



SEVENTH  
GENERATION

club

SENIOR EDITION

# NEWSLETTER

Fall 2016

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## Fun facts

- Over 8000 students are members of the Seventh Generation Club
- The club's name comes from a traditional teaching of many First Peoples that what we do today can make a difference far into the future (even seven generations ahead)
- Our mascot is K.G. Coyote ("cagey," get it?)
- Last year the club gave out 500 backpacks, 450 Canucks blankets and 300 other great prizes to students who had excellent school attendance
- The Vancouver Canucks are our Club Captains

## Hello Seventh Generation Club Members!

It is good to have you back at school and thanks for being part of the Seventh Generation Club this year! Our spotlight for the Fall newsletter is science and science careers.

This year, the Seventh Generation Club is all about getting you ready to do your best work in school every day, and to get a head start on your future education and career. We have lots of tips to share and in our interviews we'll introduce you to First

Nations people who are smart, strong and proud of their heritage. As older club members, we also encourage you to stick with maths and sciences all the way through high school – it will help keep all of your options open for higher education.

We would love to hear about your school, your favourite study tips, and about your dreams for the future, so please write to us at [seventhgen@fnesc.ca](mailto:seventhgen@fnesc.ca).

## Science Fun

Have a curious spirit? Watch sea life in vivid colours through the Folger Pinnacle ReefCam, a live camera feed in a rockfish conservation zone off the West Coast of Vancouver Island.

I challenge you to think of two or three things that you would love to be if you could have any type of career and talk to someone about how you can achieve that dream. Then, don't stop until you get there!  
– Dr. Nadine Caron



## Cool Jobs:

### Meet Dr. Nadine Caron, Surgeon

Dr. Caron is pretty amazing. She grew up in Kamloops, BC and she is the first Indigenous woman to graduate from the University of British Columbia's medical school at the top of her class. Now she is Canada's first female First Nations general surgeon.

The Seventh Generation Club had the chance to talk with Dr. Caron to ask her about her career.

#### Can you tell us about your work?

**Dr. Caron:** "As a surgeon, I operate on patients who might have cancer or who have been diagnosed with cancer. It is truly an honor to meet new people every day, hear their stories and how brave they have been. I get to meet their families who love and care for them and then I am able to share with them some things that I could potentially do to help them heal and be cured. Surgery helps me apply two major areas that my education and training have given me: 1. All the knowledge that I learned from studying textbooks and by listening to my teachers and 2. Using the skills that I have learned about doing things with my hands. This is all in a career where my primary purpose is helping someone else. It is a very rewarding career that all started with staying in school and believing that I could succeed."

#### To become a surgeon, you must have studied science for a long time. What do you enjoy about science?

**Dr. Caron:** "I did study science courses throughout high school and that helped me to see how much I enjoyed science because it gave me the ability to understand how things worked. Whether it was understanding how a machine worked, how an animal survived in its environment or how the human body functioned; various areas made things much more understandable."

"Once I got to university I realized that there were so many areas in science that someone could focus on that you really could find the one particular area that was your favorite in the high school courses and study that in great depth. Once I started to understand things I realized I don't need to memorize to be able to explain what I knew."

#### Do you have any advice for students who might be thinking about a science career?

**Dr. Caron:** "A science career opens so many doors that you don't even know are there until you walk through the first one, which would be graduating from high school with at least some science courses. It is like walking into a castle. You walk through the big doors and realize there are so many different rooms with so many different treasures and you can choose which ones you want to explore if you give yourself the opportunity by going to university or college."

# First Nations Science Scrambler

What do you know about the traditional science of First Nations peoples? Show us by unscrambling the mixed up word in each sentence (*answers are on p. 4*).

First Nations peoples have learned over hundreds of years to build sustainable ways of **ignlvi** \_\_\_\_\_ and being.

For thousands of years, First Peoples in North and South America cultivated many plants for foods, including corn, squash, tomatoes, cranberries, potatoes, peanuts, chocolate, cane sugar, pineapples, blueberries and **nesab** \_\_\_\_\_. Many are important foods for people all over the world today.

One way to tan a **soeom** \_\_\_\_\_ hide is to rub a mixture of brain tissue into the fleshy side of the hide. The brain tissue contains an enzyme that softens and loosens the hide.

To keep food **fhrefs** \_\_\_\_\_ without a refrigerator First Nations people invented a high protein mixture called pemmican. Pemmican is a mix of thin-sliced meat that is pounded and mixed with melted fat, bone marrow and often berries.

First Nations knowledge of the environment is important for keeping a healthy world. One key teaching is that we live in a **bwe** \_\_\_\_\_ of relationships that require responsibilities.

## Science Buddies

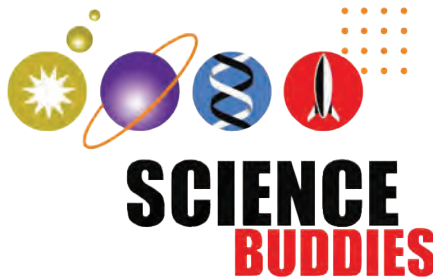
[www.sciencebuddies.org](http://www.sciencebuddies.org)

This is a very handy a website where you'll find...

**Science Fair Project Ideas:** There is a topic selection wizard called "Help me find a project" and a library of 1150 ideas you can browse to help you choose a topic for your next science fair. You can also use the "ask an expert" tool to ask specific questions about your project.

**Science Career Research:** You can browse through information on careers in Earth Sciences, Life Sciences, Engineering, Math, Computer Science and Health. You can find out more about each career, such as how much you could earn and what education you need. Sometimes there are links to additional information, like interviews and hands-on projects.

**Cool Projects:** In the blog and in the projects sections you can find all sort of extremely cool projects: toothbrush robots, slime mold science, tie-die science, paper rockets and much more. Let your scientific imagination run wild!



## A-maize-ing History

Corn or maize was first domesticated by the Indigenous people of Mexico nearly 9,000 years ago from a wild grass called teosinte. The early types of corn had cobs that were very small (about one inch long) but over time the people developed larger corn plants with cobs several inches long each. Today, thousands of types of corn are grown around the world.

## Popcorn Science

Although popcorn kernels may look very dry, each kernel of popcorn actually has a tiny amount of water inside it. This water is stored in a circle of soft starch inside the hard kernel. As the kernel heats up, the water's molecules start to move faster and get farther away from each other. As the water expands it puts pressure against the hard starch. Something's has to give - so eventually the water pressure wins out and the popcorn ruptures. The soft starch inside becomes bursts, flipping the kernel inside out to release the steam inside!

Pop!

*Learn more at [kidzworld.com](http://kidzworld.com)*





# Science Superheroes Contest

This fall's contest challenges you to tell us: "How I can make the world a better place using science?" Enter by writing a paragraph or with a drawing. You might like to imagine yourself in the future in one of the many science careers like those in the word search puzzle below, or maybe your ideas are for something you can do right now in your own community.

So get creative, and enter the contest by December 1st. We have three microscope sets to give away to the winners.

## Science Careers Word Search

All of these careers use science in their everyday work and involve learning science at university or college. Can you find them in the word search?

N G N M B K Q N O X T R Z R L P F W O S X Y R X B  
 A E Y Y V I R R A Z K Z E T G E E Z P I M O B R W  
 I O R J T O O P Q I D A N D C B H V I J B Z E H I  
 C L M N N O T L C P R B C L L V T A T O Y E O L L  
 I O G M X X C W O T M A S I F E I X T V N T X W D  
 R G C W A G E W A G X A N E S S W I Q I K R B Q L  
 T I E C L X P K Y S I Z T I U D C O G C E G P X I  
 C S C W U X S L C L T S X U R S N N H M P H M H F  
 E T P S Z K N T F B V E T T E E E S O G Y H M L E  
 L O A R C H I T E C T D W N Y L T N D S I M Z G B  
 E R N V R Q L J O G B R G A A A O E I A P Y T H I  
 T Z P H K H A W V P G I S T T R N C V I B O S Y O  
 D B G I W C R G Y M N G N Z T E I L C E F E E O L  
 Q K D E V D U G D E C E A S V S R R S Q Q S R V O  
 I D D L O A T R E K M D A G T M T E E I V C Z M G  
 Y N W X W G L R E N M X E V N Y Z Y N U J B R Z I  
 R O T C O D U C O L I D R W U P X L G G A S E X S  
 R Y A H E S C R Z N T S I T N E I C S L I O S D T  
 C S C F O D I P T H J Y Y H Y S U Y X I C N W R N  
 D C H D M V R X T L M D D Z A R P E D C Z H E E H  
 V W K X N B G V Q W G J Z I W U Y O A U N Z N E H  
 E P Z E A U A K Z J C S P Z X N P A Q S I W I H R  
 X C L I M A T E C H A N G E A N A L Y S T I O Y E  
 F Z N Z J E E O H T Y J Z O U X F O A Z V H P G H  
 E A T V W I X I R I W V M F S F V C K Y F J Q K R

**Agricultural Inspector**  
**Architect**  
**Astronomer**  
**Biologist**  
**Climate Change Analyst**  
**Doctor**

**Electrician**  
**Environmental Engineer**  
**Geologist**  
**Nurse**  
**Physicist**  
**Robotics Engineer**

**Soil Scientist**  
**Veterinarian**  
**Wastewater Engineer**  
**Welder**  
**Wildlife Biologist**

### Stick with math and science!

Thinking of a career in health, business, trades, forestry or computing? You will need Grade 11 and 12 math and science courses to enter most post-secondary programs.

Did you know that you need between 9 and 11 hours of sleep each night to be at your best?

### Choosing Classes? Get some sound advice

To get into college or university, you need Grade 12 English and math courses, and often science too. Every year you should talk to your school counsellor about the classes you are taking. Ask which ones you need to get a Dogwood graduation diploma and be able to enter college, university and trades training.

*Science Scrambler answers: living, beans, moose, fresh, web*

The Seventh Generation Club is coordinated by the First Nations Education Steering Committee and First Nations Schools Association, in partnership with the First Nations Health Authority and the Vancouver Canucks.



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