductory pages of this resource). Explain that we will be focusing our learning on the social teaching, Promotion of Peace. To help students link to prior knowledge, read and review the scripture passage, Matthew 5 on the Beatitudes (specifically Blessed are the Peacemakers), to give students a context and to connect to the teaching of Jesus (students may remember this from grade 9 Religion program).</p> <p>Share how the following questions can help guide our thinking as we try to deepen our understanding.</p> <ul style="list-style-type: none"> • <i>In building a welcoming learning environment, what words and actions demonstrate respect for the dignity of all?</i> • <i>How does our faith (age, culture, life experiences, values, etc.) influence how the message is interpreted?</i> • <i>How do we promote peace within ourselves?</i> • <i>What actions promote peace?</i> <p>Copy them on chart paper so they can be used as an anchor chart to refer to again. Refer back to the Minds On activities and ask students to make any connections they can.</p> <p>Give each student Appendix B, the article, What Do We Mean by “Peace” Anyway? As a pre-reading activity ask students to scan for new terms, and predict what the article may be about. Record the terms on the board.</p> <p>Independent:</p> <p>Explain to students that their purpose while reading is twofold; they are to record their thinking (what they feel is significant, any connections they can make, and questions they may have—show them Appendix C, the SCQ protocol) as well as defining the terms</p>

Assessment **for** learning:

- Continue to observe student behaviour and listen to what students say in both small and large groups in order to decide next steps (e.g. more instruction or modelling is required around using a protocol or there are gaps in the understanding of some of the new terms)




Differentiation of Learning:

- Opportunity for flexible groupings based upon readiness
- Some students may benefit from guided reading


Equity and Inclusion: Through the Lens of the Catholic Social Teachings

	<p>written on the board. In order to be able to reuse the article, students can use small sticky notes to make jot notes beside the appropriate places in the text. Another option is have students create two columns on a piece of paper; the column on the left (what the text is about) is for a key word or phrase while the column on the right (what it makes me think about) is for their own notes.</p> <p>Small Group:</p> <p>After reading, review the steps in Appendix C the Significant-Connect-Question (SCQ) Protocol so students know what will take place after reading. The reason for the protocol is to structure their conversation and to make sure that everyone has a voice. Remind students that they will be randomly chosen to share some key discussion pieces that took place in their group.</p> <p>Whole Group:</p> <p>After groups have had enough time to talk, randomly choose (e.g. shortest hair, tallest member, etc. or use popsicle sticks with their names) students to share parts of their discussion. Ask the rest of the class if they have anything to add or build on what each group shares. Note: Encourage students to listen to each other instead of just wanting to say something else.</p> <p>It is important to complete the debrief at the end of the protocol (see the last step).</p> <p>Before moving on, ask students to revisit and reflect on the guiding questions presented earlier (on chart paper):</p> <ul style="list-style-type: none"> • <i>In building a welcoming learning environment, what words and actions demonstrate respect for the dignity of all?</i> • <i>How does our faith (age, culture, life experiences, values, etc.) influence how the message is interpreted?</i> • <i>How do we promote peace within ourselves?</i> • <i>What actions promote peace?</i> <p>Ask students to jot down some responses in their notes to be used later on.</p>	<p>Assessment for learning:</p> <ul style="list-style-type: none"> — Debrief the protocol. <p>Assessment for learning:</p> <ul style="list-style-type: none"> — Student responses
--	--	---

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

	<p>Independent: Ask students to read the text again, but this time the purpose is to reflect on Canada and their own life; jot down their thinking as they read. The following are possible questions to consider:</p> <ul style="list-style-type: none"> • <i>In what ways is Canada similar to the US? How are we different?</i> • <i>What are some examples of structural violence in Canada?</i> • <i>What are some examples of structural violence in our schools? in our classrooms?</i> • <i>How have you been a part of structural violence? Are you more of a “peace lover” or “peacemaker”? Give a specific example.</i> <p>Small Group: After reading, review Appendix D, the steps in the Penny for Your Thoughts Protocol; give students a minute or two to think about what they would like to share. The pennies are to encourage all to have a voice at the table. Remind students that they will be randomly chosen to share some key discussion points with others.</p> <p>Whole Group: After groups have had enough time to talk (pennies are mostly in the centre of the groups), randomly choose (e.g. nearest birthday, youngest, etc. or use popsicle sticks with their names) students to share parts of their discussion. Ask the class if they have anything to add or build upon as each group shares. Ask if there are any other comments or questions students have before moving onto the second article. Complete the debrief at the end of the protocol (see the last step).</p> <p>Independent: Give each student Appendix E, the article, Culture of Peace The Seville Statement and Appendix F the protocol, It Says, I Say, And So. Go over the protocol together so students know how they will share their thinking about this new article. As before, have students record their thinking during the reading.</p> <p>Small Group followed by Whole Group: Follow the same steps as above only this time students will use the It Says, I Say, And So protocol to carry out their learning conversations.</p>	<div style="text-align: center;">  </div> <p>Differentiation of Learning:</p> <ul style="list-style-type: none"> — Opportunity for flexible grouping <p>Assessment for learning:</p> <ul style="list-style-type: none"> — Student responses <p>Assessment as learning:</p> <ul style="list-style-type: none"> — Debrief the protocols.
--	--	--

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

	<p>Whole Class:</p> <p>Ask students to think about the life (remember from scripture and the fact that Romans occupied Palestine) and teachings of Jesus. What did he do that honoured individual’s dignity? How did he challenge the current thinking and promote peace? As a class, create a list of specific examples of Jesus as a peacemaker.</p> <p>To bring the Catholic Social Teaching principle, Promotion of Peace to a more personal level, ask students to quietly reflect on (you may want them to jot notes down) some of the questions in the following activity called Have you ever...?</p> <ol style="list-style-type: none"> 1. <i>Have you ever heard someone make fun of someone else because s/he seemed different?</i> 2. <i>Have you ever seen someone big pick on someone smaller?</i> 3. <i>Have you ever made fun of someone because of his/her clothes/shoes/hair/accent?</i> 4. <i>Have you ever thought that some groups of people are better than others?</i> 5. <i>Have you ever heard or shared a joke that made fun of a person or group of people of a different background?</i> 6. <i>Have you ever called or heard someone called “gay” because s/he made a mistake or looks different?</i> 7. <i>Have you ever believed that you were laughed at because you are different?</i> 8. <i>Have you ever been the target of name calling because of your background, religion, race, or gender?</i> 9. <i>Have you ever hurt someone because that person was different from you?</i> 10. <i>Have you ever apologized to someone for making him/her feel less special than you?</i> 11. <i>Have you ever stood up for someone who was being made fun of?</i> 12. <i>Have you ever encouraged peers to not use the word “gay” when describing something negative?</i> 13. <i>Have you ever invited someone sitting alone to sit with you and your friends?</i> <p>Source: Adapted from Choose Your Voice: Antisemitism in Canada Education Program</p>	<p>Assessment for learning:</p> <ul style="list-style-type: none"> — Student responses <p> Differentiation of Learning:</p> <ul style="list-style-type: none"> — Post questions. — Have students choose questions to reflect on. <p>Assessment for learning:</p> <ul style="list-style-type: none"> — Jot notes (responses)
--	---	---

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

CONSOLIDATION	CONNECTIONS
<p>Independent: As a way to consolidate learning ask students to take out their Anticipation Guide (Appendix A) in order to revisit it and complete the remaining two columns to see if any of their thinking has changed or new learning has occurred (synthesis).</p> <p>Ask students to reflect on their reading, thinking, talking, and listening over the last couple of days. Use the guiding questions, reflections, and the two articles (return articles to students) to write a 1-2 page response (focus on creating voice) including any combination of the following:</p> <ul style="list-style-type: none"> • new learning / thinking/ wonderings related to Catholic Social Teaching on the Promotion of Peace • a personal experience (being included /excluded/ reaching out-being inclusive/ being a peacemaker etc.) • a description of a welcoming, inclusive, safe, and harmonious school and classroom (or workplace) <p>Note: Before students begin to write, create success criteria together so learners know what a response looks and sounds like, what the purpose is (i.e. to inform), who the audience will be and what voice in writing means. Also, students need to understand what the teacher will be looking for.</p>	<p>Assessment as learning:</p> <ul style="list-style-type: none"> — Revisiting their anticipation guide <p>Assessment of learning:</p> <ul style="list-style-type: none"> — Reflection

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

CONTINUED LEARNING OPPORTUNITIES	
	<p>Further extensions to this lesson might include:</p> <ul style="list-style-type: none">• Adding names of peace examples of movies, video games, etc. as the semester unfolds• Continuing to read (and practise a variety of reading comprehension strategies) or view a variety of texts (Genocide, Peacekeeping, Child Soldiers, Human Trafficking, Colonialism, Residential Schools, Blood Diamonds, etc.) to better understand issues related to the challenge of peace and nonviolence (or other Catholic Social Teachings)• Starting a class blog on the Promotion of Peace and having students populate it with new learning, challenges, ideas, peacemakers, current events, etc.• Continuing to make explicit links between promoting peace (or other Catholic Social Teachings) and other texts students will be viewing, listening to, or reading• Having students come up with a question (inquiry) they wonder about and do some research• Researching (practice summary writing) people/organizations who have found nonviolent ways to promote peace (i.e. Inter Pares, Conscience Canada, Lincoln Alexander, Gandhi, Rosa Parks, Bishop Carlos Belo, Henry David Thoreau, etc.) in order to create informational graphic texts or digital products• Encouraging students to search out examples of peers who live as peacemakers and creating a photo essay• Creating public service announcements on promoting peace in the home/school/community to share with the school community

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Comparison List and Anticipation Guide		Appendix A
List 1	List 2	
1. Name a movie about war or violence.	1. Name a movie about peace.	
2. Name a war-like toy.	2. Name a peace toy.	
3. Name a high-school course where you study war.	3. Name a high-school course that studies peace.	
4. Picture a war painting.	4. Picture a peace painting.	
5. Name a television show about war or violence.	5. Name a television show about peace.	
6. Name a war hero.	6. Name a peace hero.	
7. Name a video game based on war.	7. Name a video game based on peace.	

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Scale: A = agree strongly a = agree somewhat d = disagree somewhat D = disagree strongly Write the letters A, a ,d, or D (choose the one that best represents your current thinking) under the column “Before Learning. Repeat later-after learning.				
Before Learning		Thinking Before	After Learning	Thinking After
	Some issues are just too big to change. There is no point worrying about them.			
	Human beings are wired to be aggressive and violent, so there really isn’t anything we can do to move towards a peaceful world.			
	I feel overwhelmed by the amount of bad news I hear in the media.			
	A lot of change in our world has come about because of the actions of individuals.			
	I can’t make changes in the world, but I can make changes locally.			
	Being a Catholic has nothing to do with peace in the world.			
	I don’t have to worry about what I do; there are organizations and other people out there working to change things for the better.			
Source: Adapted from Cultivating Peace: http://www.cultivatingpeace.ca/pdfs/CPTakingActionEN.pdf				

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

What Do We Mean by “Peace” Anyway?

Appendix B

PEACE**What Do We Mean by “Peace” Anyway?**

By John Kleiderer

In All Things, A Jesuit Journal of the Social Apostolate
(www.inallthings.org)

“Blessed are the peacemakers.” Two thousand years later we still celebrate these words, now with the irony of having Peacemaker missiles. Peace - we hear it often. Popes, poets, presidents and dictators, secular and religious, conservatives and liberals, speak of it. We say “peace be with you” on Sundays. Nixon made the peace sign his signature gesture before boarding a plane. Peace is a word much used, and abused.

What are some ways, then, that we can begin thinking about peace?

Positive and Negative Peace

It might be helpful to distinguish first between negative and positive peace. “Negative” peace? The mere absence of violence constitutes a negative peace. The Cold War is one example, insofar as the United States and the Soviet Union never engaged directly in war. Positive peace moves beyond the mere absence of direct violence to include efforts to work for sustainable peace and the reduction of structural violence. Sociologist Johan Galtung, founder of peace studies as an academic discipline, defines positive peace as a “pattern of cooperation and integration between major groups.” It could also be understood as the absence of structural violence. If justice is understood as the right ordering of relationships, then positive peace can be closely associated with social justice.

Structural Violence

While a society may not be beset by overt acts of physical violence, it may still be considered violent. Do we live in a violent society in the United States? How do we define that?

Structural violence doesn’t easily command our attention because it’s not focused on a single event. The nightly news cannot lead with a story on structural violence, there is no shooting or other vicious crime, but still it occurs, through social, political or economic structures that cause suffering. The “quiet” violence of racism, poverty and hunger are prime examples of structural violence. Pope Paul VI’s oft-quoted phrase, “If you want peace, work for justice,” illustrates the call to work for positive peace by addressing underlying issues of justice and structural violence.

Peace at Any Cost?

Human rights are an essential component of peace building, but can be a potential source of tension during negotiations to end wars and violent conflicts. The conundrum is this: should war be stopped at the earliest possible moment, even if it means awarding amnesty to those who have committed serious human rights abuses? Impunity for political and military leaders can be an incentive to sign an armistice and end a war, but if amnesty is not provided, peace negotiations might break down, and thus the war and killing would continue. In cases of ethnic wars especially, the human rights community contends that providing amnesty makes a mockery of justice and lays the groundwork for the eventual resumption of war because justice has not been served. It is better, they say, to bring about a just peace than to sign a hasty peace treaty to end the conflict sooner. Ending the war might bring “peace,” but at what cost? On the other

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Appendix B continued

PEACE

hand, insistence on bringing leaders to justice might bring about a just peace in the end, but at what cost if it means the war continues and thus more people are killed? There are no easy answers. . .

Building a Culture of Peace

We are challenged to ask how we might contribute to building a culture of peace, and where there might be opportunities for us to grow, explore, and reflect. Peacebuilding can take place at different levels, some of which are addressed in this issue – the individual, within one’s soul; the societal, within or between groups/communities; and the international, among countries or nations. . .

2003 marked the 40th anniversary of the papal encyclical *Pacem in Terris* and the 20th anniversary of the U.S. Catholic Bishops’ letter *Challenge of Peace*. [To read *Pacem in Terris*, go to: <http://www.osjspm.org/cst/pt.htm>. Excerpts from the *Challenge of Peace* can be found at: <http://www.usccb.org/sdwp/peace/peace2.htm>.]

Final Thought

This comment from a recent discussion gave me pause: “Jesus said, *Blessed are the peacemakers*. He did not say, *Blessed are the peace lovers*.” Peacemaking involves more than wishing for peace; it involves action. This is the challenge to each of us: how can we be peacemakers, beyond mere peace lovers?

From: John Kleiderer, *In All Things*, A Jesuit Journal of the Social Apostolate, Spring 2004. Website address: www.inallthings.org. Reprinted with permission.

Discussion Questions

1. What is the difference between positive and negative peace? How does this relate to the quote by Pope Benedict XVI in the box to the right?
2. How can peace making happen at the a) individual, b) societal, and c) international levels?
3. What can you do to be a peace maker, not just a peace lover, in 2006?

“From all parts of the world news arrives about conflicts. This morning, I would like to make a new appeal to all leaders of nations and all human beings of good will to unite to halt violence, which disfigures humanity and mortgages the growth of peoples and the hope of many populations. . . . Without the commitment of all to peace, to the creation of an atmosphere of pacification and a spirit of reconciliation at all levels of social life, beginning with the family realm, it is not possible to advance on the path of a pacified society. . . . It is not enough to opt for peace to attain it. To achieve it, it is necessary to contribute all the means at the concrete level, at all levels of society.”

Pope Benedict XVI. Message to 11 Ambassadors at the Holy See, Vatican: Dec. 1, 2005.



SCQ Protocol

The graphic features a vertical column of blue circles on the left side. The title 'Significant-Connect-Question (SCQ) Protocol' is centered at the top. Below the title, a blue horizontal bar contains the purpose of the protocol. To the right of this bar, a blue circle contains the text 'Purpose of the Protocol'. The main body of the graphic contains a numbered list of steps for the protocol, including individual reading, small group discussion with four rounds, and whole group discussion. The bottom right corner features the 'LiteracyGAINS' logo and the page number 'xv | Appendix'.

Significant-Connect-Question (SCQ) Protocol

To provide a structure for discussing text. To connect new ideas to prior knowledge and question the text.

Purpose of the Protocol

Groups of 4 participants.

1. Individually read the text. Answer the questions:
 - What is **SIGNIFICANT** in the text?
 - What **CONNECTIONS** do you make with the text?
 - What are the **QUESTIONS** you have after reading the text?
2. Small Group Discussion (maximum of 2 minutes per participant):
 - First round
Each participant explains one of the **SIGNIFICANT** points from the text. *Participants do not identify why they found the point significant.*
 - Second round
Participants take turns identifying one of the **CONNECTIONS** they have after reading the text.
 - Third round
Participants take turns identifying the **QUESTIONS** they have after reading the text.
 - Fourth round
Participants take turns responding (for a maximum of 3 minutes) to the significant points, connections and questions shared by the group. The time may need to be monitored during this part.
3. Whole group open discussion around questions, such as:
 - What questions were identified by your group?
 - How can you use this text to support the work you do?
4. Debrief the SCQ Protocol:
 - How did this protocol help your understanding of the text?
 - How did the protocol help your discussion about the text?

LiteracyGAINS
xv | Appendix

Penny for Your Thoughts Protocol

The graphic features a vertical column of blue circles on the left side. The title 'Penny for Your Thoughts Protocol' is centered at the top in a large, bold, black font. Below the title, the source is listed as 'Source: Unknown'. A dark blue horizontal bar contains the purpose of the protocol. To the right of this bar, a circular graphic contains the text 'Purpose of the Protocol'. The main body of the graphic contains a list of steps for the protocol, including instructions for providing pennies, sharing the topic, and conducting a group discussion with time limits. A note specifies that participants can only contribute if they have a penny to surrender. The final step is a debriefing question. The LiteracyGAINS logo is in the bottom right corner, and 'xx|Appendix' is written below it.

Penny for Your Thoughts Protocol

Source: Unknown

To provide a structure for discussing a topic or prompt that promotes equity in participant voice.

Purpose of the Protocol

Groups of 4-6 participants.


1. Provide three pennies (tokens or slips of paper also work) to each participant.
2. Share the topic or prompt with participants. Provide the group with a few minutes to individually record thoughts about the topic or prompt.
3. Group Discussion. You may want to place a time limit on the response for each coin (e.g., 1 minute per coin).
Participants respond to the topic/prompt. Each time a participant contributes to the discussion, one of his/her pennies is placed in the centre of the table.
NOTE: Participants can only contribute if they have a penny to surrender. Once all participants run out of pennies you can divide up the pennies and start over.
4. Debrief the *Penny for Your Thoughts* Protocol:
 - How did the protocol help support equity in the group?
 - How did the protocol help your discussion about the topic or prompt?

LiteracyGAINS

xx|Appendix

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Culture of Peace, The Seville Statement



CULTURE OF PEACE

THE SEVILLE STATEMENT

INTRODUCTION

Believing that it is our responsibility to address from our particular disciplines the most dangerous and destructive activities of our species, violence and war; recognising that science is a human cultural product which cannot be definitive or all encompassing; and gratefully acknowledging the support of the authorities of Seville and representatives of the Spanish UNESCO, we, the undersigned scholars from around the world and from relevant sciences, have met and arrived at the following Statement on Violence. In it, we challenge a number of alleged biological findings that have been used, even by some in our disciplines, to justify violence and war. Because the alleged findings have contributed to an atmosphere of pessimism in our time, we submit that the open, considered rejection of these misstatements can contribute significantly to the International Year of Peace.

Misuse of scientific theories and data to justify violence and war is not new but has been made since the advent of modern science. For example, the theory of evolution has been used to justify not only war, but also genocide, colonialism, and suppression of the weak.

We state our position in the form of five propositions. We are aware that there are many other issues about violence and war that could be fruitfully addressed from the standpoint of our disciplines, but we restrict ourselves here to what we consider a most important first step.

FIRST PROPOSITION

IT IS SCIENTIFICALLY INCORRECT to say that we have inherited a tendency to make war from our animal ancestors. Although fighting occurs widely throughout animal species, only a few cases of destructive intraspecies fighting between organised groups have ever been reported among naturally living species, and none of these involve the use of tools designed to be weapons. Normal predatory feeding upon other species cannot be equated with intraspecies violence. Warfare is a peculiarly human phenomenon and does not occur in other animals.

The fact that warfare has changed so radically over time indicates that it is a product of culture. Its biological connection is primarily through language which makes possible the co-ordination of groups, the transmission of technology, and the use of tools. War is biologically possible, but it is not inevitable, as evidenced by its variation in occurrence and nature over time and space. There are cultures which have not engaged in war for centuries, and there are cultures which have engaged in war frequently at some times and not at others.

This information is provided by
UNESCO
Culture of Peace Programme
7, Place de Fontenay
75352 PARIS 07 SP
FRANCE
Tel (+33.1) 45.68.12.19
Fax (+33.1) 45.68.55.57

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Appendix E Continued

SECOND PROPOSITION

IT IS SCIENTIFICALLY INCORRECT to say that war or any other violent behaviour is genetically programmed into our human nature. While genes are involved at all levels of nervous system function, they provide a developmental potential that can be actualised only in conjunction with the ecological and social environment. While individuals vary in their predispositions to be affected by their experience, it is the interaction between their genetic endowment and conditions of nurturance that determines their personalities. Except for rare pathologies, the genes do not produce individuals necessarily predisposed to violence. Neither do they determine the opposite. While genes are co-involved in establishing our behavioural capacities, they do not by themselves specify the outcome.

THIRD PROPOSITION

IT IS SCIENTIFICALLY INCORRECT to say that in the course of human evolution there has been a selection for aggressive behaviour more than for other kinds of behaviour. In all well-studied species, status within the group is achieved by the ability to co-operate and to fulfil social functions relevant to the structure of that group. 'Dominance' involves social bondings and affiliations; it is not simply a matter of the possession and use of superior physical power, although it does involve aggressive behaviours. Where genetic selection for aggressive behaviour has been artificially instituted in animals, it has rapidly succeeded in producing hyper-aggressive individuals; this indicates that aggression was not maximally selected under natural conditions. When such experimentally-created hyperaggressive animals are present in a social group, they either disrupt its social structure or are driven out. Violence is neither in our evolutionary legacy nor in our genes.

FOURTH PROPOSITION

IT IS SCIENTIFICALLY INCORRECT to say that humans have a 'violent brain.' While we do have the neural apparatus to act violently, it is not automatically activated by internal or external stimuli. Like higher primates and unlike other animals, our higher neural processes filter such stimuli before they can be acted upon. How we act is shaped by how we have been conditioned and socialised. There is nothing in our neurophysiology that compels us to react violently.

FIFTH PROPOSITION

IT IS SCIENTIFICALLY INCORRECT to say that war is caused by 'instinct' or any single motivation. The emergence of modern warfare has been a journey from the primacy of emotional and motivational factors, sometimes called 'instincts,' to the primacy of cognitive factors. Modern war involves institutional use of personal characteristics such as obedience, suggestibility, and idealism, social skills such as language, and rational considerations such as cost-calculation, planning, and information processing. The technology of modern war has exaggerated traits associated with violence both in the training of actual combatants and in the preparation of support for war in the general population. As a result of this exaggeration, such traits are often mistaken to be the causes rather than the consequences of the process.

CONCLUSION

We conclude that biology does not condemn humanity to war, and that humanity can be freed from the bondage of biological pessimism and empowered with confidence to undertake the transformative tasks needed in this International Year of Peace and in the years to come. Although these tasks are mainly institutional and collective, they also rest upon the consciousness of individual participants for whom pessimism and optimism are crucial factors. Just as 'wars begin in the minds of men', peace also begins in our minds. The same species who invented war is capable of inventing peace. The responsibility lies with each of us.

It Says, I Say and So Protocol

It Says, I Say, And So Protocol

Adapted from Kyliene Beers *When Kids Can't Read What Teachers Can Do: A Guide for Teachers 6-12* and the Ontario Ministry Of Education *Think Literacy Documents*.

To provide a structure for discussing and making connections with a text.

Purpose of the Protocol

Note: The words, sentences or ideas that a participant chooses are not as important as the discussion that develops from the selection.

Groups of 3-4 participants.

1. Individually - Each participant reads the text silently and identifies words, passages, ideas, and/or images that stand out.
2. Continue in rounds until each participant takes a turn as the presenter.
One round consists of the presenter using up to 3 minutes to:
 - It Says:** Read aloud the word, sentence, idea selected from the text.
 - I Say:** Say what s/he already knows about the selection from her/his experiences, interpretations, or connections using specific examples (words, pictures, stories, etc.).
 - And so:** What does the presenter conclude, think, judge or predict based on their selection? What does the selection mean for their work?The group responds (for a maximum of 2 minutes) to what has been said. The time may need to be monitored during this part.
3. Follow the same pattern until all members of the group have had a chance to be the presenter and to discuss their selection.
4. Debrief the *It Says, I Say, And So Protocol*:
 - How did the protocol help your understanding of the text?
 - How did the protocol help your discussion about the text?

LiteracyGAINS

xiii | Appendix

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Appendix F Continued

It Says <ul style="list-style-type: none">• What words, phrases, ideas, or images stand out when reading?	I Say <ul style="list-style-type: none">• What do you already know about the selection from your own experiences, interpretations, or connections? Use specific examples (words, pictures, stories, etc.).	And So... <ul style="list-style-type: none">• What do you conclude, think, judge or predict based on your selection?• What does the selection mean for your work?

Ontario Ministry Of Education Think Literacy Documents <http://www.edu.gov.on.ca/eng/studentssuccess/thinkliteracy/files/thinklitenglish.pdf>

xiv|Appendix

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

GRADE 12

<p>Equity and Inclusive Education: From the Lens of the Catholic Social Teachings</p>	<p>Subject: University Physics Code: SPH4U</p> <p>Lesson Title: Modern Physics - Mass and Energy</p> <p>Suggested length of time: 75 Minutes</p>
	<p>Lesson Overview This lesson will introduce students to the Catholic Social Teaching, Promotion of Peace. Catholic Social Teaching promotes peace as a positive, action-oriented concept. In the words of Pope John Paul II, "Peace is not just the absence of war. It involves mutual respect and confidence between peoples and nations. It involves collaboration and binding agreements." There is a close relationship in Catholic teaching between peace and justice. Peace is the fruit of justice and is dependent upon right order among human beings.</p>

CURRICULUM CONNECTIONS	CATHOLIC SOCIAL TEACHINGS & ONTARIO CATHOLIC SCHOOL GRADUATE EXPECTATIONS
<p>Physics SPH4U</p> <p>Strand: F. Revolutions in Modern Physics: Quantum Mechanics and Special Relativity</p> <p>Overall Expectations: F1. analyse, with reference to quantum</p>	<p>The Catholic Social Teaching evident in this lesson: Promotion of Peace</p> <p>The Ontario Catholic School Graduate Expectations evident in this lesson include:</p>

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

	<p>mechanics and relativity, how the introduction of new conceptual models and theories can influence and/or change scientific thought and lead to the development of new technologies;</p> <p>F2. investigate special relativity and quantum mechanics, and solve related problems;</p> <p>F3. demonstrate an understanding of the evidence that supports the basic concepts of quantum mechanics and Einstein’s theory of special relativity.</p> <p>Specific Expectations:</p> <p>F1.2 assess the importance of relativity and quantum mechanics to the development of various technologies (e.g., nuclear power; light sensors; diagnostic tools such as magnetic resonance imaging [MRI], computerized axial tomography [CAT], positron emission tomography [PET])</p> <p>F2.1 use appropriate terminology related to quantum mechanics and special relativity, including, but not limited to: quantum theory, photoelectric effect, matter waves, time dilation, and mass-energy transformation</p> <p>F2.4 conduct a laboratory inquiry or computer simulation to analyse data (e.g., on emission spectra, the photoelectric effect, relativistic momentum in accelerators) that support a scientific theory related to relativity or quantum mechanics</p> <p>F3.3 identify Einstein's two postulates for the theory of special relativity, and describe the evidence supporting the theory (e.g., thought experiments, half lives of elementary particles, relativistic momentum in accelerators, the conversion of matter into energy in a nuclear power plant)</p>	<p>An Effective Communicator Who:</p> <p>2 (b) Reads, understands and uses written materials effectively.</p> <p>A Reflective, Creative and Holistic Thinker Who:</p> <p>3 (e) Adopts a holistic approach to life by integrating learning from various subject areas and experience.</p> <p>A Self-Directed, Responsible, Lifelong Learner Who:</p> <p>4 (b) Demonstrates flexibility and adaptability.</p>
--	--	--

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Guiding Questions from the Framework

These guiding questions have been selected from the framework focusing on:

Equity and Inclusive Education:

- In building a welcoming learning environment, what words and actions demonstrate respect for the dignity of all?

Catholic Social Teaching:

- What are the threats to peace and why?
- How do we promote peace within ourselves?
- What actions promote peace?
- How are we called to be peacemakers?
- How can we be builders of peace in my home, school and community?

Ontario Catholic Graduate Expectations:

- How does this Catholic Social Teaching, Promotion of Peace, call us to respond or act:
 - as an effective communicator who reads, understands and uses written materials effectively.
 - as a reflective, creative and holistic thinker who adopts a holistic approach to life by integrating learning from various subject areas and experience.
 - as a self-directed, responsible, lifelong learner who demonstrates flexibility and adaptability.
- Ecclesial resource that inspires this lesson:
“If you want peace, work for justice” (World Day of Peace Message, 1972) Pope Paul VI

Critical Literacy:

- What kinds of issues of equity, power and social justice are relevant to the topic?
- What types of actions and/or responses are appropriate in the subject?

Teachers and students may select additional questions from the framework to guide their learning inquiry.

LEARNING GOALS

By the end of this lesson, we will:

- Understand the Catholic Social Teaching of Promotion of Peace;
- Understand the difficult moral issues scientific development introduces.

Success Criteria, based on the Learning Goals, can be co-constructed as a class in language meaningful to students. The success criteria help students understand what to look for during the learning and what it looks like once they have learned. They identify the significant aspects of student performance that are assessed and/or evaluated (i.e., the “look-fors”) in relation to

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

	<p>curriculum expectations.</p> <p>Sample Success Criteria</p> <p>I can:</p> <ul style="list-style-type: none"> • Explain how the equation $E=mc^2$ relates to everyday objects • Describe ways that human actions can make this equation a powerful force for destruction • Give an example of how the Catholic Social Teaching, Promotion of Peace, reminds us that peace through force is impossible.
--	---

INSTRUCTIONAL COMPONENTS AND CONTEXT	
<p>Prior Learning: Experience the Critical Analysis Process</p> <p>Teacher Readiness: Prior to this lesson, the teacher will have introduced the students to Einstein’s postulates and the Special Theory of Relativity.</p> <p>Student Readiness: Prior to this lesson, students will be able to read and interpret perspectives on scientific literature and theological literature.</p> <p>Terminology: kinetic energy, potential energy, radiation, mass, energy, fission and fusion.</p>	<p>Materials:</p> <p>Appendix A $E = mc^2$ (class set)</p> <p>Appendix B Need for Disarmament (one copy)</p> <p>Appendix C Causes of the Arms Race (one copy)</p> <p>Appendix D CST: Promotion of Peace (class set)</p> <p>Appendix E Peace: What is Pugwash? (class set)</p> <p>Appendix F Peace: Pugwash - The Goal(class set)</p> <p>Appendix G Peace: Pugwash - The Results (class set)</p> <p>Internet Resources:</p> <p>http://phet.colorado.edu/en/contributions/view/3079</p> <p>http://phet.colorado.edu/en/simulation/greenhouse</p> <p>Print Resources:</p> <p>All Thinking Routines are taken from: <u>Making Thinking Visible</u>, by Ritchhart, Church, Morrison, Jossey-Bass, 2011</p> <p><i>The Early Days of Pugwash</i>, Rotblat, J. Physics Today, June 2001, American Institute of Physics, AIP Publishing (Reprinted with permission)</p>

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

MINDS ON	CONNECTIONS
<p>Small Group-Matching Activity</p> <p>Distribute Appendix A $E = mc^2$ to each student and have each student complete the questions. Once complete, students can share their responses in their small group.</p> <p>Have the students discuss the implications of these energies. Make sure they comprehend the energy stored in even small amounts of mass.</p> <p>Show the video http://www.youtube.com/watch?v=uTO1kxxlkpw</p> <p>Ask the students to make a list of the positive and negative uses of this mass energy conversion.</p> <p>Teacher questions: <i>Do you know all the positive uses? How can human actions make this equation a powerful force for destruction? Why would a holistic approach to life and learning be an important consideration when considering using the destructive power of the atom?</i></p>	<p>Assessment for learning:</p> <ul style="list-style-type: none"> — Observation — Appendix A <p>Assessment as learning:</p> <ul style="list-style-type: none"> — Guided discussion — Appendix A

ACTION	CONNECTIONS
<p>To understand the implications of mass-energy equivalence run this applet for the class. You can build upon the understanding of single fission or go directly to demonstrate the chain reactions happening in nuclear reactors.</p> <p>http://phet.colorado.edu/en/simulation/nuclear-fission</p> <p>If you start with Fission: One Nucleus <i>Where is the energy coming from that allows the daughter nucleus and ejected particle to fly off?</i> <i>Based on the legend given, what particles are flying off?</i> <i>How do you think Fission is different than Fusion?</i></p>	<p>Assessment as learning:</p> <ul style="list-style-type: none"> — Students complete four questions for evaluation

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

<p>If you start with Nuclear Reactor <i>How does the reactor work?</i> <i>What is the point of the control rods?</i> <i>If you remove the control rods completely, what happens?</i> <i>How is the reaction rate related to the temperature?</i> <i>Why is it important to keep the control rods in for managing the reaction?</i></p> <p>Show the video : http://www.youtube.com/watch?v=XHitaEy-Xtg&playnext_from=TL&videos=N5lqVlgU9hU</p> <p>Teacher questions:</p> <p><i>How does this video demonstrate a nuclear bomb or a runaway nuclear reactor? Is there any difference between the two?</i></p> <p><i>In the past twenty years, as we have progressed so much, have we had any incidences of nuclear reactors going beyond our control?</i></p> <p>Discussion:</p> <p>Stress to the students that nuclear power is the driving force behind nuclear weapons, based on the same technology. This technology after its use at the end of the Second world War terrified all peoples that it would be used again.</p> <p>Although not covered in the media like it once was, there is still concern about using the destructive properties of mass-energy equivalence for active war or as a way of sustaining peace.</p> <p>Introduce Appendix B Need for Disarmament. Introduce Appendix C Causes for the Arms Race.</p> <p>Have the students answer these questions. <i>Why was there a call for banning weapons?</i> <i>What is meant by “the realization that true and lasting peace among nations cannot consist in the possession of an equal supply of armaments but only in mutual trust?”</i> <i>What is the economic concern of stock piling weapons?</i> <i>Why would stock piling weapons cause fear in any society?</i></p>	<p>Assessment as learning:</p> <ul style="list-style-type: none">— Teacher led discussion with whiteboard, overhead or PowerPoint— Introduction Appendix B— Introduction Appendix C <p>Assessment for learning:</p> <ul style="list-style-type: none">— Group Work— Teacher can read aloud the questions or put them on the chalkboard— Monitor student responses to gauge understanding and next steps
--	---

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

CONSOLIDATION	CONNECTIONS
<p>Individual Seat Work: One Phrase</p> <p>Distribute Appendix D CST: Promotion of Peace.</p> <p>Have students complete Appendix D individually.</p> <p>The following articles and questions stress the promotion of peace by scientists from all over the world. You can introduce the Pugwash meetings before you distribute the handouts.</p> <p>See http://www.pugwash.org/ for more resources.</p> <p>Hand out a copy of Appendix E – Peace: What is Pugwash? The questions are attached.</p> <p>Hand out a copy of Appendix F – Peace: Pugwash - The Goal. The questions are attached.</p> <p>Hand out a copy of Appendix G – Peace: Pugwash - The Results. The questions are attached.</p> <p>Individual: Exit Card</p> <p>This thinking routine allows students to reflect on their thinking and explore how and why that thinking has changed. Have students write and respond to the following on a slip of paper and hand in at the end of class:</p> <p><i>About Promotion of Peace</i></p> <ul style="list-style-type: none"> • I used to think...Now I think... • This new learning will influence my words and actions in educating others about the promotion of peace by... • In building a welcoming learning environment, what words and actions demonstrate my respect for the dignity of all? How do I do this in promoting peace? • The issues of equity, power and social justice relevant to the topic might include... • After understanding the guidelines of the Pugwash society and being introduced to Catholic teachings, I think peace achieved through force is... 	<p>Assessment of learning:</p> <ul style="list-style-type: none"> — Assessment and Evaluation Appendix D <p>Assessment of learning:</p> <ul style="list-style-type: none"> — Assessment and Evaluation Appendix E, F and G <p>Assessment as learning:</p> <ul style="list-style-type: none"> — Exit Card

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

<p>Collect and review exit cards responses. Look for patterns in student responses that indicate how the students' thinking has grown, deepened, shifted or changed. Use this student learning to plan for the next lesson. Consider using responses from the third statement to create a class agreement/vision for learning that can be posted.</p>	
---	--

CONTINUED LEARNING OPPORTUNITIES	
	<p>At the start you read from John Paul II <i>"Peace is not just the absence of war. It involves mutual respect and confidence between peoples and nations. It involves collaboration and binding agreements."</i> Based on this quote the students can write a report outlining the similarities between the Catholic Church and famous scientists in promoting peace.</p> <p>For help with this see: The Hiroshima Declaration of the Pugwash Council http://www.pugwash.org/about/declaration95.htm</p> <p>For help with this see: The Russell – Einstein Manifesto http://www.pugwash.org/about/manifesto.htm</p> <p>For further understanding the nuclear processes and upcoming curriculum, return to http://phet.colorado.edu/en/simulation/nuclear-fission</p> <p>Open the link - http://phet.colorado.edu/en/contributions/view/3221</p> <p>From there you can open and print off a lab that works through nuclear processes covered in curriculum(alpha and beta decay)</p> <p>If the students want to research a famous Canadian have them google Vandana Shiva. She is a Nuclear Physics PhD graduate from Western Ontario. She is critical of schools not understanding nor teaching the connection between nuclear power and its impact on human communities.</p> <p>For interested students an excellent extension of these ideas of peace and threats to it are summarized in a speech by Cardinal Ratzinger (before he became Pope Benedict XVI) http://www.catholiceducation.org/articles/politics/pg0143.htm</p>

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Mass-Energy Equivalence

Appendix A

$$E = mc^2$$

This equation is probably the most popular equation that most people recognize. It was formulated in the Special Theory of Relativity by the German-born American physicist Albert Einstein (1879-1955).

It means that for mass energy conversion the *energy (E)* equals the *mass (m)* multiplied by the *speed of light(c) squared*. For the metric system the mass is in kilograms the speed of light in meters per second, then the answer will be in the familiar units of Joules.

The implications of this equation are shocking. It states that matter and energy are identical! Matter and energy can be the same? If you could convert a small amount of matter completely, it would yield a *tremendous* amount of energy (like our sun).

Let's use gasoline as an example. If we burned 3 kilograms of gasoline (roughly a little less than a Canadian gallon of gas) it would yield 1.4×10^8 Joules, which is a tremendous amount of energy. However, the burning of gasoline only produces a *chemical* change.

Now let's calculate converting those 3 kilograms of gasoline completely into energy using the Einstein's famous equation $E = mc^2$. The mass would be 3 kilograms and the speed of light(c) is 299,792,458 m/s.

For most calculations using 3.0×10^8 m/s is allowed.

Then $c^2 = 9 \times 10^{16} \text{ m}^2 / \text{s}^2$ and $m = 3 \text{ kg}$

So, the energy equals

$$E = 3 \text{ kg} \times 9 \times 10^{16} \text{ m}^2 / \text{s}^2$$

which equals $27 \times 10^{16} \text{ kg m}^2 / \text{s}^2 = 2.7 \times 10^{17} \text{ Joules}$.

The difference between nuclear energy/chemical energy equals $2.7 \times 10^{17} \text{ Joules} / 1.4 \times 10^8 \text{ Joules} = 1.9 \times 10^9$

This is almost *2 billion times the energy* we obtained from the "ordinary" burning of 1 gallon of gasoline.

1. Calculate the energy of your body mass.
2. Compare it with other forms of traditional energy.
3. Why is it not that easy to convert mass into energy?
3. Why is nuclear power so dangerous?
4. To directly calculate any mass conversions go to the website <http://www.1728.org/einstein.htm>. The figures used for the numbers above were taken from this site.
5. From this equation how do you think the transporter works in *Star Trek*?

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Appendix B

Need for Disarmament

112. Hence justice, right reason, and the recognition of man's dignity cry out insistently for a cessation to the arms race. The stock-piles of armaments which have been built up in various countries must be reduced all round and simultaneously by the parties concerned. Nuclear weapons must be banned. A general agreement must be reached on a suitable disarmament program, with an effective system of mutual control. In the words of Pope Pius XII: "The calamity of a world war, with the economic and social ruin and the moral excesses and dissolution that accompany it, must not on any account be permitted to engulf the human race for a third time." (59)

113. Everyone, however, must realize that, unless this process of disarmament be thoroughgoing and complete, and reach men's very souls, it is impossible to stop the arms race, or to reduce armaments, or—and this is the main thing—ultimately to abolish them entirely. Everyone must sincerely co-operate in the effort to banish fear and the anxious expectation of war from men's minds. But this requires that the fundamental principles upon which peace is based in today's world be replaced by an altogether different one, namely, the realization that true and lasting peace among nations cannot consist in the possession of an equal supply of armaments but only in mutual trust. And we are confident that this can be achieved, for it is a thing which not only is dictated by common sense, but is in itself most desirable and most fruitful of good

PACEM IN TERRIS

ENCYCLICAL OF POPE JOHN XXIII
ON ESTABLISHING UNIVERSAL PEACE IN TRUTH,
JUSTICE, CHARITY, AND LIBERTY

APRIL 11, 1963

http://www.vatican.va/holy_father/john_xxiii/encyclicals/documents/hf_j-xxiii_enc_11041963_pacem_en.html

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Appendix C

Causes of the Arms Race

109. On the other hand, we are deeply distressed to see the enormous stocks of armaments that have been, and continue to be, manufactured in the economically more developed countries. This policy is involving a vast outlay of intellectual and material resources, with the result that the people of these countries are saddled with a great burden, while other countries lack the help they need for their economic and social development.

110. There is a common belief that under modern conditions peace cannot be assured except on the basis of an equal balance of armaments and that this factor is the probable cause of this stockpiling of armaments. Thus, if one country increases its military strength, others are immediately roused by a competitive spirit to augment their own supply of armaments. And if one country is equipped with atomic weapons, others consider themselves justified in producing such weapons themselves, equal in destructive force.

111. Consequently people are living in the grip of constant fear. They are afraid that at any moment the impending storm may break upon them with horrific violence. And they have good reasons for their fear, for there is certainly no lack of such weapons. While it is difficult to believe that anyone would dare to assume responsibility for initiating the appalling slaughter and destruction that war would bring in its wake, there is no denying that the conflagration could be started by some chance and unforeseen circumstance. Moreover, even though the monstrous power of modern weapons does indeed act as a deterrent, there is reason to fear that the very testing of nuclear devices for war purposes can, if continued, lead to serious danger for various forms of life on earth.

PACEM IN TERRIS

ENCYCLICAL OF POPE JOHN XXIII
ON ESTABLISHING UNIVERSAL PEACE IN TRUTH,
JUSTICE, CHARITY, AND LIBERTY

APRIL 11, 1963

http://www.vatican.va/holy_father/john_xxiii/encyclicals/documents/hf_j-xxiii_enc_11041963_pacem_en.html

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Appendix D

Catholic Social Teaching: Promotion of Peace

Student Name _____ **Date:** _____

Peace is much more than the absence of war; it represents the fullness of life. It is predicated on a vision of all things being rightly ordered-of all persons living with dignity and in harmony with one another and with God. To promote peace, we are called to be peacemakers as a requirement of our faith.

*Read the following points for the Catholic Social Teaching on **Promotion of Peace**. From the chapter in the Compendium of the Social Doctrine of the Church that addresses issues of war and peace is entitled “The Promotion of Peace”. The title emphasizes the vocation of the church and all Christians to be peacemakers. (<http://catholicmoraltheology.com/the-promotion-of-peace/>)*

By learning about this Catholic Social Teaching, it is hoped that students will...	One Phrase	One Word	How is this word or phrase connected to what you already know or think? What question or wonderings do you have about this phrase or word?
<i>If peace is a life of fullness, then the social conditions that prevent human beings from achieving a life of flourishing are also obstacles to peace</i>			
<i>In the end, war is the failure of all true humanism, it is always a defeat for humanity</i>			
<i>War is a scourge and is never an appropriate way to resolve problems that arise between nations</i>			
<i>It is hardly possible to imagine that in an atomic era, war could be used as an instrument of justice.</i>			

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Peace: What Is Pugwash?

Appendix E

Initially when the atomic bomb was being developed (mass energy equivalence) the scientists on both the East and West divides were using the rationale of nuclear deterrence. If you could develop and use the bomb first you would force peace!!

“The scientists used the rationale of nuclear deterrence: The threat of immediate retaliation was the only way to prevent Hitler from using his bomb against us¹. As it turned out, this fear was unfounded. The German atom bomb project never got off the ground and was practically abandoned as early as 1942. But even after Hitler was defeated, the tempo of the Manhattan Project continued undiminished (see the article by Stanley Goldberg in PHYSICS TODAY, August 1995, page 38). To a large extent this was due to inertia: Having gone so far, the scientists were eager to see the conclusion of their efforts. In addition, the brutality of the war continuing in the Far East drove some of them to look at the bomb as a means to bring the war to a rapid end.”

After the bomb was used Bertrand Russell addressed the British government and in a series of steps initiated a group of international scientists to stop this push for nuclear bombs.

“With prophetic insight, Russell very early assessed the dangers inherent in the discovery of nuclear energy; in a speech to the House of Lords on 28 November 1945—only a few months after the Hiroshima bomb—Russell had forecast the tremendous destructive power of the H-bomb and the resulting threat to civilization.⁶

(Russell) became increasingly agitated about the danger of a thermonuclear war and its horrifying consequences, and decided to express his fears in a BBC radio broadcast on 23 December 1954.⁶ The radio broadcast made a deep and widespread impression on the public, and Russell received many letters supporting the ideas expressed during the program.

Encouraged by this response, Russell decided on a new initiative: to persuade a number of eminent scientists from all over the world to join him in issuing a statement warning governments and the general public about the danger of a thermonuclear war, and calling on the scientific community to convene a conference on steps to avert that danger.”

In ringing phrases and in beautiful and moving prose from the pen of Russell (after all, he was a Nobel laureate in literature), the Russell Einstein manifesto called on governments and the general public to take heed of the dangerous situation that had arisen from the progress of science in a world engaged in a titanic struggle between communism and anticommunism:⁸

We are speaking on this occasion, not as members of this or that nation, continent or creed, but as human beings, members of the species Man, whose continued existence is in doubt. Almost everybody who is politically conscious has strong feelings about one or more of these issues; but we want you, if

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

you can, to set aside such feelings and consider yourselves only as members of a biological species which has had a remarkable history, and whose disappearance none of us can desire.

We shall try to say no single word which should appeal to one group rather than to another. All, equally, are in peril, and, if the peril is understood, there is hope that they may collectively avert it. We have to learn to think in a new way.

It was a historic encounter, the first time that eminent scientists from East and West met to discuss what essentially were highly sensitive issues, on which there was a wide divergence of views even within the scientific community in the West. Indeed, we were worried that disagreements over viewpoints would be exacerbated in a confrontation with Soviet scientists because of the high political tensions generated by the cold war. When the 22 scientists and their assistants from 10 countries, embracing both sides of the political divide and neutrals (Australia, Austria, Canada, China, France, Japan, Poland, USA, USSR, and UK), met in Pugwash, we had no perception that this was the start of a new world movement.”

Essentially the Pugwash meeting had three main agendas.

“In a general sense, Pugwash has had three agendas throughout its history: technical, political and ethical. As part of the technical agenda, we use our specialized knowledge to assess the consequences of modern warfare, primarily the effects of nuclear, chemical, and biological weapons. The political agenda, the one that occupies most of our time, involves debates on disarmament and arms control in the nuclear field and discussions of the terms of conventions banning chemical and biological weapons. It also includes a multitude of other issues relating to overcoming war and strife and securing peace and stability on both national and international scales.

As part of the ethical agenda, Pugwash, as a movement of scientists, deals with the social and ethical aspects of science. This is a problem of increasing importance today at a time when fast advances in some areas of science and technology are increasingly impinging not only on the material, but also on the cultural, moral, and spiritual values of the community.”

1. Why was Pugwash needed?
2. Is it still needed today?
3. Should science look at its' social and ethical role it plays in the development or deterrence of peace? Would that be more or less relevant today? Why?

Reprinted with Permission: *The Early Days of Pugwash*, Rotblat, J. Physics Today, June 2001, American Institute of Physics, AIP Publishing

http://www.physicstoday.org/resource/1/phtoad/v54/i6/p50_s1?bypassSSO=1

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Peace: Pugwash - The Goal

Appendix F

Pugwash was set up to have three types of meetings.

Type A: a large meeting to deal with general problems in which we would issue resolutions aimed at the world at large

Type B: a smaller meeting to clarify the thinking of scientists themselves and to study the social implications of scientific progress

Type C: a still smaller meeting to discuss immediate political problems, directed primarily at influencing national governments

Result: The great majority was in favor, in about equal numbers, of type B and C meetings; only a few respondents were in favor of type A meetings.

During the cold war, when there was a real danger of it turning into a “hot war,” Pugwash’s main effort went into tackling the immediate danger: Nuclear war had to be averted and the nuclear arms race had to be brought to a halt. This effort necessitated reaching agreement on treaties, such as the Partial Test Ban Treaty, that were of limited scope but acted as brakes on the arms race. We had to wait until the destruction of the Berlin Wall and the end of the ideological divide before resuming efforts toward the total elimination of nuclear arsenals. In 1993 we first published a study of the desirability and feasibility of a nuclear-weapon-free world.¹⁰ Later still, we began to tackle the long-term objective expressed in the statement from the first conference⁸:

In this age of atomic weapons, the objective of all nations must be the abolition of war and even the threat of war from the life of mankind. War must be eliminated, not merely regulated by limiting the weapons to be used. Elimination of all war was of course the main call of the Russell–Einstein Manifesto¹¹:

Here, then, is the problem which we present to you, stark and dreadful and inescapable: Shall we put an end to the human race; or shall mankind renounce war?

[Editor’s note: Joseph Rotblat and the Pugwash Conferences on Science and World Affairs jointly won the 1995 Nobel Peace Prize for their efforts to eliminate nuclear weapons.]

1. What type of meeting would be the most realistic in terms of solving our current “peace” crisis?
2. Is the author overdramatic with his final quote? “Here, then, is the problem which we present to you, stark and dreadful and inescapable: Shall we put an end to the human race; or shall mankind renounce war?” With the potential for weapons of mass destruction, be it nuclear, chemical or biological why is this relevant?

Reprinted with Permission: *The Early Days of Pugwash*, Rotblat, J. Physics Today, June 2001, American Institute of Physics, AIP Publishing

http://www.physicstoday.org/resource/1/phtoad/v54/i6/p50_s1?bypassSSO=1

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Peace: Pugwash - The Results?

Appendix G

The Russell-Einstein Manifesto

The Manifesto called on governments and the general public to take heed of the dangerous situation that had arisen from the progress of science in a world engaged in the titanic struggle between Communism and anticommunism:

We are speaking on this occasion, not as members of this or that nation, continent or creed, but as human beings, members of the species Man, whose continued existence is in doubt...

Almost everybody who is politically conscious has strong feelings about one or more of these issues; but we want you, if you can, to set aside such feelings and consider yourselves only as members of a biological species which has had a remarkable history, and whose disappearance none of us can desire. . We shall try to say no single word which should appeal to one group rather than to another. All, equally, are in peril, and, if the peril is understood, there is hope that they may collectively avert it.

We have to learn to think in a new way.

In ascribing our success to the fact that we are a group of scientists I am not suggesting that scientists are a superior class of human beings, that they have more wisdom and fewer faults than other groups in society. I put it down to their training in the scientific method, to the scientific tradition of appraising a problem without prejudice, but with respect for facts. It is this that makes scientists well qualified to tackle the kind of issues we take up at Pugwash.

Three kinds of issues were on the agenda of the First Conference, which I regard as the immediate, the long-term, and the fundamental. The three items were: (1) nuclear energy hazards in war and peace; (2) international control of nuclear energy; (3) responsibility of scientists. The first item was highly topical at that time. With the testing of ever larger hydrogen bombs the general public had become greatly concerned about the consequences of nuclear war and the long-term effect of radioactive fall-out. At that time the US and UK governments were keen on testing and tended to pooh-pooh any health hazards from them.

But the role played by Pugwash was attested by many public figures, including Mikhail Gorbachev, who said, "Through its activities, due to its scientific and moral authority, Pugwash has contributed in a unique way to averting the military danger, has helped to stop the 'Cold War' and to achieve profound positive changes in the development of the world."

After the end of the Cold War and the abatement of the immediate danger, we directed our attention to the major objective: the elimination of nuclear war. More and more, we are also concentrating our efforts on the long-term objective: the elimination of all war. The most important acknowledgement of our activities in the nuclear issue--the top accolade--came in 1995 in the award of the Nobel Peace Prize:

... for their efforts to diminish the part played by nuclear arms in international politics and in the longer run to eliminate such arms. (Norwegian Nobel Committee citation)

Equity and Inclusion: Through the Lens of the Catholic Social Teachings

Epilogue

The acknowledgements and prestigious awards to Pugwash do not mean that we can now 'rest on our laurels. Our job is not yet finished. We have still to convince the governments of the nuclear powers that they, and the rest of the world, will be better off without nuclear weapons; we have still to educate the public to realize that war-any war must be eliminated; we have still to educate the scientific community that it must take responsibility for the outcome of its research. We know what the penalty would be if these objectives were not attained. The last paragraph of the Russell-Einstein Manifesto spells this out:

There lies before us, if we choose continual progress in happiness, knowledge and wisdom. Shall we, instead, choose death, because we cannot forget our quarrels? We appeal, as human beings, to human beings: Remember your humanity, and forget the rest. If you can do so, the way lies open to a new Paradise; if you cannot, there lies before you the risk of universal death.

The choice is still to be made but the portents are that we will choose life. We are gradually realizing the folly of war; we are slowly and painfully learning to solve our disputes by means other than military confrontation.

BERTRAND RUSSELL AND THE PUGWASH MOVEMENT: PERSONAL REMINISCENCES, Joseph Rotblat
<http://digitalcommons.mcmaster.ca/cgi/viewcontent.cgi?article=1199&context=russelljournal&sei-redir=1&referer=http%3A%2F%2Fwww.google.ca%2Furl%3Fsa%3Dt%26rct%3Dj%26q%3Db Bertrand%2520Russell%2520and%2520the%2520Pugwash%2520movement%253A%2520%2520personal%2520reminiscences%26source%3Dweb%26cd%3D1%26cad%3Drja%26ved%3D0CCoQfjAA%26url%3Dhttp%253A%252F%252Fdigitalcommons.mcmaster.ca%252Fcgi%252Fviewcontent.cgi%253Farticle%253D1199%2526context%253Drusselljournal%26ei%3D0FkeUuyUBMqagqGY1YAQ%26usq%3DAFQjCNGQFBnDKM7oPyG8nlbQ2jmSYMwnhw%26bvm%3Dbv.51156542%2Cd.aWc#search=%22bertrand%20russell%20pugwash%20movement%3A%20personal%20reminiscences%22>

1. Who is responsible for the promotion of peace?
2. When you read international headlines, in what way is the fear of nuclear weapons still real today as it was sixty years ago?
3. Accordingly to scientists, is the promotion of peace more important than military confrontation? What could be the result of avoiding peaceful solutions to disputes?

Reprinted with Permission: *The Early Days of Pugwash*, Rotblat, J. Physics Today, June 2001, American Institute of Physics, AIP Publishing

http://www.physicstoday.org/resource/1/phtoad/v54/i6/p50_s1?bypassSSO=1