

YOUTH MANUAL



*the social art of
architecture:
involving youth
in the design of
sustainable
communities*

for teachers and youth leaders

STANLEY KING AND SUSAN CHUNG



We gratefully acknowledge the support and partnerships from the following organizations:

Architecture Canada

Institute For Environmental Learning

Real Estate Foundation

Bamfield Marine Sciences Centre Public Education

PURPOSE AND CONTENTS

The purpose of the youth manual is to guide the teacher or youth leader in conducting a program that enables young people to plan for the future sustainability of the community, and to learn how to contribute to the design of their environments. The program can be applied to the design of any environment such as parks playgrounds and recreation areas, streets, public space or building.

The manual contains three chapters that relate to one another but can be used separately.

Chapter 1. City-on-the Wall.....7

Students quickly draw a developing city and see how it is ‘we’ not ‘they’ who create it. Youth design their environment based on their round of life and their senses. Questions include: What do you see, hear, touch, smell in your new environment? What are you doing at 6AM, 10AM, noon, midnight? Next, youth are encouraged to: “*Draw yourself, then your friends, then your surroundings*”.

Chapter 2. Mentorship.....31

Community mentors teach students about sustainable living and design. Older students teach younger students in an intergenerational exercise. Older students facilitate the City-on-the-Wall exercise for children. Children design their sustainable space. Case study: Prince of Wales Secondary, Vancouver.

Chapter 3. Ideas Fair.....56

Older students guide children in organizing a public display of student designs for the parents and civic leaders. Case study: Prince of Wales Secondary, Vancouver.

Chapter 4 Finding The Sweet spot.....63

Meet Wilderness Chick and City Dude. We ask youth to consider the range of life in the wilderness and life in the city and to mark where in this range they would wish to live. They choose a place between to two, a *sweet-spot* that contains both nature and the city

BENEFITS OF INVOLVING YOUTH

A little time spent working with youth when planning the future of their areas can bring benefits. Newly aware of the environment beyond home, they bring fresh eyes into the dialogue. Their active lives enlarge the range of activities in the design. Their awareness of danger from traffic, from dangerous people and environments that pose a threat, can illuminate potential dangers in the design. A place that is safe for a child is safe for us all.

UNICEF has identified twelve characteristics of “Child Friendly Cities”, based on the Convention of the Rights of the Child, 1989. The Youth Manual addresses seven of them:

Children’s rights to:

1. Influence decisions about their city
2. Express their opinion on the city they want
3. Participate in family, community and social life
4. Walk safely in the streets on their own.
5. Meet friends and play
6. Have green spaces for plants and animals
7. Live in an unpolluted environment

<http://www.childfriendlycities.org/>

Stanley King’s **City on the Wall** exercise enables children to participate authentically in the first three characteristics. The last four traits are common images that have emerged from the childrens’ drawings in over 200 City on the Wall workshops. The first was in Port Hawkesbury, Nova Scotia in 1971, for the design of a community school. Major urban projects have followed, including Vancouver’s Robson Square, Granville Island, False Creek, Hastings Park/PNE; Victoria’s James Bay; Calgary’s Olympic Plaza, and Memorial Drive. Young people have contributed to the design of many parks, provincial and national parks, city neighbourhoods and small towns throughout Alberta and British Columbia.

When young people are included in planning, the designs show consistent characteristics; a humanity of scale, and a large range of activities that can be enjoyed in the new place. The involvement of youth in planning encourages civil behaviour and strengthens the community. Youth care for environments they have helped to design. Vandalism is noticeably absent.

“I certainly concur wholeheartedly with the concept that if the kids are involved in creating their own space there will be no damage.”

Letter Moira Hegarty, Principal, John Deifenbaker Senior High School, Calgary.

RESPONSE FROM EDUCATORS

Social Studies and History

"We end each unit with a Vancouver field trip – they do 'PEP' lists while they tour the Colliseum, the Toronto Dominion Tower, Gastown, Empire Stadium, U.B.C., Oakridge, etc, etc. To sum it up, this material is the most rewarding thing I have found in my classroom. The kids love it"

Letter from Alan Wilmott, Port Alberni, B.C., February 8, 1973

"The results were astounding. The Children reacted to the project like ducks to water. Where before I had great problems getting them to write or speak a single word, they now came crashing forth with ideas, suggestions, comments. I could scarcely believe it. They were another class altogether. Three other teachers, one with Grades 3-4-5, a second with Grade 4 and a third with Grade 7 also attempted the project. They all received a fantastic reaction from their students."

Letter from John Hibberson of Laura Secord Elementary School, Vancouver, B.C., 19 March, 1973

The City on the Wall exercise gives the students a basic understanding of the historic changes in the evolution of human settlements. The study of activities in the round of daily life helps students to picture the human element in their study of different settlements, e.g., the daily life of a farmer, a shopkeeper, or a miner in a mining town: The comparison of the students' current daily round of life to the daily life of their grandparents when they were children.

Communication

The program improves communication skills. The combination of drawing and words, gives the students ease and confidence in describing their ideas. This applies particularly in those students newly arrived to Canada who have difficulty with the English language. Students also learn to work in groups more easily.

Teachers' Evaluation, Vancouver School Board Report – Students Design Neighbourhood Improvements - Stanley King 1978

Ecological Education: Where I live and what I do

Susan Chung used the "City on the Wall" and the "Sustainable Design Ideas Fair" to relate "text-book ecology" to every day living. The design exercise enabled students to be acutely aware of their surroundings and their round of life, a first step in designing a sustainable life.

*"The **ecological niche** of an organism depends not only on **where it lives but also on what it does**. By analogy, it may be said that the habitat is the organism's "address", and the niche is its "profession", biologically speaking."*

Odum - Fundamentals of Ecology - W B Saunders 1959

RESPONSE FROM DESIGNERS

“Thank you for your invitation to the Science Fair at Prince of Wales. I came home elated from this wonderful event. The students really grasped - thanks to your inspiration and guidance - what sustainability is all about and what we must do to save our planet. There is hope in the generation that you are teaching and your passion is being transmitted to your students from understanding storm-water management, energy saving devices, and market gardening. The C.K. Choi building, which you choose to study, is definitely the state of the art though we completed it in 1995, before your students were born! Imagine, this morning I had a telephone call from a good friend of mine, and a grandmother of a student in Grade 8 who told her that he heard me speak and that I said there is hope with his generation for a better life because they are learning to save the planet. I enjoyed the event immensely...”

Letter from Cornelia Hahn Oberlander, OC, April 3, 2009, in response to the Sustainable Design Ideas Fair held at Prince of Wales Secondary.

“Stanley King, MRAIC and Susan Ng Chung were well received by the Metro Vancouver Chapter of the RAIC after their presentation of “The Social Art of Architecture”. The members of this Chapter as well as our Director Stuart Howard FRAIC, MAIBC are in full support of the endeavours taken on by this group. The Metro Vancouver Chapter fully endorses this project especially in its educational relationship with high school students. Mr. King and Ms Chung are contributing in a unique way towards the promotion of Architecture and its role in Society.”

Letter from the Royal Architectural Institute of Canada, Metro Vancouver Chapter, September 3, 2009



Metro

Vancouver

Chapter

British Columbia

YOUTH MANUAL CHAPTER 1

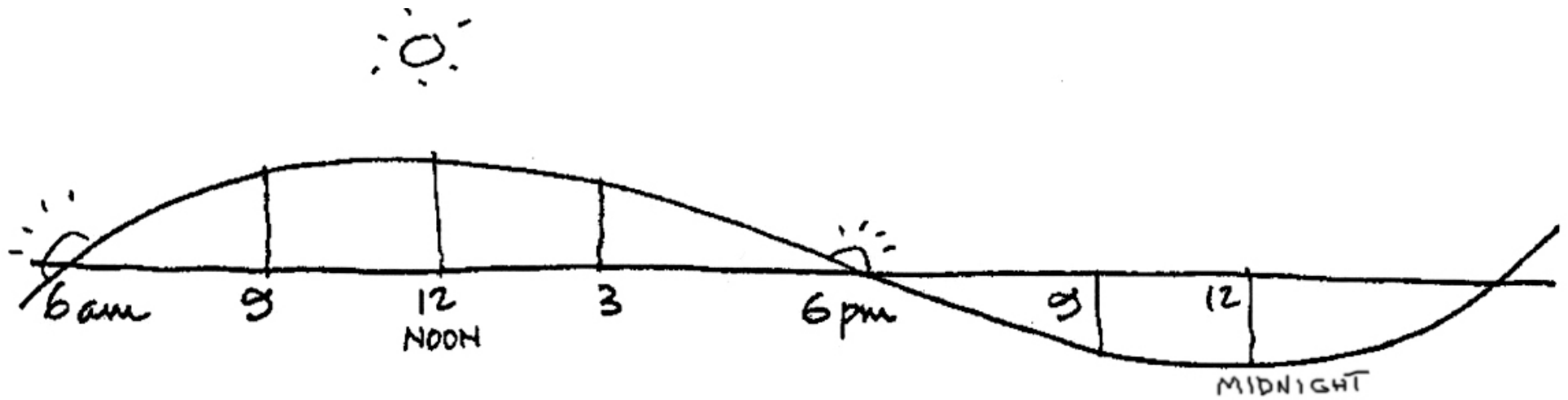
THE CITY ON THE WALL



PROGRAM AIMS

1. Youth meet and talk with the 'they' who plan the changes
2. Youth demonstrate to themselves that the city develops through the activities of 'we', not 'they'
3. Youth have a say in the design ideas for the future of their place





**The simple direction
“Draw yourself, your
friends and your
surroundings...” provides
a wealth of design criteria
for the architect or
planner.**

By drawing scenes of themselves and their friends, and describing the surroundings, youth provide ‘performance’ criteria. Designers regard this as the best form of criteria because it allows them to apply their experience, their knowledge and their creativity to meet the required life of the place. Designers value the drawings by youth because they provide design data that is not otherwise available. Youth are acutely perceptive of their surroundings, and, without distractions of adult concerns of funding and management, they offer a fresh perspective.

PREPARATION

Opening doors ahead

Inviting a planner to visit

Before starting a program that would involve youth in planning of changes to their environment, be sure that planners and decision-makers will welcome their ideas. They are usually willing to consider the ideas from the youth of the town, and they are more than willing to talk with the youth and assure them of their interest in hearing their thoughts. The mayor and other notaries may welcome an invitation to join the planner at the school, at least for the introduction.

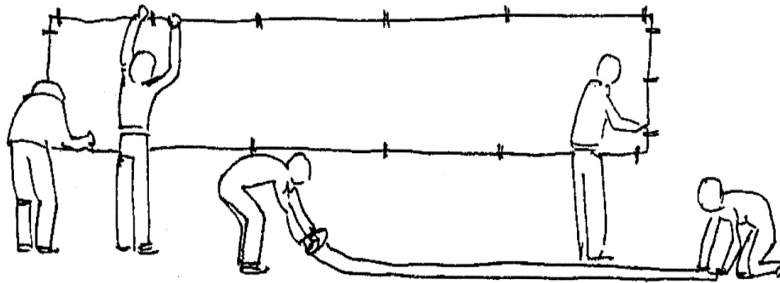
An example of the ‘City-on-the Wall’

A film of Stanley King conducting the City-on-the-Wall exercise for the design of Robson Square, Vancouver is available from the National Film Board of Canada: “Chairs for Lovers”, 28 minutes in length.

Press and Television

The community’s press and local television stations are often interested in the newsworthy item of the children’s involvement in planning, and may wish to record the event. Permission of parents is required prior to photographing activities. Opportunities to photograph or film the children occur during the latter half of the City on the Wall exercise at approximately 9:30am – 10am.

SET UP



Set Up in the Gym

Roll out 20 feet of paper on the floor. Ask the students to fix the paper on the wall. Two layers of paper are best, and if the wall is rough more layers may be required.

Students Arrive

Ask the students to seat themselves closely on the floor facing the paper on the wall. Maintain a four-foot clear walkway between the first row of students, and the wall. Ask the students to crowd together. Ask the front row to unpack the pastel boxes or felt pens that you have brought for the exercise.

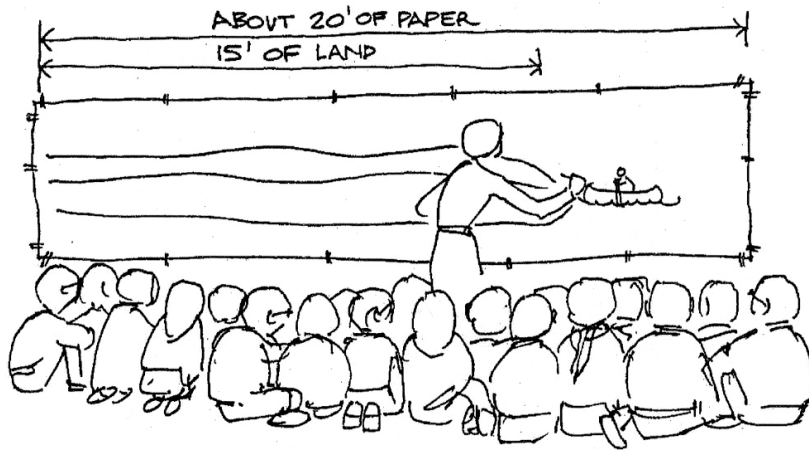
Introduce the community leader, architect or planner

Ask the community leader or planner to tell the students what he or she does in their daily work, and to describe the area that is to be planned, and that ideas the students may have for the area will be considered in the planning.

THE CITY ON THE WALL

9:00 a.m.

"I will ask you to imagine the future of your area a little later. First, let's take a look at the past and see how a city can actually develop"



Draw lines of land and water (use brown & blue pastels) as you talk to the students.

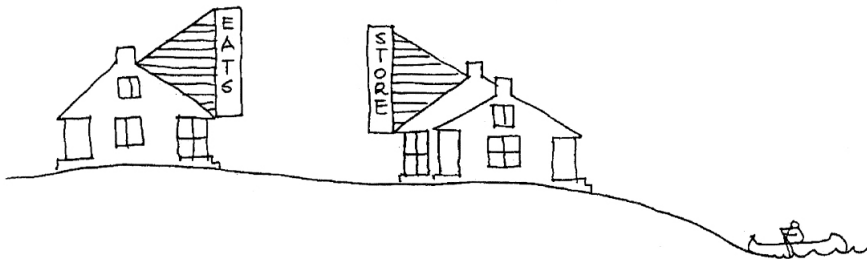
"Imagine you were here when the land was new. Here's you in a canoe. What would you do here? What sounds would be here? What smells would there be?"



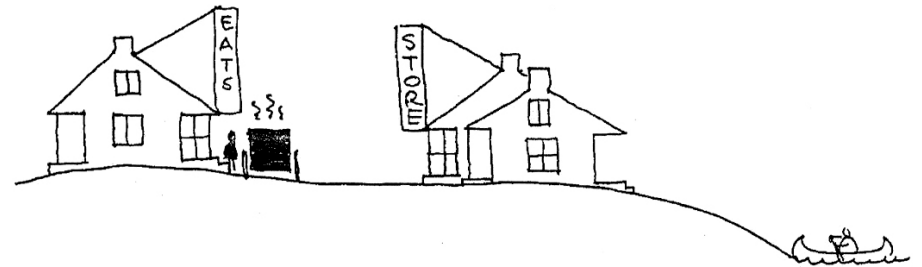
"You want to stay longer so you decide to buy some land. Your friends arrive and help you to build a cabin. Where would you build it...here?"



"Your friends want to live here too. You then subdivide the land, sell them lots and help them build their homes."

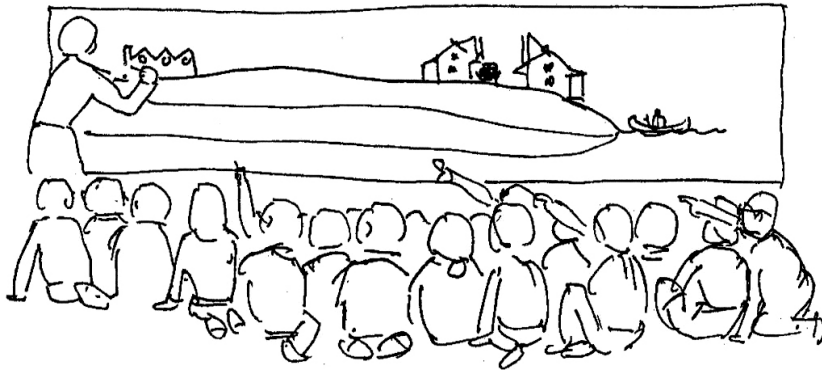


"Where would you go to buy your goods? For a cup of coffee? We need a restaurant and a store. Some homes are converted to offer these services."

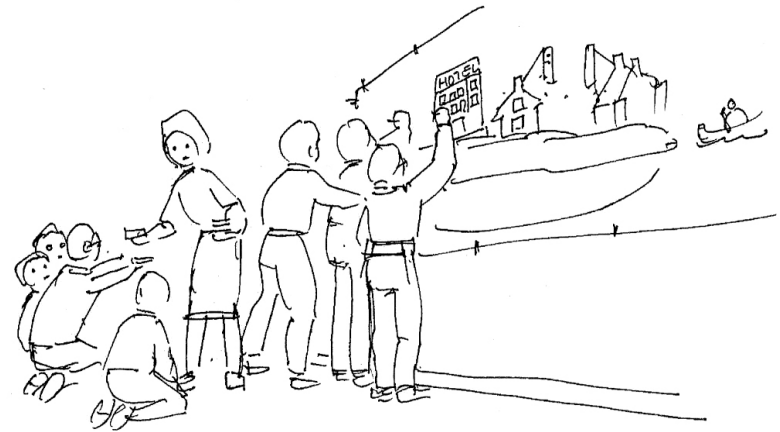


"A man arrives in a truck full of smelly skins and bones of animals. He wants to build a factory."

“You like the idea of earning money but you don’t want the smell of the factory too close. Where should he build the factory? Over there...?”



“Now we have the beginning of a town that has a place to live, called the residential zone; a place to shop, called the commercial zone; and a place to work, called the industrial zone.”



Ask the students what more should go in the drawing to make it like any town they have known. The students will then call out, a hospital, a school, a fire station! Invite the students to come up to the paper and draw their ideas in.



“You have so many wonderful ideas! Why don’t you come up and draw them. Grab some pastels and draw your idea, where you think it belongs in the city you are now beginning to develop.”

9:40 a.m.

In a short time, the crowded city is drawn.

“Sit down and look at the city you have drawn. Would you want to live there?”

Children often, but not always, declare that they do not want to live there. Children don’t want live there because it resembles their own urban environment. It is often crowded with shops, concrete, cars. There are few trees. It looks noisy, smelly and crowded.

Have them locate the canoe. Ask the students to remember what they said could hear and see and smell when the place was wilderness.

*“Is this the kind of place you would want to live in?
What could you do when the place was wilderness?
What can you do in the city you have drawn?”*

“What do you hear, and see and smell now in the city?”

|

THE PROBLEM OF THE CITY

There are now six billion people on this earth. Half of these people live in cities. By 2050, there will be nine billion on the earth and six billion will live in cities.

Dr. Hans Rosling, Gapminder

<http://www.gapminder.org/videos/a-slum-insight/>

If everyone lived in the city like the one we built, it would take at least four earths to support it ...



Picture, NASA, From Apollo 17, December 7, 1972

STARTING AGAIN: WHAT WOULD YOU LIKE TO DO?

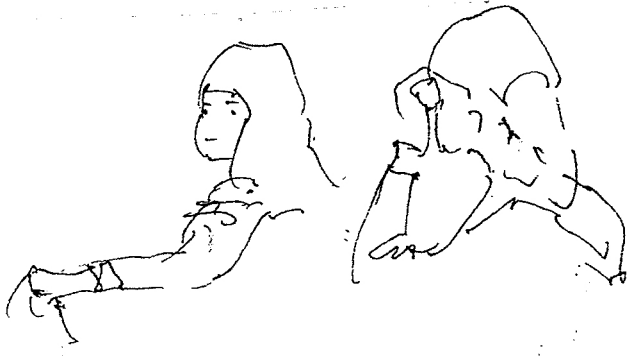
Look at our city. These are all solutions, and we don't even know what the question is. Lets design this place again. And this time we will not think about solutions, or even buildings.

*We will ask **what is it you would like to do.** Sometimes these things don't even require a building.*



PERSONAL EXPERIENCE AND PERCEPTION **PEP**

“Think of yourself in a place - like now. What part of you makes contact with the environment?”



Students will call out ‘feet’, ‘bum’.

“What parts of your body feels the air and warmth?”

‘Face, hands’.



“What parts notices the mood of the place and thinks about people and living things around you?”

‘Head, or heart’.

“Walking or standing, what touches the environment?”

‘Feet’.

“What part sees and hears and smells and tastes?”



‘Eyes, ears, nose, mouth’.

“And what part of you is the centre of time?”

Students usually have to think about this. ‘The brain?’ ‘The heart?’

“Yes, good, but these are not the main centre. When this part of you tells you it is time, it really is time!”

Eventually a student will answer ‘Stomach’.

“Yes, well done. The lower abdomen tells you when you need to eat. It tells you when you need to go to the bathroom, and you have to go!”

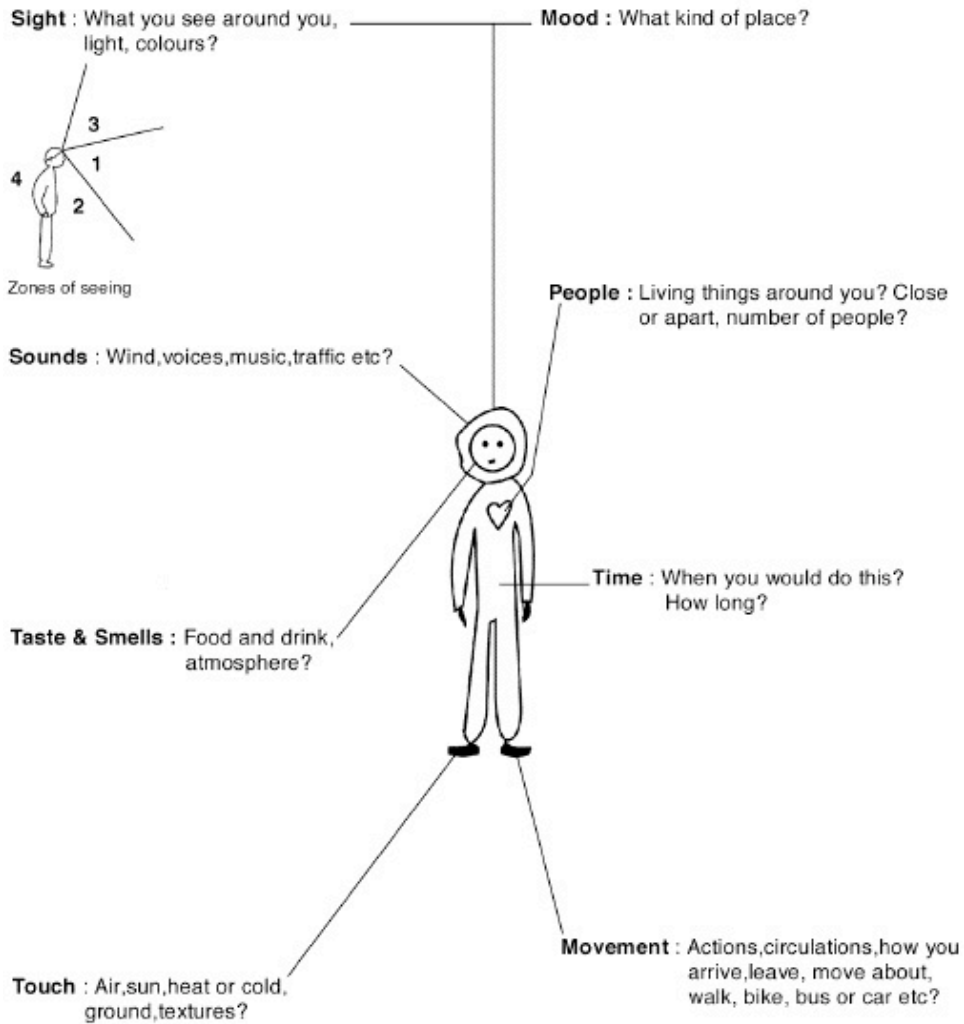


The Community Leader or Planner

Introduce the students to the subject of design; the open space, park, garden, or building.

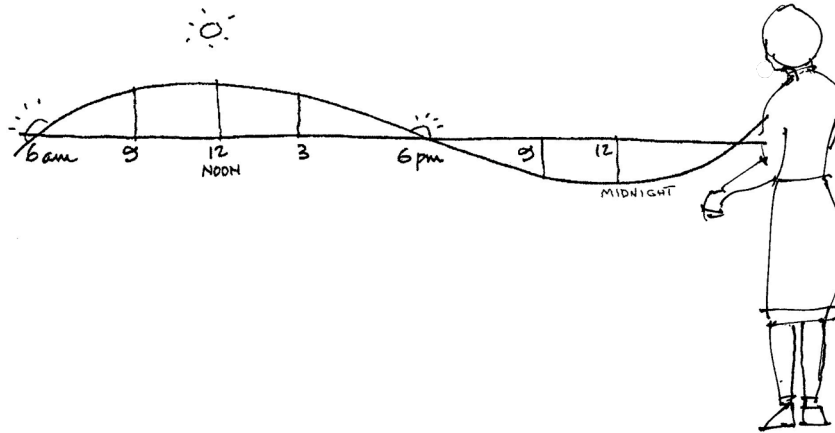
“Now we would like you to imagine your place has been designed, and all the building finished just as you would like it to be. Imagine a day in your new place. What would you see, hear, smell, touch? How would you move around?”

As you ask this question, show the PEP diagram below to guide their responses.

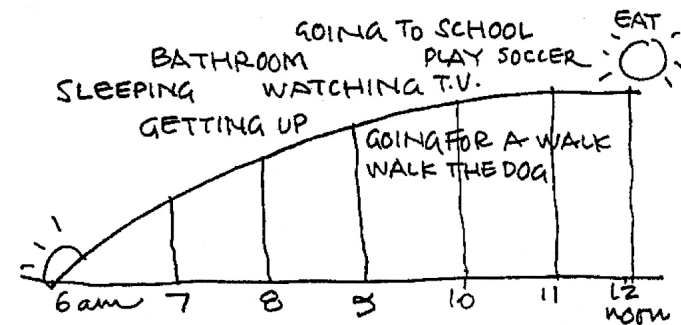


(PEP) PERSONAL EXPERIENCE AND PERCEPTION DIAGRAM

A DAY IN THE LIFE



As they call out the activities to you, **repeat what they said** as you note them on the time line. Make sure to write their ideas for activities at approximately the same hour they suggest as shown in the diagram below.



DESIGNING A DAY 10:30

ACTIVITY TIMELINE

With the students help, remove the City on the Wall drawing and tape it below the layered paper or on another wall. On the revealed paper, draw the Activity Timeline diagram.

“Imagine a day in the new place in any season, midweek or weekend, or on special days. What would you wish to do hour by hour in the place to be designed, starting at 6 a.m.?”

Check in your mind that they have included the activities of the day (prompting if necessary):

- sleeping, resting
- bathroom, toilet
- eating
- getting provisions (food, water, etc.)
- moving about
- recreation
- work
- getting rid of waste

A DAY IN THE LIFE... FOR TEENS

Note that teens prefer to do this activity anonymously as they may be very aware of the perception of their peers. Therefore, with a young adult participant group, we advise you to make use of sticky notes. Instructions are:

“You have 10 minutes to write down 5 activities that you would like to do in your ideal day and to stick it on the timeline!”



VERY SIMPLY AN ACTIVITY IS SUSTAINABLE IF...

11:00 AM

Past and Future Activities

When the paper is fairly full of ideas ask the students to consider the following question.

*What activities listed on the time-line could your grandparents **not** have done when they were young?*

Would your grandchildren enjoy the activities?

Explain that by thinking of their grandchildren's quality of life

"Thinking of your grandchildren's quality of life is one way to think of sustainability"

What makes an activity sustainable?

"What does the word 'sustainable' mean to you?"

Acknowledge their responses, and if they have not said so already, say:

"Very simply, an activity is sustainable if you can keep doing it for a long time without harming your own habitat or anyone else's."

"So how might some of your activities in the Time Line be sustainable?"

"Let's look at eating and creating waste...how could you gather food from one place? How would you arrange to not run out of food? So a sustainable food supply would be one that could continue to feed you."

"What would happen if your food waste was piling up?"

A discussion can follow on nutrient cycling, e.g. kitchen waste can be turned into compost that can be used to grow food.

DRAW YOURSELF AND YOUR FRIENDS...



Students individually select activity ideas from the time-line for their individual drawing. Give each student a sheet of 11 X 17 paper. Working two students to one box of pastels, the students spread around the gym and draw their ideas.

The aim of this exercise is for the student to imagine themselves in their new environment doing the activity they chose from the list, and imagine the surroundings they wish around them

“Imagine yourself in the site. All the designing has been done and it is all built to your satisfaction. Think of what you will be doing. Now, draw yourself and your friends first in the picture. Then draw the surroundings.”

Note that older students may prefer to write a description.



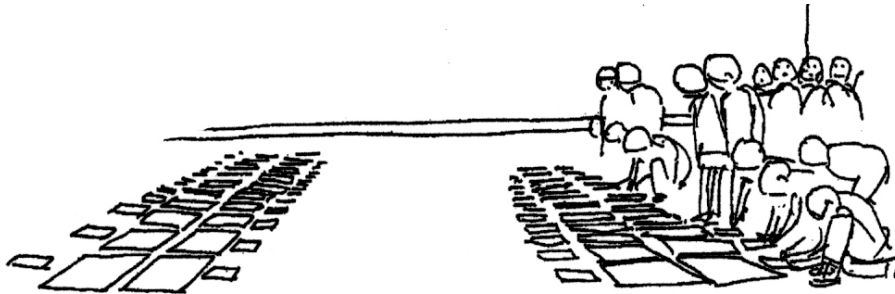
...AND YOUR SURROUNDINGS

“To explain your drawing further, add words that describe the time, mood, sounds, smells and tastes for the surroundings.”

“Put your name on the back of the drawing.”

Viewing all the drawings

Lay all the drawings out on the floor and ask the students to circulate and look at them. Number the drawings. Give each participant a rating sheet. Have them **silently and individually** rate the drawings for their preferred choice of activity.



Closing the Activity

Thank everyone for all their hard work and explain that the drawings will be viewed by the community and will go on display at the community or planning office. Obtain approval from the students before displaying the City on the Wall, as they sometimes are unhappy with it because it was rushed and looks quite messy.

DISPLAYING THE DRAWINGS

Arrange for the drawings to be displayed with a poster that describes the students' program:

- At school on a Parents' Evening, with students hosting the event and organizing refreshments
- In a public place, Town Hall, shops, mall
- In the local newspaper
- On a website



Teen artist working on a drawing

	I love this: I see myself doing this here	Great idea But I can't see myself doing this here	Great idea : I think it needs some more designing
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

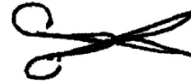
A SAMPLE RATING SHEET

The validation of ideas demonstrates democracy for the children

MATERIALS CHECK LIST



Roll of paper
approximately 4 feet x 50 feet



scissors or a knife



2 roles of masking tape



Pastel crayons
1 box for every 2 students



Drawing paper
Light brown tone – 1 per student (plus extras)



Rating sheets – 1 per student (plus extras)



Camera

History of “The City on the Wall”

By Stanley King

The work began with children. While working as an architect in Montreal, in the mid 1960's, I discovered that our work inadvertently alienated youth.

‘They grouped around me, their faces ablaze with anger. My son among them shouted, “A bulldozer is bulldozing our play area. Are they allowed? What are the rules?” Their play area, to the adult, a vacant lot, was to them their private territory that they had carved from wilderness and claimed with a tree house as their own.’

Stanley King et al. “Co-Design: A Process of Design Participation”, VNR, NY 1989.

Later, I found this to be a common occurrence along the edge of advancing suburbia. In an attempt to calm the anger, I prepared material to show them the exciting new ideas from designers of future cities. The students rejected these ideas, with hostility.

Colin Ward, in England, wrote of my experience:

Stanley King is an English architect who emigrated to Canada in the late nineteen-fifties and got involved in a school board program intended to stimulate an interest in the urban environment. He was dismayed by the reactions in the classes he visited. ‘The atmosphere was anxious, hostile, full of gloom.

In short the students weren't talking. And inevitably they weren't listening.’ When they did talk and listen, he discerned in them a

combination of apathy and fear. Apathy because his students had concluded that the city was ‘too big to fight’ and fear because they felt the city to be ‘like an evil presence creeping up on its people. Many teachers will recognize this defensive stance.

Colin Ward and Anthony Fyson, ‘Streetwork’, Routledge and Kegan Paul, Town and Country Planning Association, London, 1973

“If you don't like these ideas’, I asked, ‘what kind of city would you like to live in?’, and asked them to come up to the board and draw their own ideas. This is how youth created the ‘City-on-the-Wall’ program.

With the help of my wife Margaret, an art teacher, and our children who were then in elementary school, I began the preparation of teaching strategies. Encouraged by teachers and principals, and with funding from CMHC Fellowships, I held discussions with students in many schools in Vancouver and small towns throughout British Columbia and in cities and towns across Canada. The City-on-the-Wall grew from these discussions and on research for my Master of Architecture degree thesis, ‘Introducing Young People to the Social Art of Architecture’, produced during inter-disciplinary studies at the School of Architecture and the Faculty of Education at the University of British Columbia, 1968-70. Educators responded with enthusiasm. Simon Fraser University, and the University of Victoria invited me to teach the process to educators. Teachers have made imaginative use of it, weaving it into many aspects of their teaching

CHAPTER 2 INTERGENERATIONAL MENTORSHIP



CASE STUDY

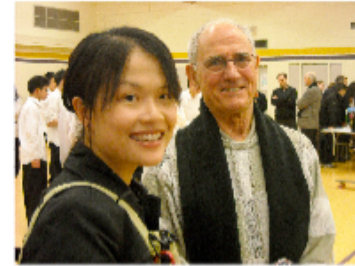
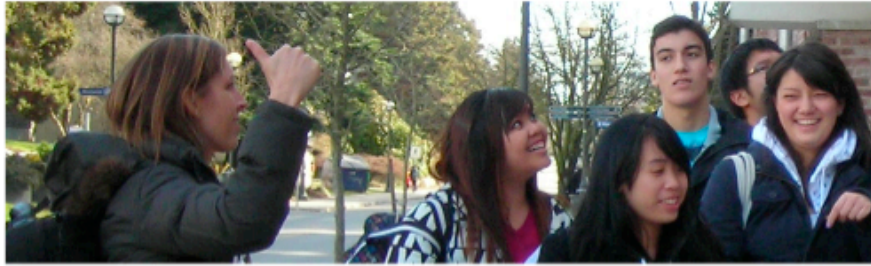
SUSTAINABLE DESIGN IDEAS FAIR PRINCE OF WALES SECONDARY SCHOOL, VANCOUVER BC, APRIL 2, 2009

in the eyes of some of you here tonight, the purpose of this evening may seem completely crazy. why are we having an ideas fair during an economic crisis, when our own schools are short of money. isn't this a little foolish? but the vancouver school board has, as its goal, to be the most sustainable school district in north america. you don't meet that goal without starting somewhere. so for us, it starts here.

*opening address of the sustainable design ideas fair,
kieran lee, biology student, prince of wales
secondary april 2, 2009*

COLLABORATION

1. **Stanley King** wished to involve our youth in the planning process of the city by using the “City on the Wall” as a lesson plan. “City on the Wall” has been used to involve children in over 200 planning contexts, These include major urban projects such as Vancouver’s Robson Square, Granville Island, False Creek South and South East, and Hastings Park/PNE, Victoria’s James Bay, and Calgary’s Olympic Plaza, and Memorial Drive, urban parks, Provincial and National Parks, and city neighbourhoods and small towns throughout Alberta and British Columbia. The process has been documented in “Chairs for Lovers”, 1973, produced by the National Film Board He personally trained our youth in the facilitation exercise. Stanley wrote chapter 1 and edited chapter 2 and 3
2. **Diana Klein**, together with **Fiona Zawadzki**, of the **Green Bricks Education Society** wanted to teach youth sustainable design principles and to have the youth present sustainability concepts to their own parents. Green Bricks delivered a fast paced, inspiring sustainability workshop to our students and taught them about sustainable design principles. They arranged for funding and for city officials to come to the fair as guest speakers.
3. **Susan Ng Chung** wanted to teach ecology beyond the textbook. Susan edited Stanley King’s City on the Wall activity to emphasize sustainability. She found that the activity can help youth reflect on the challenges of the urban tsunami. Using Stanley’s “Day in the Life” activity, she challenged her students to examine their own round of life and activities and to analyze how they impacted the local and global ecology. Susan believes that youth are an agent for societal change and schools can be community hubs for implementing that change. The Sustainable Design Idea’s Fair is meant to help students take leadership within their communities. Susan observed that a mentorship cascade leads to student engagement in learning. She wrote the lesson plan for intergenerational mentorship and the Sustainable Design Ideas Fair. Susan edited chapter 1 and wrote chapter 2 and 3.



Clockwise from top left:

Diana Klein conducts a sustainability tour for youth
Susan Ng Chung and Stanley King
Student plan of a sustainable school, detail

INTERGENERATIONAL MENTORSHIP

community mentors → senior students

→ junior students → all students present their ideas to their parents, their community, their world, **that's you**



REQUIREMENTS

The Youth Manual Chapter 1: The City on the Wall exercise

A group or class of older youth (about fourteen years or older)

A group or class of children or younger youth (aged eight through thirteen years)

A local sustainable space to visit and study:

An organic farm, a place with a green roof, green walls, LEED accredited building, an energy efficient, solar powered place, a village museum showing pioneer life, or a museum describing aboriginal life in the pre-industrial times.

Possible community mentors:

First Nation elders or storytellers
can tell a narrative of pre-industrial, sustainable living

Architects, engineers, planners, landscape architects
who design sustainable spaces

Gardeners and farmers
who incorporate organic practices.

Senior citizens who are knowledgeable in the traditional arts of food preservation techniques
(canning, pickling, bottling)

BENEFITS AND OUTCOMES

- **Cross-curricular connections:** art, design, biology, geography and junior science.
- **The mentorship cascade:** junior students receive care and attention from senior students. Senior students gain leadership experience.
- **Youth participation in planning:** By meeting the representatives of “they” who engineer changes, students reduce their feelings of alienation from society
- **Outcomes:**
Youth as agents of change: students understand that their built environment can be changed and they are the agents of that change. After our ideas fair, Prince of Wales students tenaciously overcame bureaucratic hurdles to implement an idea that featured prominently in all designs: **a school food garden.**

Prince of Wales Secondary School won the Green Bricks Student Challenge, 2009



Children visiting the C.K. Choi building, a sustainable building at the University of British Columbia,

THE PROGRAM

1. **Youth learn about sustainability**
 - a. From the teacher (two or three hours)
 - b. Youth prepare a library research project on sustainable design
2. **Youth visit with a community mentor to learn about sustainable living**
 - a. The community mentor is a guest speaker in the class (one hour)
 - b. Youth visit a sustainable place, guided by the community mentor (field trip)
3. **Train the youth in facilitation** (Youth Manual) (one hour)
4. **Youth facilitate a design workshop and organize a design fair**
 - a. Youth facilitators teach children (three or four hours)
 - b. Youth, children and their teachers organize an ideas fair to share the projects and the children's drawings with the community (one evening)

PREPARATION

Contact the community mentors and arrange a time for them to visit with the students. The purpose of their visit is to discuss sustainable living.

Arrange a visit to the sustainable space

Leaders of the youth and children groups meet to organize the facilitation and the design fair

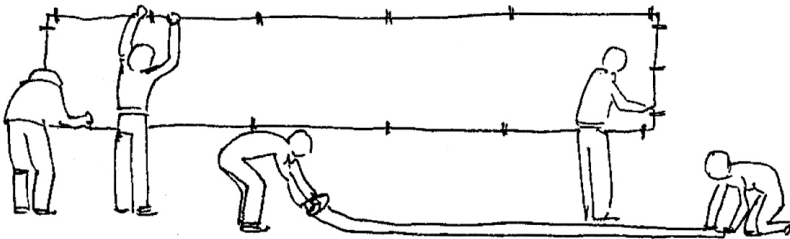
YOUTH LEARN ABOUT SUSTAINABILITY

Lesson:

WHAT IS SUSTAINABILITY? AN ECOLOGICAL PERSPECTIVE (one hour)

Rationale: This lesson introduces the youth facilitators to the Day in the Life exercise (reproduced below). The facilitators are encouraged to think about themselves as ecological creatures, connected with the environment. Later, they will conduct their own research on sustainable living and share their expertise with children.

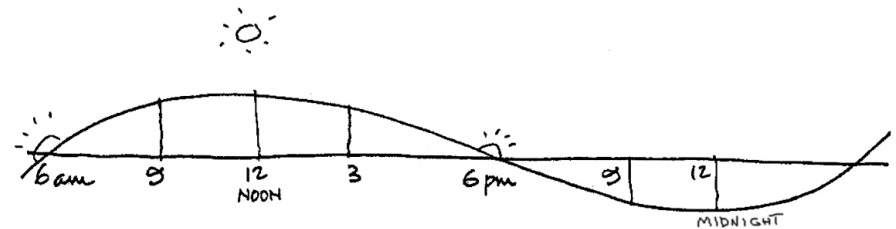
Activities



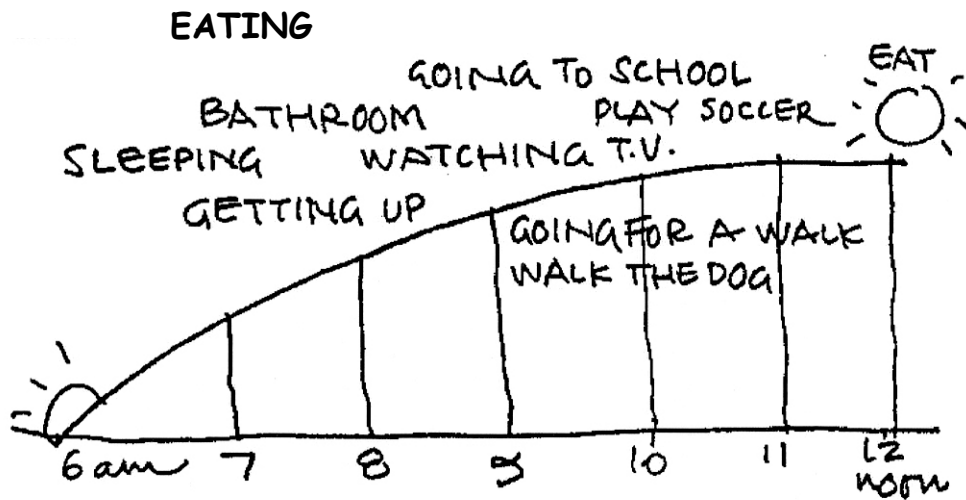
1. Imagine a Day in the Life, and sustainability dialogue, from the City on the Wall
2. Ecological Niche
3. Personal Experience and Perception of a sustainable school

IMAGINE A DAY IN THE LIFE (30 MINUTES)

Draw a horizontal line across the mid section of a sheet of paper (about 20 ft long). Mark the approximate center point and then draw a sine curve describing it as one revolution of the earth (equinox). Mark the hours as in the diagram below.



Imagine a **“typical day” of a perfect life**... in the local setting of their choice in any season, midweek or weekend, or on special days. Then ask what they would do hour by hour in the place to be designed, starting at 6 a.m. Give out sticky notes so that they may write down their preferred activities and stick them on the timeline.



Check in your mind that they have included the activities of the day (prompting if necessary):

- sleeping, resting
- bathroom toilet
- eating
- getting provisions (food, water etc)
- moving about
- recreation
- work
- getting rid of waste

Past and Future Activities

When the paper is fairly full of ideas ask the students to consider the following questions:

1. "What activities listed on the Time-Line could your grandparents **not** have done when they were young?"
2. "Would their grandchildren enjoy the activities?"
3. "What activities practiced by grandparents would be considered "sustainable" and which activities would not be sustainable?"
4. "What makes an activity sustainable? What does the word "sustainable" mean to you?"

Listen to their responses and write them down. If they haven't said so already, you can state that

"Very simply, an activity is sustainable if you can keep doing it nearby, for a long time, without harming your own habitat or anyone else's."

"Here are some activities you identified in the "day in the life" activity. Are they sustainable? Let's look at eating...how could you gather food nearby and not run out of food? And what would happen if your food waste was piling up? Where could it go? What if your friends wanted to live here and they brought their friends...?"

OUR ECOLOGICAL NICHE

“The Day in the Life represents our “round of life”. The place where we live is known as our environment.

Any animal (jellyfish, mosquito, tapeworm, bear, ant, slug,) intersects with its environment through its round of life and its sense of the environment. There is a word that sums up any creature’s round of life and their environment. Does anyone know what that word is?”

THE WORD IS ‘NICHE’

“The ecological niche of an organism depends not only on where it lives but also on what it does. By analogy, it may be said that the habitat is the organism's "address", and the niche is its "profession", biologically speaking.”

-Odum - Fundamentals of Ecology - W B Saunders 1959

SENSING THE ENVIRONMENT: DISCUSSION (5 MINUTES)

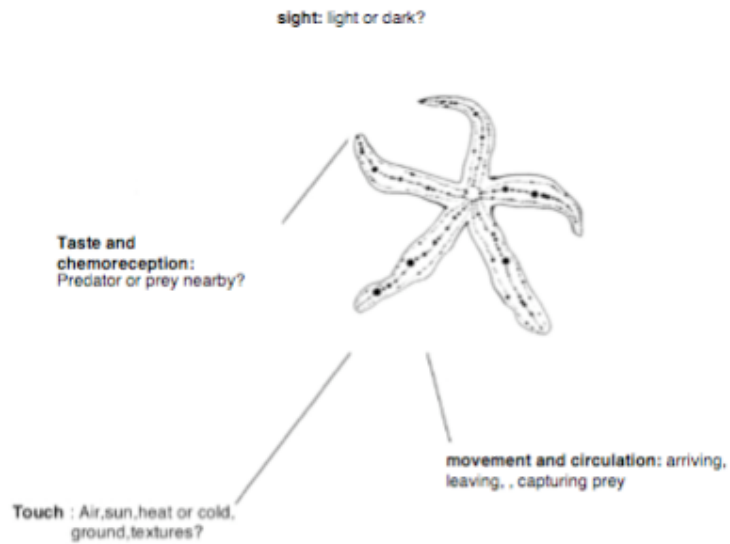
*“Animals experience the environment through diverse senses What kinds of senses do we share with other animals?
(smell, balance, sight, touch, hearing, movement) shared with
many other mammals and vertebrates.*

*What senses do other animals have that we don’t have?
magnetic sense – migratory pigeons
UV light – bees
taste buds on their feet – a fly*

What actions form an animal’s round of life? Lets take a sea star. Name all the things that the sea star might do (movement, eating, hunting, escaping, getting rid of waste...)

We can draw a Personal Experience and Perception diagram of a sea star. (PEP) “

A SUSTAINABLE NICHE



The Day in the life helps to describe the round of life. PEP diagram describes the environment. Together, they define a person's ecological niche.

"Every organism on earth necessarily lives a sustainable life because to do otherwise would have deadly consequences. Think about whether our urban modern life, our present niche, is sustainable.

How can we define a new niche that follows how most organisms live? Think about defining a "good life", not a miserable life, or a life of deprivation. What would our niche look like if we lived our ideal sustainable life? What would you see, hear, smell, touch, in your new niche? What would your day look like?"

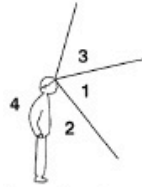
"Draw a PEP diagram for you in the environment of a sustainable school. Make notes around the PEP person."

When the students are finished, ask them to share what they wrote:

"Group 1, what did you write for movement and circulation, name two things? Group 5, what did you put down for mood...? Group 6 what sounds did you hear?"

SETTING FOR THE ACTIVITY

Sight : What you see around you,
light, colours?



Zones of seeing

Mood : What kind of place?

Sounds : Wind,voices,music,traffic etc?

People : Living things around you? Close
or apart, number of people?

Taste & Smells : Food and drink,
atmosphere?

Time : When you would do this?
How long?

Touch : Air,sun,heat or cold,
ground,textures?

Movement : Actions,circulations,how you
arrive,leave, move about,
walk, bike, bus or car etc?

PEP 3
Personal Experience & Perception

Work near to the window to get good daylight
 Work outside
 Let sunlight heat your room
 Make a warm sunny place to work and play outside
 Signs promoting ecological living
 Solar panes
 Lots of green
 Small parking lot more green
 No pollution
 Clean walkways
 Green wall
 Fluorescent light or LED at night
 Lots of windows
 Wind power
 Pond filled with aquatic life

Touch

Wear warm clothing indoors to save central heating
 Touch soil in the community garden
 Cool off in the natural breeze in place of air-conditioning
 Cool off in the sea instead of air-conditioning
 Touch desks, whiteboard
 Natural grass instead of fake grass
 Planting organic food



Mood

Be active and get warm rather than sit and shiver
 Speak with respect
 Natural light
 You and your friends be active together
 Help each other study
 Positive encouragement
 Peace
 Great teachers in a good mood
 Teachers encouraging ecofriendly living
 Encouraging teachers and cooperative students
 Happy teachers
 Supportive teachers
 Spread out course load, stress free
 Joining clubs for a positive attitude
 Feeling sustainable
 Go for a walk when stressed
 Volunteer for an environmental organization
 yoga
 More sleep

PEP DIAGRAM OF A SUSTAINABLE SCHOOL

A SUMMARY OF COMMENTS WRITTEN BY TWO CLASSES OF STUDENTS, AGED 16

-PRINCE OF WALES SECONDARY SCHOOL

Sound

Listen to the birds and natural sounds instead of ipod/electronic device radio, Sing to keep warm , Hear education on sustainability, Singing, Whistle, Birds, Wind, Windchimes Animals, No cars, waterfall, live acoustic music

Movement and circulation

Walk
 Fireman's pole slides
 Bike , scooter, skateboard, rollerblade, Car-share
 Ride transit
 Run and dance to keep warm
 Walking through a sustainable garden
 Jogging
 Secure bike storage, scooter lockers, bike racks
 Skateboard friendly entrance
 Free govt issue transit passes for students and teachers
 Walkways
 ramps
 Carless roads
 Bus stop close by
 Short cuts
 Bigger halls
 Wine making with feet
 Paths through Japanese garden

Waste

Composting toilets, no bleach, low flow toilets
 Convenient recycling bins
 spaced out urinals
 toilet paper made of recycled post consumer paper
 rain water for toilet/sink
 smaller garbage can

PEP 3
 Personal Experience & Perception

Living things around you

Play hard outside with friends to save indoor heating
 Tend your food garden on the roof
 Pick huckleberries from your living wall
 Walk with family and friends
 Bike with family and friends
 Car share with family and friends
 Ride transit with family and friends
 Don't spend too long sitting at computer

Taste and Smell

Eat fruit and raw vegetables to save on energy, eat slow cooked food
 Eat local, organic food
 No perfumes, artificial air fresheners
 Compost bins take care of waste

LIBRARY RESEARCH PROJECT

(one or three hours)

Students formed groups of four and conducted research in the local library. Each group must choose a topic
(student's own time or class time: two hours)

SUSTAINABLE LIVING TOPICS

Energy generation: Wind, active and passive solar, geothermal, micro-turbines

Energy efficiency and retention techniques

Movement and Circulation: Mass transit, bicycling, skateboarding, walking

Gathering Provisions: Organic foods, urban agriculture, permaculture

Waste systems: Compost systems for organic waste, including human waste. Recycling strategies, zero garbage

Garden and Landscape

Roof gardens, green walls, xeri-landscaping, edible gardens

Sustainable Building Materials

Recycled content, traditional building materials

1. **Two assignments** for each group
 - a. Prepare one of the following to demonstrate your learning: **poster, oral presentation, drama, song performance or a board game**
 - b. Create **a model** of a **sustainable house** or a **sustainable school** made of any material. The model will have features of ALL TOPICS. For example, a model of a residence with solar panels, food garden, straw bale insulation, rainwater collection, recycled building materials and someone's skateboard by the door.
(student's own time or class time: one hour)

2. Students share their projects for evaluation from the teacher the peers and self-evaluation.
(one hour, class time)

Example of a board game (following page)



CONNECTING WITH THE COMMUNITY MENTOR

Invite a community mentor into the classroom as a guest speaker. The community mentor can teach students about a **sustainable round of life**. For example, a **First Nations elder** or storyteller can teach students about what it was like to live in their local area when the land and sea provided for all the needs. A **grandmother** can teach students the art of food preservation without using a refrigerator. A **gardener** can talk about organic growing techniques.

Our school chose to contact **designers of sustainable spaces**. The designers spent **one hour** with the students to teach sustainable design strategies. Our mentors were **Diana Klein**, a LEED accredited **structural engineer**, and **Cornelia Hahn Oberlander**, **landscape architect**. Cornelia conducted a group of thirteen-year-old youth around her landscape at the C.K. Choi building at the University of British Columbia.

In addition to sharing their expertise, these women are positive role models for teens considering architecture and engineering as careers.



Cornelia Oberlander is a landscape architect who is recognized as an officer of the Order of Canada for her artistic, modern, sustainable designs.

VISIT AND STUDY A SUSTAINABLE PLACE



Conduct a tour of a place known for its sustainable features. Possible sustainable places include: an organic farm, a solar powered place, a village museum showing pioneer life, or a museum describing aboriginal life in the pre-industrial times.

Our students visited the C.K. Choi Building at the University of British Columbia, design team led by architect, **Eva Matsuzaki**. Our tour guide was the building's structural engineer, **Diana Klein** from Read Jones Christofferson. (pictured above). This place featured a small building footprint, recycled building materials, passive cooling. The landscape treats all the water from the sinks and toilets. Marginal aquatic plants perform this delicate task in a gray water trench designed by **Cornelia Hahn Oberlander** (see right)

The water filtered by the plants had a coliform count of between 10 to 50 units per ml of water: fit to drink! We visited the toilets and opened up the bins of "humanure". Students were surprised that there was no odour.





A sixteen year old examining the toilets (above).

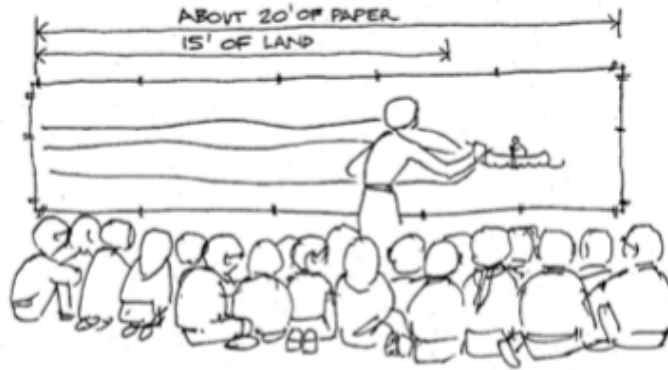
Children (right) on a tour of the C.K. Choi building, U.B.C.



TRAINING YOUTH FACILITATORS

(one hour)

Go over the steps of the **main activities of the Youth Manual:**
Senior students leading the City on the Wall exercise



YOUTH FACILITATORS WORK WITH THE CHILDREN

(three or four hours)

Program

Match the youth with the children
The City on the Wall exercise
The Day in the Life
Drawing exercise
Place the activity on a site map

Sustainable Energy choices
Movement and Circulation
Gathering Provisions
Waste systems
Garden and Landscape
Energy efficiency and retention techniques.

Three or four facilitation lessons: each lasting one hour:

1. **Lesson 1: Match the youth with the children.** If there are eight groups of youth who did library projects, create an equal number of children. Youth get to know the children and share the **library projects**. Provide refreshments like cookies and hot chocolate.
2. **Lesson 2 Youth facilitators lead** the City on the Wall exercise and A “day in the life of a Sustainable school” “What is Sustainability?”
3. **Lesson 3 Youth Facilitators help children with the drawing exercise.** Children each produce drawings of themselves and their friends engaged in a sustainable activity. Then they draw the surroundings of the activity. Youth facilitators help by making suggestions, articulating ideas. Circulate around the room and see if these topics are explored in the drawings: If they are not, prompt them to think about including these topics.
4. **Draw a site map** of the school and place your activities within the site map
5. **Extra lesson:** *to refine, colour and finish the drawings. Youth facilitators can analyze summarize and sort the drawings into the categories above.*

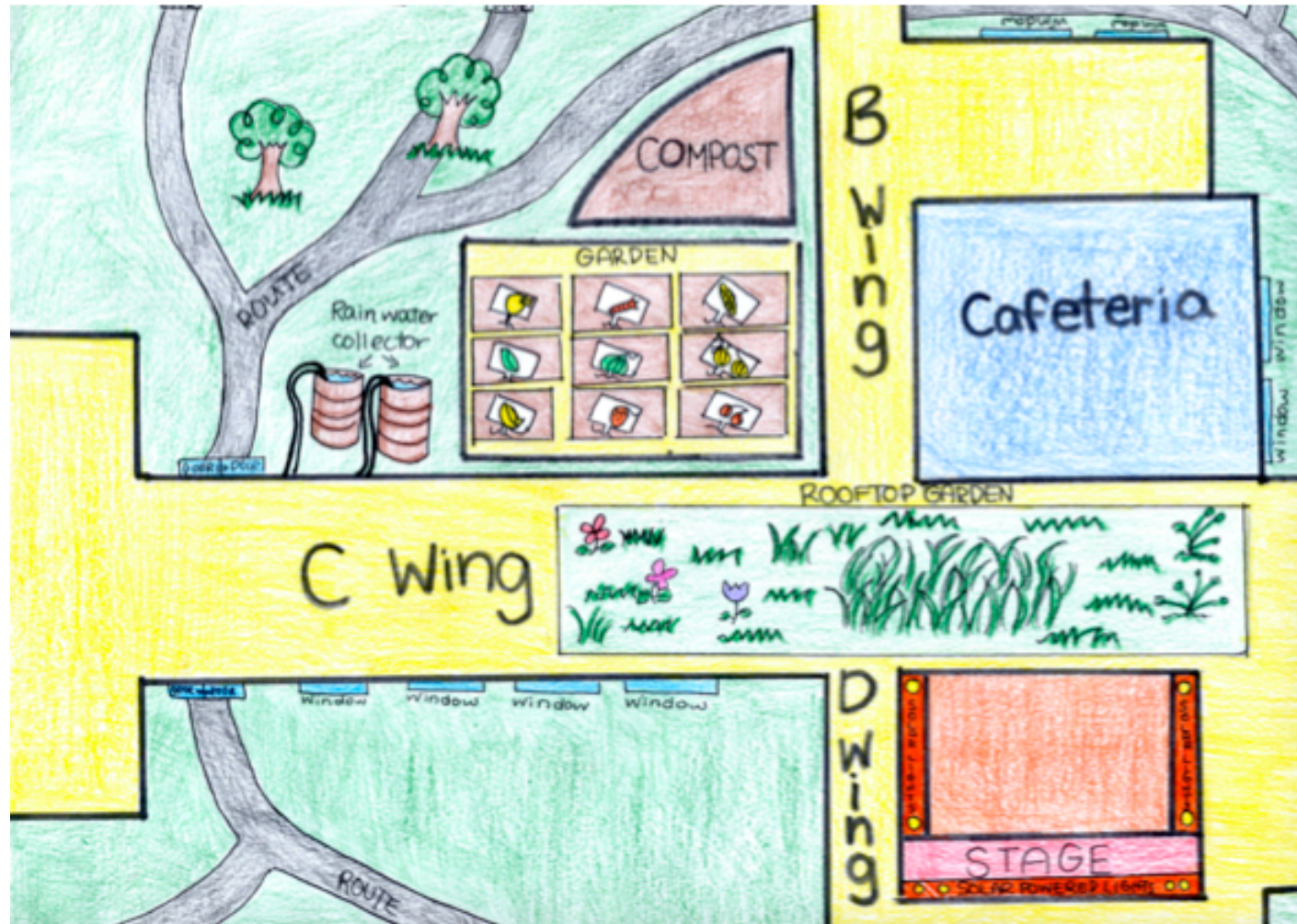
ACTIVITY DRAWING



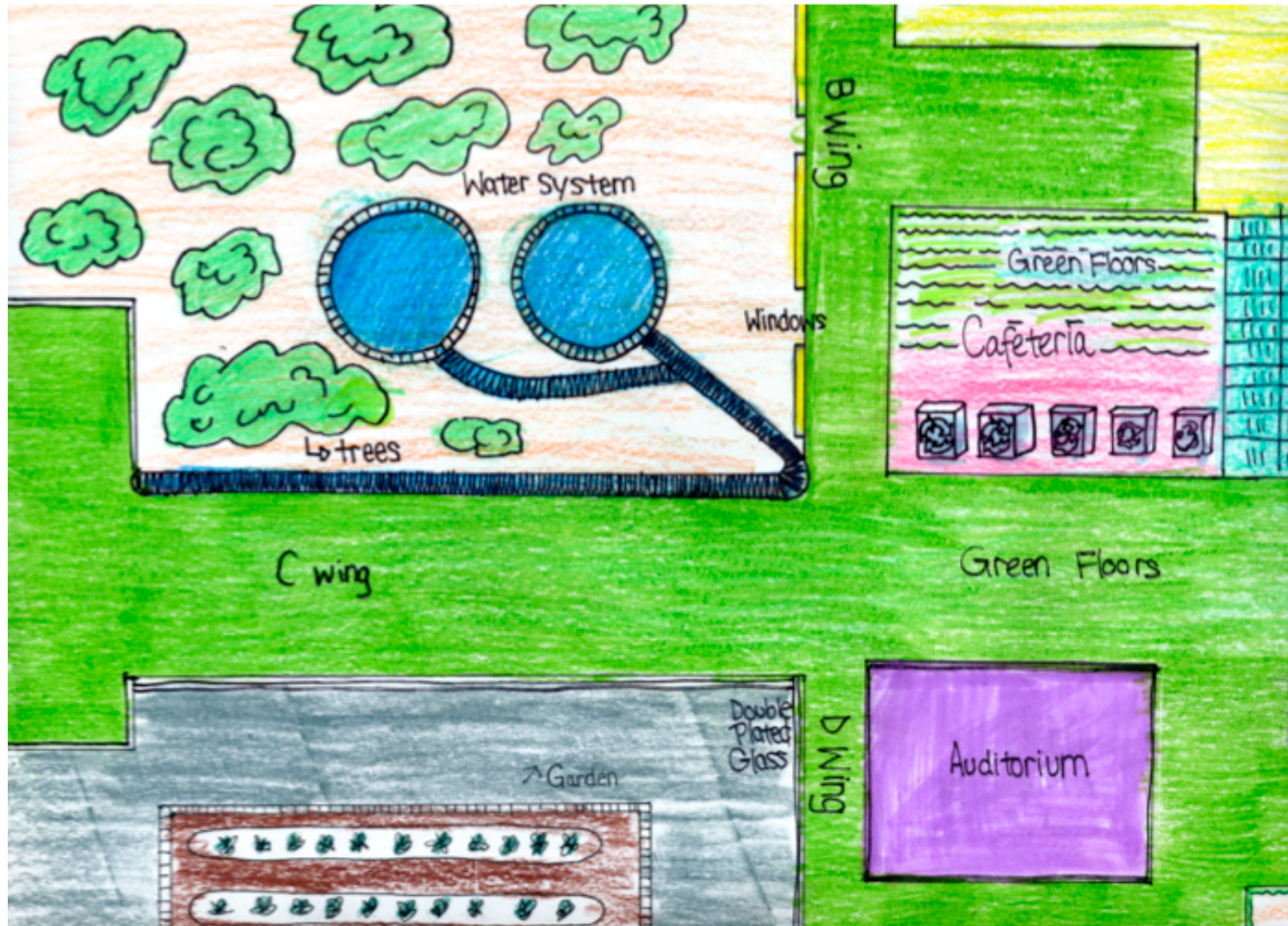
ACTIVITY DRAWING



SITE MAP



SITE MAP

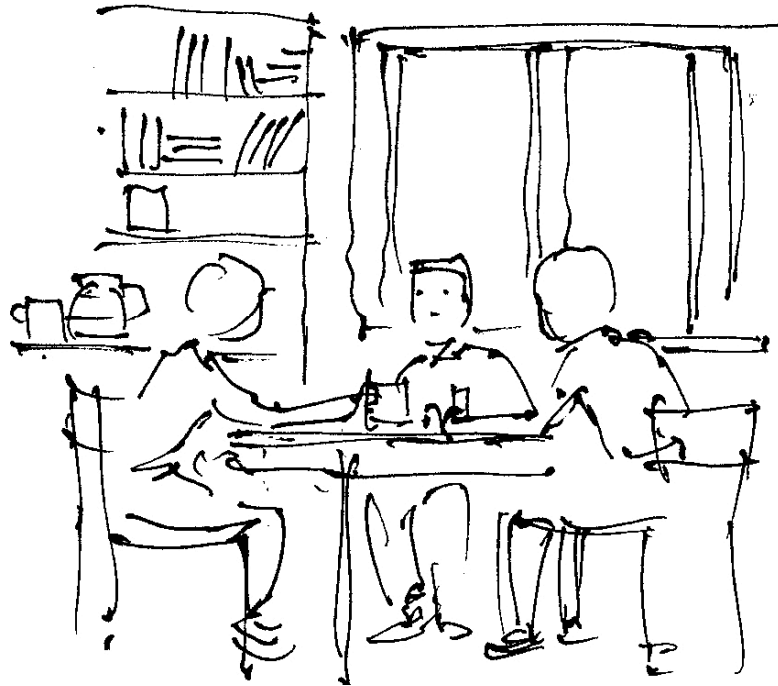


CHAPTER 3

SUSTAINABLE DESIGN IDEAS FAIR



PREPARATION



PREPARATION DETAILS

Youth and the children sign up for tasks: Every student has a job : greeter, music performer, station host. Students sign up for shifts. All students are expected to clean up. Dress code: semi-formal.

Invite a government official to share government grants for green renovation. So the parents can be invited to act on their childrens' enthusiasm

Invite a community mentor to give a keynote address

Invite sponsors: to help fund the event. Our event was funded by Green Bricks Education Society and the City of Vancouver.

Invite local merchants to donate: door prizes, food, coffee and beverages.

Invite the parents, school trustees, city planners



SUSTAINABLE DESIGN IDEAS FAIR PROGRAM



FOUR PARTS

Part 1: Formal presentation in the auditorium: 35 minutes

Part 2: Informal gathering in the large cafeteria: people circulate around stations in a fair format 1.5 hr

Part 3: Door Prizes, Thank you to sponsors. Acknowledgements of the community mentors, Goodbyes. 10 minutes

Part 4: Clean Up.

PROGRAM DETAILS

Part 1: formal presentation in the auditorium: 35 minutes

- Entertaining and fast paced student presentation of our process,
- City presentation of green renovation grants
- Student song performance: "Water Rap"
- **Keynote address:** Cornelia Hahn Oberlander, OC, Landscape architect

Part 2: informal gathering in the large cafeteria: people circulate around stations. similar to a science fair 1.5 hr

Each station included

- Friendly hosts:** youth and children
- Youth library projects and childrens' designs** (models, posters)
- Props** were displayed, loaned by parents, the City, other teachers.
- Passport stamp** , each guest is given a passport. Stamped passports were eligible for door prizes.

The Stations: and ideas for props

- **Movement and circulation;** a skateboard, scooter, bike, toy train set, toy bus, poster showing sustainable transit options. Junior students collected raffle tickets on skateboard
- **Sustainable building materials:** bamboo flooring, linoleum
- **Energy**
 - Solar power and solar panel and solar cars
 - Passive heat
 - Geothermal
- **Waste systems** vermicomposter, kitchen composter
- **Water** rain barrel, grey water trench display
- **Food** Local apples and cheeses were served, pamphlets for local area farms, organic food information from Agriculture Canada and BC Organics.
- **Continuous live Jazz** (students)
- **The City** was given a booth to give out green renovation grant pamphlets
- **Slow bike race**

Part 3: Door Prizes, Thank you to sponsors, Acknowledgements of the community mentors, Goodbyes. 10 minutes

Part 4: Clean Up.

The slow bike race





CHAPTER 4: FINDING THE SWEETSPOT

This program will have participants **consider urban impacts on the wilderness**. We invite participants to consider their pristine environment with their senses; to visualize urbanization in such a setting and to ask for their ideal sweet spot between the wilderness and the city.

Then they co-design their future round of life and their desired environment

**-PERSONAL
EXPERIENCE
&PERCEPTION**

**-CITY ON THE WALL
WILDERNESS CHICK
CITY DUDE**

-TAKE A HIKE

**-A DAY IN THE LIFE
OF YOUR SWEETSPOT**

**-DRAW YOUR
SWEETSPOT**

PERSONAL EXPERIENCE & PERCEPTION

TIMING: 1 HOUR SETTING: THE OUTDOORS

Materials:

notebook, pen, appropriate dress for the outdoors.
Shelter for class discussion afterwards
Classroom to do the City on the Wall afterwards.

30 minutes:

Find a special place that has qualities of the wilderness. This may be a park or a pond.: A place near to you where it is possible to be surrounded by greenspace. Have students sit very quietly there and record observations of their personal experience. They may write or draw their experiences. Give them at least 15 minutes of complete silence. No talking allowed.

What do you SEE? Identify textures, colours, light levels.
Close your eyes, What do you HEAR? List all sounds.
Close your eyes, what do you SMELL?
Touch your surroundings. What are the textures and temperature of your environment?
How do you move around in this environment?
What is the MOOD of this place?
What other living things are around you? Identify them.

After they have written their perceptions, collect the writing and, without identifying them, read some of their observations out loud. Discuss and share perceptions. Ask "how many of these perceptions might have been here 100 years ago?"

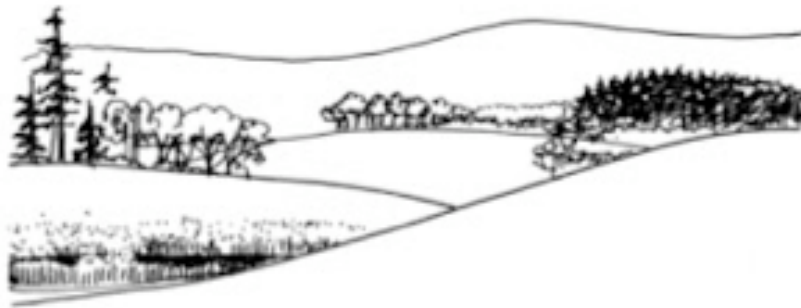


CITY ON THE WALL

When they have had the opportunity to reflect on how their space might have looked like 100 years ago, then do the **City on the Wall** activity and the **Problem of the City** activity as described in **Chapter 1** of the Youth Manual. Timing: 45 minutes. The introduction in the wilderness gives a sensory cue to the place where all cities begin: in a wilderness.



WILDERNESS CHICK AND CITY DUDE



Meet Wilderness Chick and City Dude: They represent two lifestyles on opposite ends of an urban wilderness continuum. We all live somewhere on this continuum. Do we live in the wilderness, the city, or the suburb, or perhaps a village? How much green space are in the surroundings? **If you had a choice, in your ideal world**, where would you stand in that continuum between the wilderness and urban divide?

Ask the class: *Who likes to go camping? Great, you are wilderness chick. Stand here. And who likes to enjoy all the things to do in the city. You will be City Dude.*

Have Wilderness Chick and City Dude stand on opposite ends of the class with a clear path between them. Now ask: *Who is a sweet*

person in this class? The one who's really nice and makes muffins for everyone and is just really sweet? Everyone, point to someone sweet! There will be several who will point at a person in the class. Invite that person to be "sweet spot".

Now, Wilderness Chick represents a place where we live totally in the wilderness. We are surrounded by nature. We use outhouses. There are no urban amenities here. City Dude represents a place like New York City: Totally urban; Lots of excitement and noise. Not a lot of greenspace.

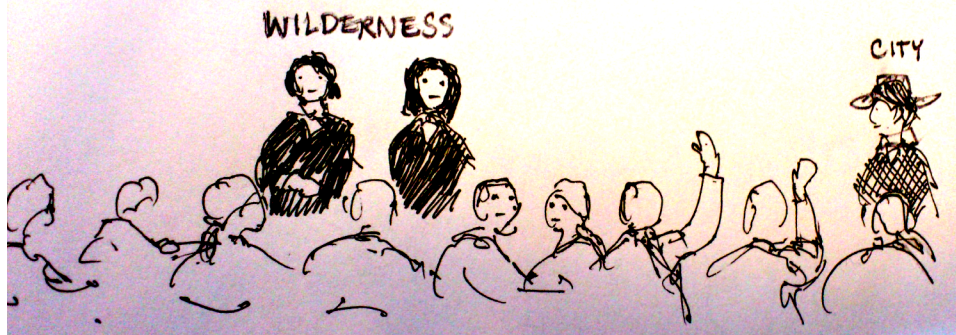


WHAT IS YOUR SWEETSPOT?

What is your sweet spot, your perfect spot between the wilderness or the city? Is it in the wilderness? Or is it amongst the highrises? Or is it somewhere in between? Sweet spot will now slowly walk in between wilderness chick and city dude. Where s/he is standing at your personal sweet spot, put up your hand. But

when sweet spot passes your spot, put down your hand. You will then get an idea of where everyone is in that continuum between the city and the wilderness!





Ok Sweet spot, now start walking! Interesting. We begin to see where most people are...

*Ask Sweet spot to walk to the place where most people have their hand up. Now start asking individuals this questions: **What are you doing and what is around you?** Each student will share what they are doing. They will define the space for themselves.*



It is interesting to note that someone who identifies their sweet spot as close to the city may have the same vision as the person who identifies their sweet spot as nearer to the wilderness.

Many of them will be in the middle of the continuum. If the youth are shy to express themselves, they may write their thoughts anonymously for you to read out. After some of them have had the opportunity to share, conclude the lesson: Explain to the class that in the future, we will all have to define this place for ourselves: This perfect spot where we may enjoy green space and where we might have some urban amenities.



TAKE A HIKE...TO REFLECT ON THE BENEFITS OF THE WILDERNESS AND THE CITY

TIMING: ONE DAY:

The purpose of taking a hike is to have students experience nature with all the benefits and perceptual qualities...and to appreciate the amenities offered by the city. At Bamfield Marine Sciences Centre, The youth went on an arduous two hour hike through bog, trudging through mud, stepping over slippery logs. After much sweat and effort, we climbed over a hill and heard the bark of sea lions and the roar of the ocean



We made it to Keeha beach where we smelled the salt spray of the air and heard whale blow in the distance. Waves crashed onto the beach. Later, we hiked back through the mud again and made it back to the marine centre. The teens were invited to shower in their cabins and reconvene in an outdoor classroom. We wrote a “Day in the Life” of Keeha beach and also a Personal Perception diagram of Keeha beach!

I also asked them about what was nice about coming back: “hot showers!!!! Cold drink!! Chairs! Toilets!!”. The benefits of urban amenities were observed directly!



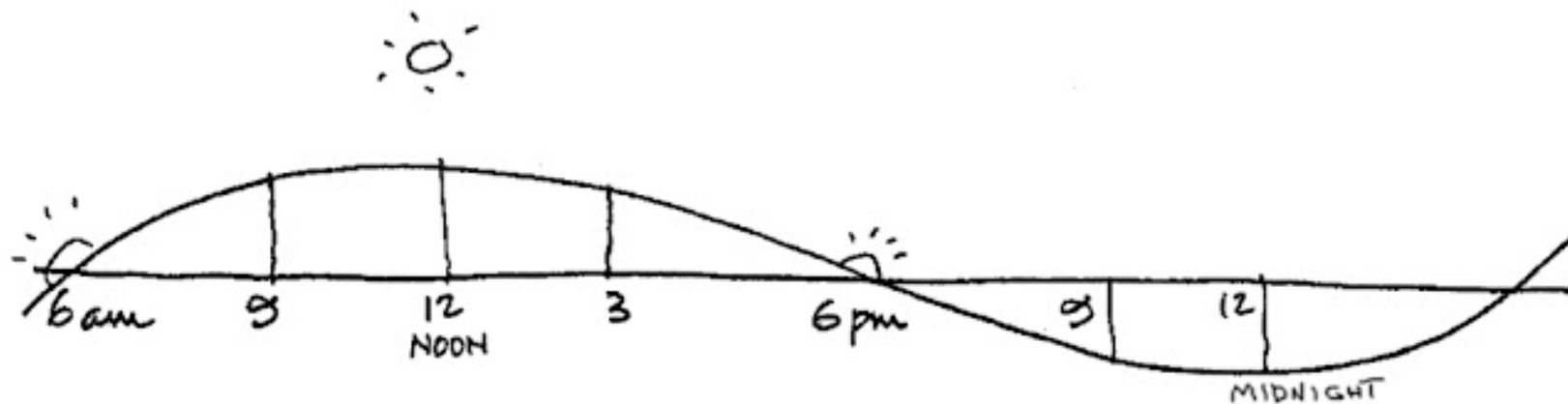
DESIGNING YOUR SWEETSPOT

Now that the students have thought about their wilderness and the city and also reflected on their sweet spot, it is now time to think about designing their space.

The question of finding the sweet spot is about identifying the niche and then designing it. . We can now enter into a design dialogue by doing the

Ecological Niche activity on p. 41

followed by the **Day in the life Activity p. 22,23** and then **Draw Yourself, your Friends and your surroundings activity p. 25** in the Youth Manual. When they are finished, the drawings may be displayed in the Community.



The drawings that the students come up with are significant because the drawings demonstrate what it means to live in a space that is neither wilderness nor city. It is a place defined mainly by their desired environmental stimulus. Having so recently experienced the wilderness, their drawings are full of nature. They want their future to include the shade of the forest, the sound of water, outdoor activity. Yet it also includes community, having many people around them amongst green space.

This program combines outdoor activity with the opportunity to design the future and think about the ecological future in positive and creative terms.

Youth can learn that they have some agency and responsibility to design the future. More importantly, they learn that designing the future is a creative act and it is fun.



E. STANLEY KING

Dip.Arch (Leics), UK, 1953, M.Arch (U.B.C.), 1971, MAIBC (Retired), MRAIC.

Stanley King is Founder President of the Co-Design Group and a retired architect. Stanley practiced in England and Montreal, 1953-68: administrative architect for Montreal's 43-storey CIBC skyscraper in 1962-63, concept designer for EXPO 67 where his drawings were exhibited nationally and internationally, urban designer in Montreal, 1962 – 68, urban design consultant and public program consultant for the cities of Vancouver, Calgary, Lethbridge, Red Deer, and many communities for the Alberta Main Street Communities program, (1969 to present)

He taught courses at Simon Fraser, University School of Environmental Education, (1971-76) and at the University of Victoria, Faculty of Environment, (1982-86). Program supervisor and Instructor, Architectural Technologies at The Southern Alberta Institute of Technology (1979-92). Founded and directed the Co-Design Course of Advanced Urban Illustration, Calgary and Victoria (1981- 86). Received SAIT's highest academic award, the Ralph T. Scurfield Award for Academic Achievement in 1990, and was nominated for International Professor of The Year in 1989 by the USA based Council for the Support of Education.

Stanley King is an internationally recognized and published authority on public design participation, and a pioneer in developing methods of public dialogue. He designed the Co-Design process in research at the University of British Columbia 1968-71. His work has been featured by the National Film Board (*Chairs for Lovers* 1972) and nationally on CBC and CTV. King is principal author of the book *Co-Design - A Process of Design Participation*, Van Nostrand Reinhold, New York, 1989) and author of the School Manual 'Bringing Youth to Main Street', *The Alberta Main Street Programme Manual*, ed. Merinda Conley, 2000).



SUSAN NG CHUNG B.Sc, B.Ed., M.Ed., U.B.C.,
Teacher, Prince of Wales Secondary School,
Vancouver Board of Education, Vancouver, B.C.,
Canada, 1993 – present. *Teacher coordinator* of

Prince of Wales Community Garden Group: students overcame bureaucratic hurdles to start a food garden. Mentor: Cornelia Hahn Oberlander, OC. June, 2009 – present.

Plan-It Earth Youth Forum:

Sustainable Design Ideas Fair: Intergenerational

Mentorship: Winner, Green Bricks Student Challenge, 2009

Camosun Bog Mentorship Program: Biology students teach bog ecology to primary students , 2005 - 2009.

Transit advocacy: organized a petition, gained grassroots support amongst teachers, spoke to the media and presented a proposal to the VSB. Persuaded them to offer the Translink Employer Pass to all teachers and ten month employees, May, 2006

Hot Chocolate Astronomy Night: A star party for junior science students, 1996 – 2002

Author of *The Mystery of Dr. Svetlana Mirov*, Forensic science unit. Catalyst Conference, Whistler, BC, 2000. Implemented, 1997 – 2009. Implemented by others at Burnaby South Secondary, 1999, and King George Secondary, 2006

Naturalist, Vancouver Aquarium Marine Science Centre, 1992
Member of the Board of Directors, Pacific Spirit Park Society

Co-design Artist for the Co-Design Group, 1994 – 2009

AWARDS

- **RAIC Community Advocate for Architecture Award, 2011**
- **RAIC Volunteer Recognition Award, 2011**
- **Foundation Bursary Award, Architecture Canada: Royal Architectural Institute of Canada, 2010**
<http://www.box.net/shared/pol9jel9yq>
- **Sustainable Design Ideas Fair: Winner, Green Bricks Student Challenge, 2009**

Our website: The Youth Manual Blog:

YOUTHMANUAL.BLOGSPOT.CA