

**Financial Literacy Lessons and Activities for The Ontario
Geography Curriculum**

“What is in your Cell phone”:

Understanding the materials and
construction of Cell Phones- Are they a
sustainable Product?

An activity package

For:

Activity# 3-Grade 9 Applied CGC1P

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Author: Ewan Geddes



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Lesson #1		Grade: 9 Applied
Time Circle: One 75 minute period.	Learning Expectations <ul style="list-style-type: none"> • GCI.03B - summarize Canada's significant world contributions (e.g., peacekeeping, telecommunications technology); • SS1.04B - demonstrate a knowledge of the characteristics of human systems (e.g., transportation, population, communication, energy networks, industry); • MI3.01B - select and use an organizer or decision-making model effectively to study a geographic issue in a local bioregion 	Materials: Computer lab Internet LCD projector and speakers
Assessment Opportunities		
Before - Activation Minds On! Brainstorm the materials that go into making a Cell phone.	<ul style="list-style-type: none"> • Class discussion around the production and use of cell phones to find out what students already know about the topic. • Have students watch the youtube video: http://www.youtube.com/watch?v=SAIsbgJGyD4 Mobile Phones - Designing, Testing and Manufacturing (6:10 minutes) • Students should write down what is “surprising” to them as they watch the video. 	For Learning Monitor class discussion have students share with other what they find surprising
During – Processing Strategies: Brainstorm the materials that go into making a cell phone. Groupings: of four	<ul style="list-style-type: none"> • Have the students use the place mat (Appendix A) to compile student knowledge on extraction, manufacturing, distribution and consumption of materials needed for a cell phone. Give each section approximately four minutes. (16 minutes) • In the middle of the place mat the students discuss their results and record what they agree on (a summary of the information gathered). (5 minutes) • Each group now shares their information with the rest of the class. This can be done as a presentation, gallery walk, or a small group sharing the groups are broken up into four groups and each member shares their groups’ response. (20 minutes) • Shared information is then brought back to the original group for further discussion and addition to their original place mat. (10 minutes) • Fill in the <i>What is Where, Why There, Why Care</i>. This can be adjusted as the activity goes on. 	As Learning Each group now shares their information with the rest of the class. This can



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After – Consolidation	During class discussion the teacher can discuss the common understanding of what the class has learned. Then using Appendix B the teacher can give clearer information as to what materials are needed and where they come from. Using Appendix C, the teacher can help explain where most of the manufacturing takes place.	be done as a presentation, gallery walk, or a small group
<u>Home Activity or Future Classroom Consolidation</u>	Ask students to find out how much their cell phone package costs, if they have one or how much their parents costs and how long they think they need to work to be able to pay for the phone. If they don't have a phone they can estimate how long they would have to work (assuming minimum wage for a 16 year old) to be able to afford a phone.	



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Lesson # 2		Grade
Time Circle: One 75 minute class	Learning Expectations <ul style="list-style-type: none"> • SS1.04B- demonstrate a knowledge of the characteristics of human systems (e.g., transportation, population, communication, energy networks, industry); • SS1.08P- identify and explain the geographical requirements that determine the location of businesses, industries, or transportation systems. 	Materials ArcGIS Lab Internet access
		Assessment Opportunities
Before - Activation Minds On!	<ul style="list-style-type: none"> • Discuss Appendix B and the Geography around why certain elements are found in certain places. • Discuss Appendix C and the geography around why manufacturing companies are located where they are. 	For Learning Teacher will monitor groups to see that they have an understanding of terminology
During – Processing Strategies: Groupings:	<ul style="list-style-type: none"> • Students will work independently to create a series of maps to show the location of countries that supply the materials needed in the production of a cell phone, countries that manufacture the cell phones or part of the cell phone, and counties that use the most NEW cell phones. • Students can use Appendix D, ArcGIS, Location of Material to map out where materials originate from and end up in the production of a cell phone. • If a GIS lab is not available the World Map Black Line Master can be used (Appendix E). • When the maps have been completed the students should draw arrows to show the direction of flow of: countries of raw materials to countries of manufacturing to countries of consumption. • Using Appendix F: Developing Countries students can determine the level of development of the countries involved in the cell phone life cycle, from beginning to end. Students can actually click the names on this list and get details about the developing countries. • Use Appendix G as a mapping check list to assess students mapping skills. (This is attached to the ArcGIS activity) 	As Learning Students will use mapping conventions checklist



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After – Consolidation	<ul style="list-style-type: none">• Using Appendix F or ArcGIS data, ask students to summarize some of the differences between the different levels of development.• Do the students feel that everyone has an equal opportunity to own a cell phone?• Students must give reasons for their answers.	
<u>Home Activity or Future Classroom Consolidation</u>	Have the students gather information on the location of the needed raw materials around the world and what if any are the geological/geographical reasons for their location.	



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Lesson # 3		Geography Curriculum	Grade
<p>Time Circle: One 75 minute class</p>	<p>Learning Expectations</p> <ul style="list-style-type: none"> • HEV.03B- demonstrate an understanding of the challenges associated with achieving resource sustainability and explain the implications of meeting or not meeting those challenges for future resource use in Canada. • GCV.03B- produce research reports on global concerns that affect Canadians (e.g., wilderness protection, economic impact of globalization). 		<p>Materials Computer lab Presentation software</p>
Assessment Opportunities			
<p>Before - Activation Minds On!</p>	<ul style="list-style-type: none"> • A Class discussion on the cost of individual cost of cell phone use. Questions to ask: What is the cost in Canada, what is the cost in different countries, why the difference? (5 minutes) • Use the CBC web site below to gather information on how much it cost to use a cell phone in different parts of the world. http://www.cbc.ca/news/interactives/map-cellphonecosts/ • Students will see some price discrepancies and further discussion can take place. (5 minutes) 		<p>For Learning Students will discuss in Groups</p>
<p>During – Processing</p> <p>Strategies:</p> <p>Groupings: Groups of four</p>	<ul style="list-style-type: none"> • Students are going to have a group discussion on how long they feel they need to work in order to be able to pay for their own cell phone. After a short discussion hand out Appendix H Minimum Wage in Ontario table to assist. • Using the information from the CBC interactive map students can get the information on how long and average person needs to work in order to afford their radio. • Students need to examine their life style: how long they spend doing home work, how long do they need with their family and friends. Students can create a graph to show what percentage of time will be allocated for each group. Now they need to determine how long they have to work using the information from the web site and table. • Students now need to add this to their table. How much time do they have for themselves after everything has been taken into consideration? • Show the youtube video Grand Theft Congo: http://www.youtube.com/watch?v=O1FQmUQ1-mM&feature=related (15 minutes). • Students take this information (five dollars a day) and now determine how long a mine worker in the Congo must work to 		



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	<p>earn enough for a cell phone. Do they think that the workers would actually be using one?</p> <ul style="list-style-type: none"> • Now using the original place mat students file in, as a group, <i>What is Where, Why There, and Why Care</i> 	<p style="text-align: center;">Assessment of learning This piece of communication can be evaluated with the attached rubric.</p>
<p>After – Consolidation</p>	<ul style="list-style-type: none"> • Students now need to write a letter, produce a power point or other appropriate form of communication to answer: <i>What is Where, Why There, and Why Care</i> with regards to cell phones. Students need to incorporate extraction, manufacturing, distribution and consumption in their piece of communication. 	
<p><u>Home Activity or Future Classroom Consolidation</u></p>	<p>This piece of communication can be evaluated with the attached rubric. (Appendix I)</p>	

