"STEAM, career awareness among women"
by Myron Curtis - Darkeagle

DarkEagle: l am Myron Curtis in real life, but l answer to just about anything because l spent 36 years in the retail industry before becoming an educator in computer science.
My avatar, Darkeagle, bares my Native American name from the Blackfeet Nation.
He is also a bit thinner than my real life self.
Vic Michalak: ☯
K.T. Burnett (kayt): :D
Mike Shaw (shawza.tunwarm): :)

DarkEagle: My topic is Attracting Women into STEAM Careers, and it is a puzzle that l am helping the 7 Community Colleges l now serve to solve
Here are some quotes from one of the USA's leading experts on attracting women into STEM related career paths.
"If we ever want to increase the percentage of women in STEM, we need female role models women and girls can identify with.
Prospective students need to see that there are women just like them thriving in these jobs.
It's contemporary women who will inspire today's women and girls to pursue STEM careers -- not famous women from history.
Chantal (nymf.hathaway): Women like Thuja ☯

DarkEagle: Prospective female students need to see that there are women like them thriving in STEM jobs.

Rosie the Riveter is important for all students to know about.

https://en.wikipedia.org/wiki/Rosie_the_Riveter

Yet, if you want to recruit more female students to welding today, Rosie isn't the best role model

Outreach to recruit female students to your STEM programs needs to be extremely targeted to be effective.

Broad recruitment strategies rarely work, while very focused strategies can work in under a year.

If your brochures, posters, flyers, and other outreach materials don't appeal to female students, then all the time and resources that went into those materials will go to waste.

3 key mistakes:

1. No images of female role models (brochures only featured male students)
2. No clear 'call to action'
3. Lack of career information "

Donna Milgram http://www.iwitts.org/

Executive Director, Institute for Women in Trades, Technology and Science (IWITTS)

Principal Investigator, NSF-funded National Online WomenTech Project

Donna's statements while seemingly simple are far more complex than they sound.

What educators, industry leaders, politicians, and parents are realizing is that we have allowed our world to continually define women as incapable of precise organized thought, physical competency, or dependability and durability in the workplace even though all real evidence points to just the opposite.

Far too often, I am stunned to hear a young lady state that she just isn't good at math or science when she reaches middle school, even though those were subjects she excelled in up to that time.

Tooyaa (thuja.hynes): :D

K.T. Burnett (kayt): That's a bunch of malarkey!

Tooyaa (thuja.hynes): According to a 2013 report by National Science Foundation, in the United States only 18.2% of bachelor's degrees in computer sciences and 18.4% of bachelor's degrees in engineering are awarded to women

DarkEagle: What happened?

Perhaps this encounter I had on one of my colleges will offer a clue.

I was discussing women in STEM with a small group at one of my colleges, when a young woman, a college math instructor, chimed in that girls really were not able to understand math as well as boys; they were simply more determined to do their work.

Dae Miami: interesting my students at the high school level tend to do better than guys

DarkEagle: Really?!

I was so angered by that statement that I had to walk away, but later I realized that she had just identified a major problem that we must solve.

Dae Miami: Dae holds KT back lol

DarkEagle: It isn't that girls are not good at the skills included in STEM related jobs, but rather that we keep telling them that they aren't, that it isn't cool for them to be, and it certainly isn't sexy.

K.T. Burnett (kayt): Bad, bad Dae :D

DarkEagle: We do that through almost everything they encounter TV, movies, ads, friends, parents, and yes even through the attitudes of their instructors.

Fixing that is going to take much more than just another public awareness campaign. It is going to take a complete shift in our global consciousness.

Tooyaa (thuja.hynes): even in STEM SCHOOLS there is ongoing "uncoolness" for females to outshine the boyz

DarkEagle: This is not new.

Alina Gabilondo: hello everybody!!

DarkEagle: People have been trying desperately to fix this for decades, but now there is a difference.

There are millions of jobs available in STEM careers right now that are going unfilled, and even if every man studying STEM related course work were to graduate tomorrow and all get jobs, we still would not have enough qualified people to fill all those v

CB Axel: That's appalling that a woman math instructor would say such a thing.

DarkEagle: The need for women to enter the STEM workforce is very real and it is very critical.

K.T. Burnett (kayt): Hey Alina :)

DarkEagle: Nothing changes mankind's consciousness as quickly as desperate need.

So, we have a rare opportunity.

What must we do to seize it?

Chantal (nymf.hathaway): True that

DarkEagle: In Donna's above statements, we find some direction to take.

Dae Miami: That is especially true in Virginia lots of high paying jobs in tech

DarkEagle: 1. Women at all ages need to be made aware of practical opportunities within their reach.

2. That reach could be defined by geography, internet access, family, or even community ties.

3. They must be made aware that they are perfectly able to do these jobs, and it is more than acceptable for them to work in these fields.

4. All potential employees, both men and women, need to be educated about the good that they can achieve in STEM fields.

Finally, we need to make a shift in our definition of the careers normally classified as STEM. More and more employers are seeking employees who are not just qualified to do the basics of their jobs, but who are also creative, coherent, personable, and motivated to improve.

Every employee faces a customer.

I have had manufacturers tell me that even if they are making a simple gear, it has to look good, and feel right or else the customer won't purchase it.

Vic Michalak: One thing we can all do is to treat being smart and interested in nature and how things work as natural.... for all children

DarkEagle: Such considerations are even more critical when items are being sold online and must catch the customer's attention quickly.

So, we need to include the Arts in the STEM definition, and not just graphic arts. Employers want people who can take all the elements of a product and make them not only work, but be appealing as well.

Tooyaa (thuja.hynes): truly!

DarkEagle: This is even more critical in digital careers.

For example, companies are unwilling to settle for a website that looks nice but doesn't do anything productive.

Mike Shaw (shawza.tunwarm): Agreed!

K.T. Burnett (kayt): Sell people things that they don't need! \o/

Vic Michalak: STE(A)M = Science, Technology, Engineering, ART, Math --- all important

DarkEagle: Now all the images, the verbiage, any sound or video and all the menus must work together to tell the story that website is meant to convey to its visitors.

It isn't enough now to be a good coder.

You have to be a creative, coherent, and concise artist who is also a good coder.

So it is that STEM must become STEAM to include Art because Art is the fire, the passion that gives us STEAM power.

Well, there is an advantage for us in this.

While we have been fibbing to women all this time about how poorly we expect them to perform in STEM careers, we have been trying to appease them by pushing them into more artistic endeavors.

CB Axel: That's been Apple's appeal, IMO. Their products not only useful but usable and attractive.

K.T. Burnett (kayt): STEAM power, I like :D

DarkEagle: Ironically, that could make them more qualified for STEAM careers than many of their male counterparts.

Now if we could only convince them to learn the other skills they need.

We have the need; we have a general idea about what we need to do to attract women into STEAM careers; we even have some proven ideas that will help retain them in training until they are ready to go to work.

Vic Michalak: Yes, Apple Co. is a good example of using the concept of STEAM, not just tech tools...

DarkEagle: What are the details?

Stranger Nightfire: we need you steampunk women

DarkEagle: Media campaigns that do show women thriving in STEAM pathways are becoming more common, but we need more.

Chantal (nymf.hathaway): ☺ Stranger

DarkEagle: We need to convince TV, movie, and game producers to improve the image of women they portray more often.

Tooyaa (thuja.hynes): lol

Dali Waverider: B-) Stranger

DarkEagle: We need to identify careers that are "in reach" of people in our communities and point them out to women, or we have to find ways to broaden the reach of our community members.

K.T. Burnett (kayt): Airpods: shake your head, lose a wireless bud, accidentally step on it

DarkEagle: We, of course, want to encourage everyone including women to pursue jobs that let them make a positive difference in our world even if that is only at a local level. Every little bit helps.

We have to educate our community members so that they realize that women are not only capable of doing well in these jobs, but that they are also desperately needed.

Those are all important aspects of this project, but we need to start with girls at a young age and pull all of those aspects together in a fun and productive environment.

Girls Who Code is precisely that kind of project. https://girlswhocode.com/ This is their approach:

It started as an experiment and has grown into a national movement.

Girls Who Code has gone from 20 girls in New York to 10,000 girls in 42 states.

Vic Michalak:
https://www.empowerwomen.org/en/who-we-are/initiatives/ict-for-development
EmPowerwomen.org

DarkEagle: That's the same number of girls who graduate each year with a degree in computer science. That's progress!

They are proud to say They are not just aiming to close the gender gap in tech; they are actually doing it.

When girls learn to code, they become change agents in their communities.

Whether it's a game to illustrate the experience of an undocumented immigrant or a website to provide free college prep, these girls create technology that makes the world a better place.

Believe in girls' unlimited potential.

Tech jobs are among the fastest growing in the country, yet girls are being left behind.

While interest in computer science ebbs over time, the biggest drop off happens between the ages of 13-17.

Tooyaa (thuja.hynes): "Why not have a game where you throw tampons at people?"

K.T. Burnett (kayt): :o

DarkEagle: The gender gap in computing has actually been getting worse since the 1980s.

By 2020, there will be 1.4 million jobs available in computing related fields. US graduates are on track to fill 29% of those jobs.

Women are on track to fill just 3%.

Girls Who Code was founded with a single mission:

to close the gender gap in technology.

They are building the largest pipeline of future female engineers in the United States.

Girls Who Code alumni are now majoring at the top Computer Science Universities across the nation.

Vic Michalak: See also https://code.org/promote

Chantal (nymf.hathaway): Thats wonderful

DarkEagle: 65% of Clubs participants say they are considering a major or minor in Computer Science because of Girls Who Code.

90% of Girls Who Code Summer Immersion Program participants said they were planning to major or minor in Computer Science or a closely-related field.

60 out of 60 top companies have pledged to hire Girls Who Code alumni.

Vic Michalak: https://girlswhocode.com/

DarkEagle: This is a model that works, and there are similar programs for science, engineering, and math.

Tooyaa (thuja.hynes): replace the TPP with the STEAM pipeline!

Vic Michalak: Lots of great sponsors as well!

DarkEagle: We need to expand those.

K.T. Burnett (kayt): Risking to appear racist, I cannot help but wonder what percentage of them are Asian girls

Chantal (nymf.hathaway): You feel they are more interested in steam, KT?

Tooyaa (thuja.hynes): interesting point K.T. & the question also breaks down in interesting way when you look at Chinese vs. Japanese. vs. Korean vs. Indian

K.T. Burnett (kayt): I've seen a video about some internal programming competition at Berkeley - that video featured mostly Asian and Indian people of both genders

DarkEagle: In my "day job" I am what is called a Deputy Sector Navigator for ICT & Digital Media.
I serve 7 colleges in a Regional Consortium that serves 15 colleges.
We are working on taking the Girls Who code program and hosting it at all of our campuses or other school district facilities.
It won't be easy, but we have the funding, and we have the passionate drive to make it happen.
So, Girls Who Code will soon become an integral part of education in the Far Northern regions of California.
That will be wonderful!
However, we must not let that be the end of the road for our girls.

We will also need to build a system that encourages girls to continue studying and preparing for jobs in STEAM careers.

What should that system look like?

How should it be maintained and evolved?

Those are questions I need to get people talking about.

I need those answers.

bong Crescendo: Started listening from camera position instead of avatar position. I am camming from around where Dark... is standing.

DarkEagle: We will also need methods of determining the success of this system.

Fortunately, California is already building that.

It is called Launchpad, and it is starting to work amazingly well, so we are on the right track there, but I would love to hear about other data collection and presentation systems that are similar.

Thank you for listening to me.

Now I want to listen to you.

What are your ideas?

Chantal (nymf.hathaway): Great talk, Myron!

K.T. Burnett (kayt): Don't push girls neither OUT of the STEAM path, not ONTO the STEAM path. Let them choose without pressure!

bong Crescendo: IDEAS: List successful women in STE(A)M - for brochures etc.

Vic Michalak: We have used Hour of Code... https://code.org/learn our students visit middle school to high schools (secondary schools) and have had a great reception

Jawsome (jes.cobalt): Good idea Bong ☺

Darkeagle Darkstone: I noticed a lot of chat while I was talking I am going to scroll back and look at those, but please start

Talliver Hartnell: In Alaska at our school we have a Smart Girls Rock program run by our female engineering and physics teachers, kind of like a speed dating event with female professionals in STEM

CB Axel: Mayim Bialik has been working on this issue.

Darkeagle Darkstone: interesting

K.T. Burnett (kayt): I went to math industry because I live and breathe math, not because of some arbitrary woman I wanted to be like

Chantal (nymf.hathaway): wow that sounds exciting for children, Talliver http://www.slideshare.net/SWEMarketing/smart-girls-rock

Haven Ditko: I believe it begins by making it more aware to women and girls that those careers are there. give them examples of the types of careers that may be included in STEAM

Mike Shaw (shawza.tunwarm): I like the idea of starting early. Is elementary school too young?

Darkeagle Darkstone: that is good KT

Vic Michalak: It is never too young to be curious

K.T. Burnett (kayt): I'll tell you more - my mathematician role model is Hilbert - and he is a male!

bong Crescendo: Bialik is also an example of how STEM can lead to something else.

Talliver Hartnell: my experience with FIRST Lego League, the groups that had success getting girls involved were the girl scouts
Vic Michalak: Being curious about how things work is at the heart of STEAM and any science education
Chantal (nymf.hathaway): ☺ KT
Darkeagle Darkstone: elementary school may actually be a little late

Darkeagle Darkstone: Look at the toys we give children
Talliver Hartnell: I ran the FLL program at my kids elementary and when it was voluntary we had only 1 girl out of 30 kids but the girl scouts had multiple teams of all girls
Vic Michalak: Darkeagle... absolutely... we cannot try to change the question if a child asks why leaves are green
Haven Ditko: we also give toys to children that the children themselves are interested in
Dali Waverider: My contribution has been in the area of Christmas gifts to the girls in the family.   Basically, I give them the same stuff as the boys: science kits, telescopes,, books and videos.
Tooyaa (thuja.hynes): so pleased you opened this dialog. One important approach I think, is not to make women think more like men, but create environments socially, commercially, politically where non-allopathic solutions are seriously considered, where global integrated solutions are worked out, and where all life is considered sacred and precious
bong Crescendo: Space archaeologist Sarah Parcak is cool. http://www.sarahparcak.com/
Vic Michalak: Good idea, Dali... no stereotypes
Haven Ditko: we cannot blame, boys get trucks and girls get Barbie's for the gender gap
Darkeagle Darkstone: Girl Scouts is another good organization dealing with this issue
Chantal (nymf.hathaway): Excellent Dali ☺

Talliver Hartnell: so most likely have to make it compulsory for primary and elementary age students, if you want gender balance

K.T. Burnett (kayt): Oh, also. I don't think we need to educate girls, but let them choose. Let's educate their PARENTS so they don't force their daughters out of that path if they choose it

Vic Michalak: Kids will gravitate towards what they are interested in, but we do not want to put barriers in their way

Mike Shaw (shawza.tunwarm): Agree with K.T.!

Chantal (nymf.hathaway): Good point KT

Alina Gabilondo: agree too

Darkeagle Darkstone: Educating the parents is a key issue and the same for our teachers

Stranger Nightfire: I think that young girls are just not rewarded for showing these kind of interests

Vic Michalak: K.T. has a great point! If you cannot answer a child's questions about why leaves are green and the sky is blue (which is actually a hard one) or why it gets cold in winter, then the parents need the education.... OR they need to find someone who knows OR teach the child how to look things up!

Darkeagle Darkstone: (LIKE)

Stranger Nightfire: just a young boys to not get rewarded for playing with baby dolls

Vic Michalak: But do not stifle curiosity...

Alina Gabilondo: hehe then too late to educate them about green leaves

Darkeagle Darkstone: Right Vic

Chantal (nymf.hathaway): Thats slowly changing in my country Stranger

Mike Shaw (shawza.tunwarm): There are also a lot of socio-economic factors that are stacked against many kids today. I am specifically thinking about communities such as East. St. Louis where kids start with high interest in STEAM, but as they progress through high school, the realities of life chip away at that interest.

Darkeagle Darkstone: That is good to hear Chantal

Darkeagle Darkstone: Right Mike

K.T. Burnett (kayt): Math is a tiresome business - we've lost half our group during the 1st semester. Both girls and boys

Mike Shaw (shawza.tunwarm): :(

CB Axel: I agree with Vic. I've often thought, and I apologize to those of you who teach at the college level, that the pay scale is upside down. Elementary school teachers should be paid more than secondary and college teachers, because it's their responsibility to teach kids how to learn.

Tooyaa (thuja.hynes): starting with solving local issues has great rewards.. schools can lead initiatives "what do we do with this garbage? How can we control our food supply? What safe materials can be used to build appropriate sustainable housing?"

bong Crescendo: But we all want to be "the cool kid," and one of the problems, I think mentioned briefly, was it is cool for a teenage girl to pretend she is not "good" at math. What to do about that?

K.T. Burnett (kayt): Good one CB!

Vic Michalak: I think we need to teach examples of how we use things like math... not get bogged down in the details and hope kids will stick with it...

Darkeagle Darkstone: We have to build in an encouragement system that mentors interested youth to continue studying in these fields

K.T. Burnett (kayt): Khan Academy... https://www.khanacademy.org/

Chantal (nymf.hathaway): Such great ideas and thoughts run by the chat! glad we can read back ☺

Vic Michalak: Good choice as well... Khan Academy has been around for some time now

Mike Shaw (shawza.tunwarm): The encouragement system should include parents, so the overall environment the kids are in supports education

Darkeagle Darkstone: Virtual worlds are great places to teach math because we build scripted objects that react to the math equations

Tooyaa (thuja.hynes): :D

bong Crescendo: Separate STEM classes for girls? Not that I like it, but it does have benefits.

Stranger Nightfire: anti-intellectualism (that cool factor) affects many males too, especially African Americans

Vic Michalak: People who write textbooks already know the subject... I think it would be great to sit down with a child and see how they look at the world and try to answer from their perspective

bong Crescendo: Same problem, Stranger, I agree.

Darkeagle Darkstone: The Girls Who Code project is extra-curricular

K.T. Burnett (kayt): Good one, Stranger!

CB Axel: I kind of like the idea of single sex schools. School should be for learning not socializing.

Darkeagle Darkstone: so it is like a kickstarter to help overcome the barrage of pressure on girls to not be smart

bong Crescendo: I do prefer uni classes.

Chantal (nymf.hathaway): Socializing is an important factor for being educated, CB

Vic Michalak: But part of learning is learning how to work with others...

Talliver Hartnell: they learn how to socialize :)

Tooyaa (thuja.hynes): the challenges of teenhood & puberty will always be an obstacle to learning, there is a lot to be said for single gender schools

Darkeagle Darkstone: We do need some courses to be mixed

CB Axel: It is, Chantal, but there are other places for kids to be social.

Vic Michalak: What Chantal said... (we were thinking of the same thing)

Jawsome (jes.cobalt): ☺

Chantal (nymf.hathaway): Violet, good to see you ☺

Darkeagle Darkstone: Industries across the board have been clamoring for employees to have social skills

Violet (ataraxia.azemus): Hi Chantal, all :)

K.T. Burnett (kayt): Hey Violet :)

Vic Michalak: What we need is more respect... but that is my idealism speaking...

Talliver Hartnell: not necessarily as diverse as the public school

CB Axel: Have separate classes for boys and girls, but let them socialize in the cafeteria and other places in the school.

bong Crescendo: Nah... social., not for me. (See what I did there?)

Darkeagle Darkstone: with most parents both working these days few get social skills at home

Arianne (ariannejp): we need to consider financial aspects, fair payment will be necessary, or support girls who want to learn but can't continue it by financial problems.

Chantal (nymf.hathaway): l am with you, Arianne
K.T. Burnett (kayt): True, Arianne
Darkeagle Darkstone: So we expect the student to get those skills at school
and then we have consistently cut the courses that provide those skills
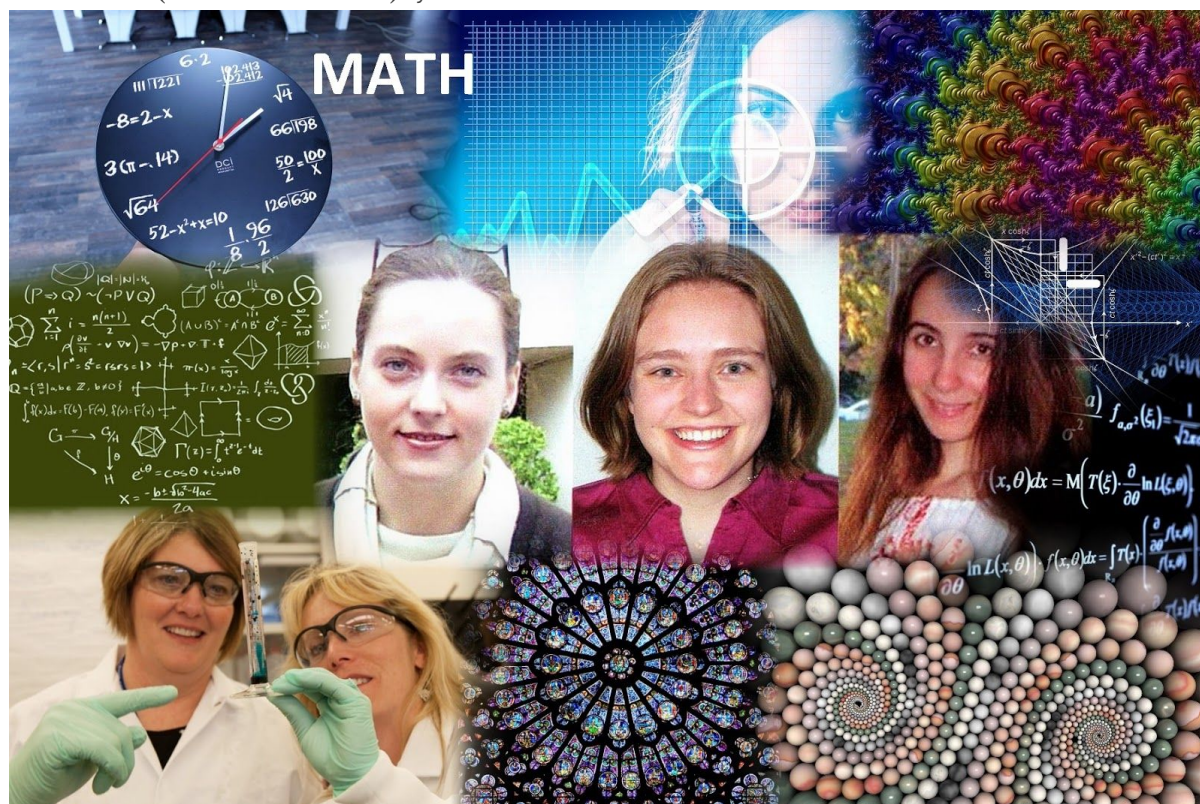Like Band and sports
Chantal (nymf.hathaway): Maybe SC is able to set up an interesting exhibit to promote
women/girls for STEAM... we have the land
Jawsome (jes.cobalt): likes that idea
Darkeagle Darkstone: Equal pay is a huge problem worldwide
Tooyaa (thuja.hynes): bravo!
Mike Shaw (shawza.tunwarm): yes

Darkeagle Darkstone: and giving women credit for their work is another huge issue
Vic Michalak: We have a class called "Science in Everyday Life" -- l think kids need to see how
STEAM relates to real life
Chantal (nymf.hathaway): yes but also due to the false modesty women are brought up with,
Dark
K.T. Burnett (kayt): Vic, sounds like a class l needed in my childhood!
Darkeagle Darkstone: l could help with that Chantal
Chantal (nymf.hathaway): wonderful Dark ☺
Joseph Bard (science24): it needs younger audience Chantal :)
Darkeagle Darkstone: true
Chantal (nymf.hathaway): true too Science
bong Crescendo: Remember that SL is about to be replaced by .... something else where things
work differently. Maybe not a good idea to start building a course based on the current model.
Violet (ataraxia.azemus): l think a lot of adults could benefit from that class, Vic :p

Darkeagle Darkstone: well we need to continue to remind ourselves so Chantal's idea has real merit

K.T. Burnett (kayt): Bong, there's still time to experiment!

CB Axel: SL may not be able to reach small children, but it can reach their teachers and parents.

Chantal (nymf.hathaway): there is always time to experiment

Tooyaa (thuja.hynes): SL will not be "replaced"

Darkeagle Darkstone: especially if it includes links to good resources

Stranger Nightfire: SL is going to be around for a long time bong, even after Sansar

bong Crescendo: It could take years before it happens...

Vic Michalak: Kids get confused with what they see and hear on the news (do they pay attention to the news?) --- about how science is an 'opinion'

Joseph Bard (science24): good point CB

CB Axel: Even if SL gets replaced, why not try things out here first?

K.T. Burnett (kayt): 'xactly

Mike Shaw (shawza.tunwarm): agreed!

bong Crescendo: That's just your opinion,. Vic. (joke)

Darkeagle Darkstone: The Metaverse is expanding and evolving. SL will do the same

CB Axel: LOL. I thought Mike was talking like a pirate. agreed.

K.T. Burnett (kayt): LOL

Chantal (nymf.hathaway): In the Netherlands we have Children's News http://jeugdjournaal.nl/ every day at 7 pm... all the schools repeat this news program the following morning (some parents do not point their children towards this, so school makes sure they see) they have science and technology news.

bong Crescendo: CB, it depends on the time schedule. I am actually not sure it will happen soon, but I have not followed the news lately. Maybe Sansar will be out in a month.

K.T. Burnett (kayt): That's freakin' sweet, Chantal!

Darkeagle Darkstone: That is a great idea Chantal

Joseph Bard (science24): I have seen interesting chemistry lecture at MIT and Cambridge all for children

CB Axel: Ebbe has said repeatedly that Sansar will not replace SL.

Chantal (nymf.hathaway): it runs for more than a decade and kids do get to see the useful part of society... not just the wars

bong Crescendo: OK

Violet (ataraxia.azemus): There were some good not-dumbed-down news for children when I was growing up (90s), too, including science news... I'm not sure what exists for that now

Darkeagle Darkstone: I do know of some startup online news services that are looking for a mission and that just might be it.

Chantal (nymf.hathaway): oh interesting Science24

Stranger Nightfire: again bong, SL does not get shut down when Sansar starts

Chantal (nymf.hathaway): Great Dark ☺

bong Crescendo: That's what CB said, and that's what I OK-ed.

Joseph Bard (science24): I can share link if interested :) https://www.youtube.com/watch?v=ti_E2ZKZpC4

Stranger Nightfire: and I think the great majority of SL folks are not going to be a hurry to abandon SL

Darkeagle Darkstone: l will contact them and brainwash them thanks for the idea

Vic Michalak: Science in the U.S. today can be used as a political and economic tool - people believe what they want or what is best for them - confusing

Darkeagle Darkstone: Right Vic

Chantal (nymf.hathaway): That's a bad development, Vic

Darkeagle Darkstone: l will see if we can get Science 24

Joseph Bard (science24): :)

Stranger Nightfire: l am amazed at the number of people these days who seem to think the nature of reality is a matter of opinion

Darkeagle Darkstone: Science, like statistics, can be misrepresented. we will need to teach our children to know when the science is good.

Arianne (ariannejp): l'm afraid that less people on SL than before , big SIM has been closed or moved to be smaller, recession will be serious , before SANSAR

K.T. Burnett (kayt): Holy smokes Stranger!

bong Crescendo: Statistics is underrepresented at all levels, unfortunately.

Chantal (nymf.hathaway): l am too, Stranger... since l meet so many people from the entire planet by the internet... it can be shocking

Joseph Bard (science24): Chemical Curiosities: Surprising Science and Dramatic Demonstrations

Stranger Nightfire: l can have whatever scientific facts l want because that's my opinion, so there

Chantal (nymf.hathaway): ☺

Joseph Bard (science24): l love the way it was explained in

K.T. Burnett (kayt): Oh, it's an hour long?

Darkeagle Darkstone: :-)

Joseph Bard (science24): yea KT :)

Chantal (nymf.hathaway): to bookmark ☺

Joseph Bard (science24): watch it later :)

K.T. Burnett (kayt): That's lotta science :D

Joseph Bard (science24): it is inspiring

Chantal (nymf.hathaway): Points to his name ☺

K.T. Burnett (kayt): Haha Chantal, of course :D

Chantal (nymf.hathaway): l like your slides Myron. Can you display them on the sim?

Darkeagle Darkstone: oh l forgot to click them. LOL l am sorry

Chantal (nymf.hathaway): l noticed ☺

Tooyaa (thuja.hynes): Aude Oliva is the senior research scientist at a MIT lab which devised a new brain imaging technique, magnetoencephalography (MEG) To me, this demonstrates how "outside the box" and willing to break established norms woman can perform in STEM

Chantal (nymf.hathaway): Jes, Recall Maria

https://sciencecircle.org/wp-content/pdf-files/CitizenScienceAtNaturalMath.pdf creating us these for her Maths field trip... l need to get them out of inventory... they were great too

Darkeagle Darkstone: i like that

Jawsome (jes.cobalt): Yes l remember

Darkeagle Darkstone: l tried to make the slides show what students might want to see.

Stranger Nightfire: there is so much that can be downright fun in mathematics

Jawsome (jes.cobalt): gosh forgot all about them, but we should have them rezzed, yes

Chantal (nymf.hathaway): absolutely agree Stranger

Stranger Nightfire: remember the old Donald Duck cartoon

Joseph Bard (science24): second one , I just found it
https://www.youtube.com/watch?v=YrgrcBxcBiw

Chantal (nymf.hathaway): Thank you ☺

Vic Michalak: https://www.youtube.com/watch?v=AJgkaU08VvY also?

Joseph Bard (science24): Science is Fun and the Joy of Learning

Darkeagle Darkstone: Math puzzles were the only reason I ever paid attention in Math classes when I was young (about a million years ago), but that was why I did well in statistics.

Joseph Bard (science24): you're very welcome :)

Chantal (nymf.hathaway): ☺ Dark

K.T. Burnett (kayt): Oh, it's chemistry! Sweet!

Stranger Nightfire: it was called something like Donald in Mathemagicland

Darkeagle Darkstone: I remember that one

Vic Michalak: https://www.youtube.com/watch?v=AJgkaU08VvY = Donald Duck in Mathmagic Land

Jawsome (jes.cobalt): Thanks Vic :))

Chantal (nymf.hathaway): oh Nice Vic ☺

K.T. Burnett (kayt): I'm terrible at chemistry, maybe that second video is where I can re-start?

Chantal (nymf.hathaway): Hi TR, good to see you ☺

Darkeagle Darkstone: LOL Cooking is chemistry

K.T. Burnett (kayt): Thanks for all them videos, Science and Vic :)

Stranger Nightfire: https://www.youtube.com/watch?v=AJgkaU08VvY

TR Amat: Hi, sorry, I was off in RL, arguing with robots :)

Joseph Bard (science24): nice one KT :)

Chantal (nymf.hathaway): ☺ gosh we needed you here TR

Vic Michalak: Darkeagle - absolutely! Cooking is chemistry... that is a good way to learn it

Joseph Bard (science24): it worth an H

Vic Michalak: (My first degree was chemistry)

Darkeagle Darkstone: :-)

Arianne (ariannejp): I like TED , plz watch it https://youtu.be/yFVXsjVdvmY

Chantal (nymf.hathaway): ☺ Arianne

Darkeagle Darkstone: So many good links!

Chantal (nymf.hathaway): yes :)))

Mike Shaw (shawza.tunwarm): "don't lick the spoon!"

Jawsome (jes.cobalt): TED is awesome https://www.ted.com/

TR Amat: I was a bit concerned that STEAM was H2O in vapour, the 'A' could stand for 'Arts', or, I've seen 'the AM' mean Applied Math...

Darkeagle Darkstone: I can build 3 new scholastic programs just from this chat. Thanks!

Jawsome (jes.cobalt): :))))

Chantal (nymf.hathaway): Is happy about that Dark ☺

Vic Michalak:
https://www.acs.org/content/acs/en/education/students/highschool/chemistryclubs/activities/food-and-chemistry.html = ACS Food and Cooking Chemistry links

K.T. Burnett (kayt): Thanks Vic!

Darkeagle Darkstone: We need the arts in Science Tech Engineering and Math

Darkeagle Darkstone: Function needs form

Mike Shaw (shawza.tunwarm): Visualization is important. Simple things, like a stereo-microscope to view crystals, give a more powerful experience than simple images.

Darkeagle Darkstone: true

Vic Michalak: l have always thought watching crystals grow was fascinating

K.T. Burnett (kayt): Absolutely, Mike

Darkeagle Darkstone: me too

Chantal (nymf.hathaway): my son loves his microscope and telescope

Joseph Bard (science24): very true :)

Violet (ataraxia.azemus): Me too

Joseph Bard (science24): and it saves a lot of energy while explaining Mike :)

Darkeagle Darkstone: l sometimes let my kids use their microscopes when l was done playing with them

Mike Shaw (shawza.tunwarm): :)

Chantal (nymf.hathaway): Hello Priscilla 🤭

Tooyaa (thuja.hynes): btw we have a new Chess Park with interpretive displays, great tables, and challenge boards, at WBH. The goal is promote math, art, game theory and social interaction. So far, the majority of visitors have been female

Violet (ataraxia.azemus): l wish l could get a do-over for maths education... it was pretty bad for me, alas

Stranger Nightfire: l was a child that Donald Duck math cartoon was actually shown as the cartoon that preceded the feature of the movie theater and my parents would come to pick me up after the movie were upset with me because l had sat there in the theater and waited to watch it a second time

TR Amat: l'm also concerned that the whole technical side of things doesn't work very well without effective communication, understanding concept development and exchange...

Chantal (nymf.hathaway): YAY Thuja! make sure to notify Yan Lauria please, he will add it to the edu portal

Tooyaa (thuja.hynes): ok

Darkeagle Darkstone: right

Darkeagle Darkstone: Art also helps students develop a mental map of how things fit and work together.

Stranger Nightfire: l thought it was the best cartoon l had ever seen

Tooyaa (thuja.hynes): in fact there are several new and upcoming projects you might be interested in there, including a Physics Fair next month, and again the majority of exhibitors are women

Darkeagle Darkstone: Math is language of science. Art is it's voice

TR Amat: Then, over the decades, l've seen philosophy become more and more important in science & tech, particularly when you head into the area of robots and Al...

K.T. Burnett (kayt): Well said Dark!

Vic Michalak: Good metaphors, Darkeagle....

bong Crescendo: "Talks by brilliant women in STEM"

https://www.ted.com/playlists/253/11_ted_talks_by_brilliant_women

Darkeagle Darkstone: Al is going to really make all of this even more important. l prefer to refer to Al's as Digital Beings

Vic Michalak: Thanks, bong!

Darkeagle Darkstone: yes
Stranger Nightfire: Well I do think Second Life females are not just your average females
Darkeagle Darkstone: In some respects our avatars are Digital Beings
bong Crescendo: - and as mentioned Sarah Parcak, she must be on the list there somewhere.
Vic Michalak: Is there an 'average' female?
Mike Shaw (shawza.tunwarm): I'm looking forward to the day a Digital Being will give a talk in the Science Circle!
Darkeagle Darkstone: there is no average anything
Darkeagle Darkstone: me too
Chantal (nymf.hathaway): 🤣
Arianne (ariannejp): lol
TR Amat: If I would be real cruel I'd suggest a wider need to understand the concept 'meta', and, that women seem to have more mental flexibility in the juggling of concepts...
Darkeagle Darkstone: We do need to be careful to include room for individual uniqueness among our students
TR Amat: Or, maybe I should suggest 'meta' is a 'meta concept'. :)
Darkeagle Darkstone: if the becomes another one size fits nobody solution it has already failed
Chantal (nymf.hathaway): Agrees... that's the problem with western education period, Dark
Stranger Nightfire: Well I mean Second Life does select for people who are not afraid of computers and technology and are in fact willing to face a fairly steep learning curve
Darkeagle Darkstone: True
TR Amat: Engineering only reaches its pinnacle when art is part of it...
Tooyaa (thuja.hynes): I think it's the difference between layered thinking and integrative thinking TR
Darkeagle Darkstone: Is that a form of survival of the fittest?
Violet (ataraxia.azemus): We've all escaped from Orientation/Help Island, here
Stranger Nightfire: exactly Violet
Tooyaa (thuja.hynes): IMO the former is masculine and the latter is feminine, in a very general way
Darkeagle Darkstone: I do try to go there once in a while but I can't get back in anymore
TR Amat: I did quite a lot of volunteer work, there, violet - the concepts people walked into SL with were pretty baroque sometimes...
Chantal (nymf.hathaway): Orientation island is empty because the grievers got banned...and LL moved landing elsewhere
Darkeagle Darkstone: Some were expecting a storyline to follow. they seldom stayed long enough to learn that they were the storyline
Tooyaa (thuja.hynes): for example, hierarchies can be presented as pyramids, or as trees. Which helps you understand the world better? Which helps the world sustain itself better?
Chantal (nymf.hathaway): help island is still a mess, as I noticed today
Darkeagle Darkstone: oh?
Vic Michalak: "You can't go back" (Thomas Wolfe)
TR Amat: The trick is realizing that we are many stories, all woven together...
Jawsome (jes.cobalt): :))) Vic
Stranger Nightfire: Very good point Tooyaa
Darkeagle Darkstone: yes

Mike Shaw (shawza.tunwarm): An anthology

Chantal (nymf.hathaway): rude people having arguments by voice and chat... that's not a welcome new people should receive

Darkeagle Darkstone: agreed

TR Amat: With a new alt you can 'appreciate' the 'joy' of being new in SL again...

Joseph Bard (science24): true :)

Darkeagle Darkstone: nor should they be solicited

Stranger Nightfire: Let us replace pyramids with trees

Tooyaa (thuja.hynes): does a young person entering the workforce want a boss who dictates? or a team who develops?

Darkeagle Darkstone: but l like pyramids

Darkeagle Darkstone: Most don't know what to expect when they enter the workforce

Stranger Nightfire: Again a good point Tooyaa

Darkeagle Darkstone: internships help

TR Amat: Power relationships, and all the mess that goes with them, could do with explicit teaching, rather than the "keep your head down, you'll work it out" approach.

Darkeagle Darkstone: and career preparedness cams do as well

Chantal (nymf.hathaway): l think every person who joins a workforce wants to feel part of a team rather than have a boss who dictates... because creative freedom ensures people strive for the best

Darkeagle Darkstone: true

Stranger Nightfire: l have always thought our society particularly got off on the wrong track after the end of World War ll when so many men were indoctrinated with the highly hierarchical military system of organization

Arianne (ariannejp): l joined an Open Grid, less rude there, but less ppl there too lol

Darkeagle Darkstone: one problem we have to remediate at the college level is that students come to us after being told for the past 18 years to sit down shut up and pay attention. We want them to stand up speak up and share ideas. Nobody prepared them for that.

TR Amat: Even people in 'successful' companies - l've seen far too many that assume they're doing it right because they haven't completely failed yet... No serious looking at elegance, good structure, the 'art' of it...

Violet (ataraxia.azemus): l think there's a correlation there, Arianne :)

Chantal (nymf.hathaway): wow Dark.... you are so right

Darkeagle Darkstone: l am always looking for good ideas about how to fix that

Mike Shaw (shawza.tunwarm): agreed!

Tooyaa (thuja.hynes): l think ASU is a pioneer in this new creative integrative paradigm of higher ed

Stranger Nightfire: yeah TR And ties in with what they call the Peter principal

Darkeagle Darkstone: l love the Peter Principal

Stranger Nightfire: You rise to your level of incompetence and then stay there

Chantal (nymf.hathaway): runs for a drink

bong Crescendo: Academia is not all. Kids need exercise, good nutrition. l think you can learn aspects of stem from e.g. dancing or playing music.

Darkeagle Darkstone: true

TR Amat: Having an emphasis on problem solving, not blame, can help, l found. People need room to make mistakes, or they never learn.

bong Crescendo: perspective in drawing

Darkeagle Darkstone: especially math

Arianne (ariannejp): good point Dark, l will let my students can stand up and have a presentation in loud voice lol

bong Crescendo: also gravity

Darkeagle Darkstone: invite me when you do Arianne

Darkeagle Darkstone: :-)

CB Axel: Neil deGrasse Tyson has talked about how he likes making mistakes because then he learns something. Or something to that effect.

K.T. Burnett (kayt): Do a vertical video of it Arianne

Arianne (ariannejp): hehe , do u come to us in Japan? nice !

Stranger Nightfire: A great many of the world's geniuses who said that their secret is making lots of mistakes

Joseph Bard (science24): the younger the better Arianne :) we need it in an early stage

Darkeagle Darkstone: l will try

Mike Shaw (shawza.tunwarm): Agreed, CB, students also learn from watching us make mistakes.

Darkeagle Darkstone: but you could Skype me in My Skype ID is curtismy

TR Amat: Learning presentation skills, actually being forced to, helped me a lot.

Darkeagle Darkstone: me too

CB Axel: Good point, Mike. If the parents and teachers make mistakes and can learn from them, it gives kids permission to make mistakes, too.

Tooyaa (thuja.hynes): yes.. humanity continues to wrestle with spacetime and gravity.. ideas which were introduced long ago, that spacetime wrinkles, folds, condenses producing all the physical world we experience.

bong Crescendo: even presentation in SL is a kind of practice. l performed music in SL before RL.

Darkeagle Darkstone: even our mistakes

bong Crescendo: l was scared.

Chantal (nymf.hathaway): back

Joseph Bard (science24): welcome back :)

Mike Shaw (shawza.tunwarm): yay!

Arianne (ariannejp): l posted article on my blog, it seems to make a kinda presentations

Darkeagle Darkstone: Hi

Chantal (nymf.hathaway): ☺ thank you

K.T. Burnett (kayt): l'm doing a lot of things in Second Life which Real Life doesn't allow me to do

TR Amat: l was terrified to stand up in front of a big crowd :)

K.T. Burnett (kayt): Welcome back Chantal!

Chantal (nymf.hathaway): ☺

Stranger Nightfire: When you crawl outside the box mistakes will happen

bong Crescendo: l am also thinking back on the first time l had to speak in public!

K.T. Burnett (kayt): In Second Life, it's much safer to make mistakes \o/

Stranger Nightfire: But so will discoveries

Darkeagle Darkstone: Role playing works and Virtual Reality is one of the best role playing platforms invented

Chantal (nymf.hathaway): l made many since l started SC but they are the best educator, Stranger ☻

Darkeagle Darkstone: Sponsor a Vet Life is using Virtual Worlds to help Veterans transition back into civilian life while they also provide other services.

Darkeagle Darkstone: lt works

Arianne (ariannejp): l have another blog for my students and let them post or answer on blog, it will help them a lot

TR Amat: You can learn a lot from roleplay, one of the major things being that you are a lot larger than you give yourself credit for, and that you stretch off in a lot of directions that you've forgotten. IMNAAHO :)

Darkeagle Darkstone: l like that idea

Stranger Nightfire: Maybe that is another mistake with the way in which girls are raised, they think that they are supposed to be perfect all the time

Darkeagle Darkstone: true

CB Axel: And boys aren't expected to be perfect?

Joseph Bard (science24): 3D perfection CB :)

Tooyaa (thuja.hynes): STEAM + MAGMA (Mistakes Are Growth Made Applicable)

Darkeagle Darkstone: nope boys are expected to learn to behave in public sometimes

Joseph Bard (science24): boys don't care :)

TR Amat: Boys cannot fail or important bits of them will drop off. :)

CB Axel: l like that, Thuja.

Stranger Nightfire: Perhaps it is not driven into their heads quite so much CB

K.T. Burnett (kayt): Nice one Tooyaa! :o

Mike Shaw (shawza.tunwarm): Have enjoyed the talk and conversation. l have to wander so will stop the recording at this point. Thanks so much!

TR Amat: Like their pride. :)

Tooyaa (thuja.hynes): eh.. it's a reach but still

bong Crescendo: Chess counts as STEM? Or is related? Because there are the Polgar sisters, esp. Judith Polgar, talking about role models.

K.T. Burnett (kayt): Have a great one Mike!

Chantal (nymf.hathaway): Thank you Mike, for filming! and company ☻ have a nice weekend :)

Darkeagle Darkstone: compare the number of ads containing women to the number containing men

Mike Shaw (shawza.tunwarm): Thanks! Bye all!

CB Axel: Boys have to be perfectly strong, perfectly stoic, perfectly superior.

Darkeagle Darkstone: thanks

Joseph Bard (science24): Bye Mike , have a nice weekend :)

Arianne (ariannejp): very interesting discussion here, but is it be endless?

Tooyaa (thuja.hynes): well to answer that, bong, several State Ed Standards now permit Chess to replace 20% of the Math curriculum

K.T. Burnett (kayt): Arianne, it very well can be... ;)

Stranger Nightfire: Think how many women believe they have to be the absolutely perfect housekeeper, one speck of dust anywhere would be a shame upon them

Darkeagle Darkstone: OOps l have to log off myself. l lost track of time. Thanks!

Chantal (nymf.hathaway): well Dark received material for three more initiatives ☻

Darkeagle Darkstone: yep!

Chantal (nymf.hathaway): l doubt anyone minds Dark ☺

CB Axel: l should go. l have a lot of new videos to watch! LOL

Violet (ataraxia.azemus): l should get moving, too... Thank you, Dark, and be well, everyone :)

TR Amat: l've seen far too many institutions in the business of shaming women...

Chantal (nymf.hathaway): Thank you for this interesting presentation Myron!