ENVIRONMENT COMMITTEE – MAY 28, 2009

GREEN DIRECTIONS VAUGHAN UPDATE: OUTREACH TO SCHOOLS

Recommendation

The City Manager, in consultation with the Manager of Corporate Policy recommends that:

1. This report be received for information purposes,
2. These select presentations of the culminating projects (designing and building sustainable communities) from students of Stephen Lewis Secondary School be received.

Economic Impact

There is no economic impact resulting from the receipt of this report.

Communications Plan

Staff will work with Corporate Communications and the school to prepare a media release to advise of the presentations.

Purpose

The purpose of this report is to provide background on the presentations to be received from the students of Stephen Lewis Secondary School on sustainability issues as they relate to the students final projects.

Background - Analysis and Options

Goal 5 of Green Directions Vaughan provides that the City demonstrate leadership in advocacy and education on sustainability issues. The actions under this goal recommend the development of an educational strategy for citizens, businesses and schools.

On February 3, 2009 the Environment Committee received a report updating the progress of a program to engage the students at Stephen Lewis Secondary School (SLSS).

As a result of the direction provided by the Committee in that report, two presentations were coordinated by City staff and the staff at SLSS. The first, competed on May 21st was a presentation to the Grade 9 Geography students (approximately 120), which included an overview of the City's growth management program, including Green Directions Vaughan, details on the Greenbelt legislation, Places to Grow, the growth projections for Vaughan and the City's own plans for growth, including highlights from the OP Review process. The City was represented by Corporate Policy, Economic Development, Policy Planning and the OP Review consulting team.

Today's meeting of the Environment Committee is in support of the second objective of the February 3rd report – to receive selected presentations from the students of SLSS. The students have been tasked with redesigning Block 10 in the Carrville community (bounded by Dufferin Street, Bathurst Street, Rutherford Road and Highway 7) as a sustainable community and were asked to prepare a scale model and an oral presentation to explain their vision. These projects incorporate all the learning the Grade 9 Geography students have had up to that point regarding issues including, but not limited to: urban form, the environment, energy, waste and transportation. For reference, a copy of their assignment has been included as Attachment 1.

Relationship to Vaughan Vision 2020/Strategic Plan

This report is consistent with the priorities previously set by Council and the necessary resources have been allocated and approved.

Regional Implications

N/A

Conclusion

One of the goals of Green Directions Vaughan is engaging the community on sustainability issues. Opportunities such as this demonstrate the City's commitment to implementing the actions contained in Green Directions, supporting environmental education as well as providing another avenue of feedback for the OP Review team in the development of the new official plan.

The presentations from the students of SLSS are a unique and valuable opportunity to engage the youth of our community. Ideally, it will provide a two-way learning experience, with the students' projects providing insights on our current planning and, in return, for the students, obtaining feedback from staff and the Committee. It is hoped that the City can build on this experience to develop a more comprehensive engagement strategy. Therefore, it is recommended that this report and the presentations for the students of SLSS be received.

Attachments

1. Culminating Activity Project Outline, Stephen Lewis Grade 9 Geography Project.

Report prepared by:

Rebekah McGurran, Economic Developer – Environmental Sector
Roy McQuillin, Manager of Corporate Policy

Respectfully submitted,

Michael De Angelis
City Manager

Stephen Lewis S.S. - Geography Department
CGC1D1 - Final Culminating Activity

BUILDING A SUSTAINABLE CITY - THE CITY OF VAUGHAN

Think about it...everyday, every month, every year, humans are increasing their consumption of the Earth's resources, either through wasteful habits or sheer population growth. If everyone on Earth lived like the average Canadian, at least 4 Earths would be required to provide all the materials and energy to sustain that lifestyle. The land needed to support each Canadian's current consumption is three city blocks per person, **PER YEAR!** This is the impact, or ***ecological footprint***, that each Canadian makes on the earth.

In 1983, the United Nations World Commission on Environment and Development defined '***sustainable development***' (SD) as a level of development that enables humans "to meet the needs of the present without compromising the ability of future generations to meet their own needs". The Commission further stated that sustainable global development requires those who are more affluent, to adopt a way of life that is within the planet's ecological means. Because Canada is a developed country, Canadians are considered to be affluent and thus have a significant role to play in achieving sustainable development. An all-encompassing strategy for achieving sustainable development that would reach a majority of the population is to create ***sustainable cities***.

In 1867, 18% of Canada's population lived in urban areas (towns and cities). Over time, the percentage has climbed to almost 80%. ***Urbanization*** is defined as the process of an area changing from rural to urban and it is an on-going process. In fact, there is evidence of it just outside the window. The city of Vaughan (a suburb) is no exception and it too has become increasingly urbanized; there are more houses, streets, schools, businesses and there is still more development to come. Communities are created in this process in which consumers and distributors of goods & services co-exist and thrive.

Unfortunately, the characteristics of a suburb create a tendency to consume more than one's fair share of resources and damage the natural environment. The typical suburb in Canada is considered to be unsustainable due to its low-density housing and its residents' dependency on the motor vehicle to work, shop, and play. As urban and suburban populations increase, how can communities be designed, or re-designed, so that they are more "liveable" for their residents today and in the future? In doing so, sustainable cities are created.

Sustainable cities are the products of ***sustainable urban or community development.*** Sustainable urban development may be defined as:

"Improving the quality of life in a city, including ecological, cultural, political, institutional, social and economic components without leaving a burden on the future generations. A burden which is the result of a reduced natural capital and an excessive local debt. Our aim is that the flow principle, that is based on an equilibrium of material and energy and also financial input/output, plays a crucial role in all future decisions upon the development of urban areas."
(http://www.rec.org/REC/Programs/SustainableCities)

Another definition to ponder:

"Sustainable community development is the ability to make development choices which respect the relationship between the three "E's"-economy, ecology, and equity:

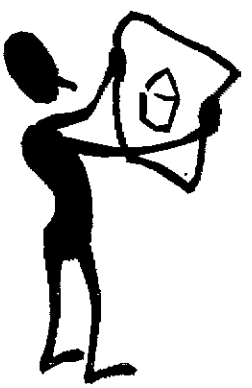
- ***Economy*** *- Economic activity should serve the common good, be self-renewing, and build local assets and self-reliance.*
- ***Ecology*** *- Human are part of nature, nature has limits, and communities are responsible for protecting and building natural assets.*
- ***Equity*** *- The opportunity for full participation in all activities, benefits, and decision-making of a society."* *(http://www.rec.org/REC/Programs/SustainableCities)*

DESIGNING & BUILDING SUSTAINABLE COMMUNITIES

In this final culminating activity you must successfully demonstrate the following overall expectations:

- describe the components and patterns of Canada's spatial organization;
- analyse local and regional factors that affect Canada's natural and human systems;
- explain the relationship of renewable and non-renewable resources to the Canadian economy;
- analyse the ways in which natural systems interact with human systems and make predictions about the outcomes of these interactions;
- evaluate various ways of ensuring resource sustainability in Canada;
- analyse connections between Canada and other countries;
- report on global issues that affect Canada;
- explain how natural and human systems change over time and from place to place;
- predict how current or anticipated changes in the geography of Canada will affect the country's future economic, social, environmental well-being;
- explain how global economic and environmental factors affect individual choices;
- use the methods and tools of geographic inquiry to locate, gather, evaluate, and organize information about Canada's natural and human systems;
- communicate the results of geographic inquiries, using appropriate terms and concepts and a variety of forms and techniques.

York Region has the daunting challenge to manage growth (population, employment, and housing) over the next 25 years. Because of the magnitude and the nature of this growth, York Region has decided to adopt and implement a sustainable strategy that will effectively integrate the economy, environment and community for the years to come. You will examine the projections made by the Province of Ontario and become familiar with the Oak Ridges Moraine Conservation Plan as well as the Greenbelt Plan. These three components are used jointly to direct this strategy of sustainability. Now, it will be up to you to apply this strategy with what you have learned about settlement patterns, land use patterns, sustainability, your ecological footprint, the sustainable city and global environmental issues to design and build our sustainable neighbourhood.



DESIGNING & BUILDING SUSTAINABLE COMMUNITIES

Instructions:

When?	What?
ASAP and notify your teacher of the partnership.	☐ Select a partner to work with on building a 3-D model of the neighbourhood. Be sure to select someone that you will be able to arrange meetings and discussions with outside of school hours (i.e. evening and weekends).
Every day that you do work for this assignment. **DUE: Wednesday May 27**	☐ **Each person must keep an **academic work journal** that documents planning skills, processing skills, and critical/creative thinking processes. (See rubric).
Friday May 8 in the computer lab (Room 205) or must be done independently due to facility constraints. **DUE: Monday May 11**	☐ ** Each person must calculate the size of your own ecological footprint (EF) by completing the survey at the following website, http://www.myfootprint.org/en/ and then write an analysis (150 - 250 words) of his/her EF results.
Tuesday May 12 - in class activity: Sketch map + Observation sheet. **DUE: Wednesday May 13**	☐ **Conduct a visual survey of the neighbourhood and sketch your observations.
TBA	☐ Participate in the field trip to Harbourfront Centre to examine urban change and land use patterns.
Wednesday May 13 - Tuesday May 19	☐ **Develop a sustainability plan for the neighbourhood.
Work period in-class: Tues. May 26 **DUE: Wednesday May 27**	☐ **Each person must independently write a 500-word report = 2 pages long, typed, 12 font, 1.5 line spacing.
Tuesday May 19 - Monday May 25 **DUE: Tuesday May 26**	☐ **Build a 3-D model of the neighbourhood to scale, implementing your sustainability plan - complete your model.

- Items marked ** are part of the rubric and you should refer to the rubric for further details about each item.
- Remember to use your notes, information sheets, primary data, and your textbook for reference.

Name: _____ Name of Partner: _____

DESIGNING & BUILDING SUSTAINABLE COMMUNITIES
RUBRIC

Criteria	Level 1 (50 – 59%)	Level 2 (60 – 69%)	Level 3 (70 – 79%)	Level 4 (80 – 100%)	Mark Assigned
Written Report					
□ Explain design approach (guiding principles, facts, terms, definitions)	Limited explanation of design approach. Demonstrated limited understanding of facts and terms.	Adequate explanation of design approach. Demonstrated some understanding of facts and terms.	Good explanation of design approach. Demonstrated considerable understanding of facts and terms.	Exceptional explanation of design approach. Demonstrated thorough understanding of facts and terms.	___/10
□ Link what was implemented in the model to the strategies, concepts, ideas, and theories.	Linked model to the strategies & concepts with limited understanding.	Linked model to the strategies & concepts with some understanding.	Linked model to the strategies & concepts with considerable understanding.	Linked model to the strategies & concepts with insight and full understanding.	___/10
□ Expression and organization of ideas and information (e.g. clear expression, logical organization)	Written expression is limited. Limited language skills. Organization of ideas and information is evident but weak.	Written expression is adequate. Adequate language skills. Organization of ideas and information is somewhat evident.	For the most part, written expression is fluid. Good language skills. Organization of ideas and information is well thought out.	Fluid expression. Exceptional language skills. Excellent organization of ideas and information.	___/10
Work Journal					
□ Visual survey conducted and information sketched out.	Sketch is legible, includes few details, many labels are missing; limited accuracy.	Sketch is fairly neat, includes some details, some labels are missing; somewhat accurate.	Sketch is neat, includes most details, is mostly labeled; mostly accurate.	Sketch is neat, includes full details, is fully labeled; highly accurate.	___/10
□ EF quiz completed, calculated, and analysis has been made.	EF has been calculated, quiz has been submitted, analysis is missing.	EF has been calculated, quiz has been submitted, analysis is brief.	EF has been calculated, quiz has been submitted, analysis is fairly accurate and sufficiently detailed.	EF has been calculated, quiz has been submitted, analysis is accurate, detailed, and insightful.	___/10
□ Use of planning skills (gathering information, organizing an inquiry, setting goals) and use of processing skills (analyzing, generating, integrating, synthesizing, evaluating)	Work journal provides little evidence of planning and processing skills utilized.	Work journal provides some evidence of planning and processing skills utilized.	Work journal provides considerable evidence of planning and processing skills utilized.	Work journal provides strong evidence of planning and processing skills utilized.	___/10

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3-D Model □ Use of critical/creative thinking processes (inquiry process, problem-solving process, decision-making skills)	Little evidence of critical/creative thinking processes. Construction of model appears to be rushed, and incomplete.	Some evidence of critical/creative thinking processes. Construction of model appears to be done with some planning and consensus.	Considerable evidence of critical/creative thinking processes. Construction of model appears to be done with planning and consensus for the most part.	Strong evidence of critical/creative thinking processes. Construction of model appears to be done with planning and consensus throughout.	___/10
□ Use of mapping conventions (North arrow, colours, symbols, legend, labels, title, etc.) model is to scale.	Use of mapping conventions and model scale are applied with limited accuracy.	Use of mapping conventions and model scale are somewhat accurate.	Use of mapping conventions and model scale are, for the most part, accurate.	Use of mapping conventions and model scale are highly accurate.	___/10
□ Transfer of knowledge and skills (e.g. concepts, procedures) to new contexts.	Transfer of knowledge and skills to 3-D model was done so with limited success.	Transfer of knowledge and skills to 3-D model was somewhat successful.	Transfer of knowledge and skills to 3-D model was moderately successful.	Transfer of knowledge and skills to 3-D model was highly successful.	___/10
□ Making connections within and between various contexts (e.g. past, present, and future; environmental; social; cultural; spatial; personal)	Made connections within and between concepts of land use, sustainability, projections and official plans with limited degree of effectiveness.	Made connections within and between concepts of land use, sustainability, projections and official plans with some degree of effectiveness.	Made connections within and between concepts of land use, sustainability, projections and official plans with a moderate degree of effectiveness.	Made connections within and between concepts of land use, sustainability, projections and official plans with a high degree of effectiveness.	___/10

Total Marks: _____/100

Stephen Lewis S.S. - Geography Department
CGC1D1 - Final Culminating Activity

Name: _____ Name of Partner: _____

DESIGNING & BUILDING SUSTAINABLE COMMUNITIES
VISUAL SURVEY OF NEIGHBOURHOOD

With your partner, complete the walkabout of our immediate area and be sure to do the following:

Time & Distance:

1. a) Time how long it takes you to walk from the front of the school to the corner of Autumn Hill Blvd. and Dufferin Street. Record your answer here: _____
   b) Calculate how fast you walked. (350 metres ÷ time in minutes = speed).
   _____

Traffic Observations:

1. Observe and record how much traffic is going by on Dufferin Street.
   a) Count the number of vehicles travelling northbound for one (1) minute (have your partner time you). _____
   b) Count the number of vehicles travelling southbound for one (1) minute (have your partner time you). _____
   c) Calculate the approximate number of vehicles that drive along Dufferin Street in one (1) hour of one day (for both northbound and southbound).
   _____
   d) Observe again for one (1) minute how many vehicles have more than one person in them. For vehicles that have tinted windows, make a logical guess. _____
   e) Why is this observation/data significant?
   _____

2. Observe and record how many pedestrians are there walking along Autumn Hill Blvd. (besides you and your class)? _____

3. Observe and record how many vehicles are entering or exiting the school neighbourhood over the course of one (1) minute. _____

Construction & Land Use:

1. Describe 4 different land uses you see.

_____

_____

_____

_____

2. Take a look at the construction sites on the north side of Autumn Hill Blvd. What do you notice about the residential density?

_____

_____

3. The space on the northeast corner of Autumn Hill Blvd. and Dufferin Street is zoned as commercial. Suggest what types of commercial land uses would best suit this neighbourhood.

_____

_____

_____

Sketch:

- Roads and streets of the immediate area around the school.
- Record street names.
- Sketch where buildings are and where they are with respect to other places.
- Record the types of land use.
- You may also wish to take photos of the area from various angles.
- Create a final sketch (a good copy).

Distance & Scale:

- Determine a method of measurement that will assist you in creating a model to scale.

Name: _____ Name of Partner: _____

DESIGNING & BUILDING SUSTAINABLE COMMUNITIES
WORK JOURNAL

Date: _____

Date: _____

Date: _____

Date: _____

Name: _____ Name of Partner: _____

DESIGNING & BUILDING SUSTAINABLE COMMUNITIES
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