

Michelle MacEwen ©

DRAGON'S DEN

Concept:

To look at the local economy to establish what viable, green, sustainable business could be created using a commodity that has already had a life/use.

Select a commodity that you are interested in creating something with; be it glass, metal, plastic, wood etc.

Establish that there is an abundance of that commodity close by.

Decide what you want to become; a collector, processor/sorter, manufacturer, sales person/marketer, store operator, distributor.

You will need to meet some basic criteria:

It is doing something that you love, that you are passionate about.

At no stage of its manufacture, marketing and transportation and sales is it creating a by product that will end up in the landfill. You are also mind full that you are not creating a massive omissions trail through poor burning methods or excessive transportation requirements to sell your product.

When you consider your business idea question what you are drawn to:

Do you like making things?

Do you like the idea of melting, forging, welding precious metals?

Are you artistic and see ideas in pictures, or do you like to organize people and share ideas verbally?

Are you a natural inventor?

Will you need to employ people to create your product, if so how many people?

Will you make your product overseas or locally?

What issues will you face if you make your product overseas? Like product quality control and paying workers a real living wage.

You have the option to work in groups of two or on your own.

I will give you a list of useful websites for you to research other green, sustainable ideas.

You will have two weeks to come up with your green idea which will then be presented to the Dragon's Den panel of judges; Ms. Gilroy, Mr. Travers and myself.

Your presentation will need to show originality, sustainability and a description of steps taken to make your product.

We will want to hear how you plan to market and sell your product, and why you strongly believe that there is a market for what you are planning to make.

The winning business plan will receive various accolades and a prize.

GOOD LUCK!

On 2018-06-26 8:31 AM, Thomas Bradbrooke wrote:

To whom it may concern,

This is a letter of recommendation for Michelle MacEwen.

Ever since I have been teaching at Gabriola Elementary School (8 years), Michelle has been facilitating a recycling program with my grade 5/6 class. In this program, Michelle educates students about environmental concerns that humans face today. Each year, students learn the important ideas of reducing, reusing and recycling. By reinforcing this message year after year, Michelle has helped to create a school culture of environmental respect. Two of my own children have had the opportunity of being in this program and they carry these messages along with them to this day.

I will always welcome Michelle in my class and I would recommend her environmental program to other teachers in our school district.

Sincerely,

Tom Bradbrooke

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Lesson Plan 1

Short Term Plastic Products, are they sustainable?

Objectives

Students will learn and understand the following:

Short term plastics products, what are they:

Plastic ballpoint pens, toothbrushes, disposable lighters, disposable razors.

All these products have a short life of less than two months when used daily, are not refillable, are not recyclable and are destined for the landfill, or end up in waterways.

All these plastic products used to be made from recyclable, refillable or biodegradable materials.

Choose one short term plastic product: Plastic Ballpoint Pen

Students will learn the history of the pen, focusing on the feather quill; its creation, use, effectiveness as a writing implement, its importance in history.

They will learn the history of ink and how the feather quill established the font of the English alphabet and how letters were sealed and sent.

Students will carve their own quill and write a letter detailing the project, seal it with wax and mail it.

They will create their own wax stamp seal using some dowel, oven bake clay and engraving tools.

They will then draw conclusions based on their experience of writing a letter using a quill.

Materials

Turkey feathers, carving knives, ink pots, paper, envelopes.

Dowel, oven bake clay, toothpicks, paint, glue, elastic bands.

Procedure

Shave off the feathers to leave enough room on the barb for the hand to hold it.

Follow steps to carve a nib into one end.

Practice writing the letters of the alphabet, upper and lower case using pots of ink.

To make your wax stamp seal, design your personal crest on paper then transfer it onto a piece of clay. Bake the clay to harden it, cool and then glue to the piece of dowel.

Paint your piece of dowel to personalize it.

Hold together with three elastic bands until set.

Write out a rough draft of the letter you plan to mail outlining the project. Complete your good copy using your quill.

Let the ink dry on the letter and the address, then melt some sealing wax onto the envelope and seal with your personalized crest.

Notes for each student to make, including questions and conclusions.

Map out the timeline of the pen from the reed pen to the quill to steel fountain pens, ballpoint pens and then the introduction of plastic writing instruments.

Discuss why the quill was the mainstay for writing instruments for almost 2000 years. What were its benefits and pitfalls. Was it biodegradable, sustainable? How long could you use it for? Was it easy to write with? Why was it replaced by a steel nib?

Why was the steel fountain pen replaced by the steel ballpoint pen?

Since the introduction of the plastic ballpoint pen, has this convenient throw away pen made writing easier or better?

How many plastic pens are landfilled each year?

Is it okay to continue the manufacture of short term plastic products?

What could we use today to write with that has no negative impact on the environment?

Conclusions

To complete this lesson plan, encourage a class discussion to determine what students felt they had learnt, and what if any changes they would make to their current choice of writing instrument.

Grade level 6/7

Four lessons, sixty minutes each.

School Program

Lesson Plan 2 – 8, and then ongoing throughout the school year.

Food

Objectives

Students will learn and understand the following:

1. Preparing a waste free lunch will reduce the amount of garbage the classroom produces.
2. Learning how to bake and cook food from scratch teaches important life skills and will inspire children to choose homemade food rather than processed, packaged, mass produced factory food.
3. Will connect children to their environment and the seasons as they learn how local organic food is grown and then prepared into a delicious meal or healthy snack to bring to school.
4. Learn some basic recipes that are simple to make and will teach how to balance the flavors of the tongue, for example a salad dressing.
5. Create a classroom recipe board where they will share favorite recipes with the rest of the school as well as to parents through the school email.

Procedures

1. Discuss with students why there is food ending up in the classroom garbage asking the following;
Do you bring too much food?
Do you for the most part like the lunch that you bring to school?
Do you help make your lunch?
What would your ideal lunch look and taste like?
Why are there so many candy wrappers in the classroom garbage?
Instead of processed snacks, what could we make to bring to school that we would enjoy eating?
This leads us into why we like the taste of some foods more than others and introduces the six tastes of the tongue: sweet, sour, salty, bitter, spicy, and savory (umami).
2. Students will taste various foods using different senses to establish which sense is the most dominant.
3. As a homework piece have students write about their favorite food memory. They will describe in detail where the meal took place, was it inside or outside, who helped make the food, what they could smell, the tastes, textures. What made the meal memorable? What was the occasion?
4. As a class discuss what some of their favorite food is and what makes it so special.
5. Ask students to help prepare a favorite snack at home that they can share with the class. They will tell the class why they like this recipe, how they made it, special ingredients required, where the recipe came from. The class can give feedback. It is also fun to ask students to close their eyes while tasting a new recipe to see what ingredients they can taste.
The aim is to get children excited about food, how to make it, what they would like it to taste like etc. This is key to inspiring children to prepare more food from scratch.
Parents and caregivers need to be involved in this process especially with the younger children.

6. Letters will go out to parents outlining this and offering ideas about how to involve children in the kitchen when preparing food, as well as involving children in deciding what they would like to make to bring to school. My experience with parents on this is that they want to make more food from scratch but don't feel they have the time. They are also in their routine of what packaged food they buy on a weekly basis for school lunches and snacks based on budget and convenience. In essence we also need to inspire parents to rethink how they prepare food. This could be done with some fun cooking classes at the commons where children and parents try new recipes together.
7. Food is a huge subject and is also one of the key elements of how to bring about positive change for the planet. Therefore each class regardless of age will have a strong food component that teaches these principles.

School Lesson Plan 1

Objectives

Students will learn and understand the following:

1. Classroom garbage contains a variety of materials, many of which can be recycled, composted, reused or eliminated completely by applying the concept of rethink.
2. Biodegradable materials are those that easily break down in nature.
3. Garbage goes to a landfill or an incinerator.
4. Wrappers from snacks and single use plastics make up a large quantity of the classroom garbage.
5. The food we bring to school is the largest determining factor relating to classroom garbage.

Materials

Students will weigh and sort several days worth of classroom garbage, separating it into each category of recyclable, compostable and garbage waste, as well as marking down which items are biodegradable.

1. Gloves to wear while sorting
2. Scales to weigh the garbage prior to sorting and then after to conclude the quantity that could be diverted from the landfill.
3. Notes explaining what materials are biodegradable and how long certain materials take to breakdown in nature.

Procedures

1. Discuss with students how much garbage on average each person on the planet produces on a daily basis, and how this is impacting the planet. Ask where does the garbage go, and are landfills a good solution to the worldwide issue of waste. What else could we do with all this garbage? Brainstorm with students why do we produce so much garbage, and is it all garbage? The main purpose of this first discussion is to establish the level of understanding of the subject, and to encourage student participation in debating a subject, which increases their confidence and validates that their opinion is important.
2. Through discussing that it is a global issue the main focus is to show how it could effect them locally, if for example the landfill was full and the classroom garbage was no longer being collected. What could we do with the garbage if it had to stay on the school grounds? This always sparks more inspired thinking and enthusiasm to find a solution.
3. Divide the class into groups of three, two will sort classroom garbage into each category ie. paper, cardboard, glass, plastics, metals, wood, raw and cooked food, candy wrappers. The third person will count the numbers in each category and write down their findings.
4. We will then write are findings down on the board and discuss them to conclude;
What was the largest number in a single category?
What materials could have been diverted from the garbage?
Why is food ending up in the garbage?
5. We will then separate all the materials that can be recycled or composted and then reweigh what is left to show what is actually garbage. The remaining garbage will show it is predominantly food waste through wrappers and cooked food.
6. This will introduce our lesson plans for the coming weeks discussing the subject of food: How it is grown, transported, packaged and prepared. We will research food history, culture and traditions, the tastes of the tongue and how they determine our likes and dislikes.

27 June, 2018

To Whom It May Concern:

Michelle MacEwen came into my Grade 3 and 4 classroom at Gabriola Elementary during the 2014/15 school year. The program she taught was interesting and wide ranging focusing on these topics:

- Where food comes from
- What are renewable and non renewable resources
- Where does the garbage go, what is recyclable
- How can we reduce classroom garbage by making a waste-free lunch
- Encouraging the children to practice baking at home and bringing food to school in reusable containers

Michelle was always organized and well prepared, she was enthusiastic and the students responded with an equal interest and enthusiasm. What she taught made a difference in how the students viewed garbage and recycling.

It would be excellent if Michelle was able to extend this program to other schools in the Nanaimo/Ladysmith District.

Yours truly
Kate Reynolds

Michelle MacEwen General Manager of the Gabriola Island Recycling Organization.

Requesting Funding for the Zero Waste School Program at the Gabriola Elementary School.

Amount \$15,000

I began teaching a Zero Waste Program at the Gabriola Elementary School in 2014. During that year I was also volunteering at GIRO in the Recycling Department to further my understanding of the four R's. The GIRO Board hired me as General Manager in 2015. Part of my job description is to educate and inform in the community, so my work at the school has continued. I report on my activities at the school with the GIRO Board monthly.

Each year the program at the school has evolved with new lesson plans while still maintaining the focus on the four R's. My aim is to make each lesson fun, engaging and to include a hands-on activity. I share the "global" picture and then more importantly what we can do at a local level. This has the effect of empowering students that their actions make a difference. I am diligent to ensure that each lesson plan touches the curriculum for that grade level at every opportunity. In addition, I consult regularly with the teachers and the principal to evaluate the success of each lesson (Teacher references attached).

One of the main elements that has made this program successful is the children/parent/teacher/principal/custodian participation. When there is a clear directive regarding how I would like the classroom recycling set up, and the teachers are clear that this is important and a valuable learning experience for the children, then there is more potential for it to be successful and for it to continue in the long run.

At the beginning of each school year I meet with the principal and teachers to outline what amount of time I can give their classes and then individual meetings with teachers to discuss lesson plan ideas.

As the school year commences I roll into each classroom to give a presentation on “what goes into each bin” and “why”. Placement and labelling of bins is essential to successful diversion of materials. This sets the tone for the year. This information is then shared with the custodian.

Each lesson plan will then expand on the four R’s, with a heavy focus on Rethink. The aim is to have minimal garbage AND minimal recycling. To achieve this the students learn all the ways that we can make changes that can have a positive effect in the classroom, at home, in their community and globally.

My classroom contact time has been approximately three - four hours a week. My prep time is two hours to each classroom hour, so I am spending approximately ten hours a week to create and run the program. My paid hours at GIRO do not cover the time I put in at the school. To date though the Board value and appreciate the work I am doing at the school, they cannot make it financially viable to fully fund the program.

This program has demonstrated through learning objectives and outcomes, as well as positive feedback from teachers, parents and students, that it could be successfully rolled out both District wide and Provincially.

I am requesting \$15,000 to fund the program for a full school year (ten months).

\$10,000 of this would pay for my time at \$25.00 per hour, 40 hours a month.

\$5,000 would be used for materials and to pay a skilled woodworker for projects that require additional hands on carpentry skills. I will expand on this in the meeting.

Yours sincerely,

Michelle MacEwen

General Manager

GIRO

June 27, 2018

RE: reference in support of Zero waste program

Attention RDN:

Michelle MacEwen has been enriching Gabriola Elementary School for the past several years by running a Zero Waste program. Ms. MacEwen has several skills that have made her a valuable community expert. Our school is a place-based school and we use our surroundings and the community to support the learning of the B.C. curriculum. The Zero Waste program and our philosophy on how to approach learning have many commonalities.

Firstly, the program is curricular. In the new BC curriculum, on the subject of Careers, students are to investigate ideas in reference to: environmental stewardship, effective use of resources and sustainability. Ms. MacEwen is very knowledgeable in these areas and creates lessons that are authentic and engage students. All students have prior knowledge and being able to share and rethink ideas is a very exciting way for students to learn.

In the B.C. curriculum Core competencies umbrella all topics. Examples of core competencies are: problem solving, critical and creative thinking. The Zero Waste program is a great vehicle to instill such competencies. Students are challenged to develop questions and then explore how they may have real impact on their surrounding. One project asked the question, "How can we reduce the use of plastic bags on our Island?" Student lead projects were created and then the class narrowed it down to one project and implemented it. The result was creating cloth bags with messages on them on how the Earth is being impacted by use of plastic. The entire island felt the energy and desire to make smart changes that produced zero waste.

Finally, whole school initiatives have been created and spurred on through Ms. MacEwen integration of Zero Waste ideology. All students are globally aware of their impact on our surrounding and now recycle their paper towels and we are one of few schools that have organic bins for food waste in each classroom. The district is now implementing this idea but because of Zero Waste we are already there. "Waste Free Wednesday" were started this year as we tried to reduce the amount of garbage produced by our lunches. Many students are now influencing their parents as we all work together to being more mindful of our environment.

The Zero Waste program has been presented by Michelle MacEwen that reflect curricular objectives and promotes a way of learning that is beneficial to all learners. It is our school's desire to have this program continue and we need your support to make that happen.

Sincerely

Dave Travers, Principal

Gabriola Elementary school