Learn To Code Using Scratch

Fahima Bacha

New Jersey City university

11/11/2015

Coding Activity Proposal

Every year, Hudson County Community College Center for Business and Industry hosts the Girls In Technology (GIT) Symposium. The symposium provides information on career opportunities for women in STEM. This is a day-long event, attended by nearly 200 female students from hudson county schools, teachers, guest speakers and sponsors. The event seeks to provide means and educational opportunities to improve and empower girls and women in underserved communities through workshops, exhibits and contests.

As a member of the planning committee for GIT Symposium. I am presenting a coding activity for the 2017 Girls In Technology Symposium. This activity will be using a creative computing curriculum guide-Scratch Curriculum and Exploring Computer Science Curriculum (ECS) to create artifacts that promote developing computational thinking and problem solving across disciplines and contexts.

Description of the Activity

Students will be creating dynamic, interactive and enjoyable computational media and artifacts using Scratch. The activity will introduces the concept of coding using animations, controls and events.

Objectives: Students will be able to complete a Scratch project, share it and present it to the class.

Outline of Activity (45 mins) :Introduction of the project (5 mins), develop and complete the Scratch project (30mins) and present it to the class (10mins).

Resources : Computers with speakers , internet connection and a projector .

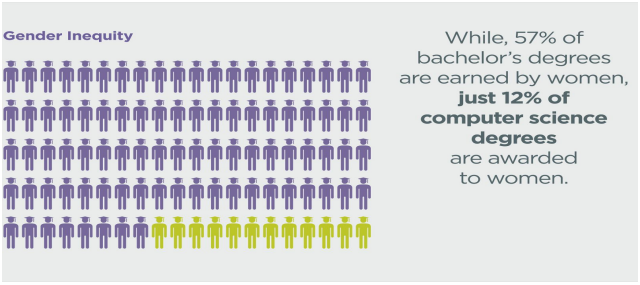
Fahima Bacha

Emerging Educational Presenter

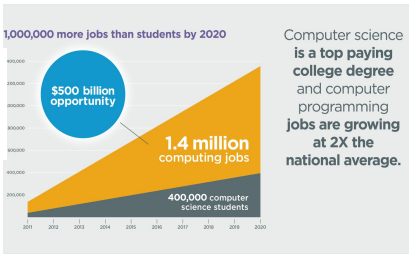
New York Avenue-North Bergen-NJ
www.fahimabacha.com
fbacha69@gmail.com
(201) 923 4278

WHITE PAPER ON HOW TO INTRODUCE CODING IN SCHOOLS

Problem : Lack of students graduating (Girls in particular) in Computer Science and programming.



Fewer CS majors than 10 years ago
(and a shrinking % are women)



QUICK BIOGRAPHY

I am currently a doctoral student in the field of Educational Technology Leadership at New Jersey City University.I teach mathematics and computer programming using C++, Java and Visual Basic at North Bergen High School,NJ. see link http://www.northbergen.k12.nj.us/Domain/594 I hold a Master's degree in Computer Engineering, three teaching certificate: mathematics, computer science technology, special education as well as a Novell Engineer certificate.

SOLUTION : Introduce students (girls) to computer science through engaging hands-on coding activities. Increase conceptual practices of algorithm development , problem solving and programming skills through examples that are relevant to the life of today's students.

SUMMARY : The lack of teaching computer science is hurting our economy and creating discriminations in education in the fields of Computer Science and STEM. Implementation of Computer Science in schools curriculum and new policies to allow computer science courses to count toward core mathematics or science high school graduation requirements will increase enrollment and access to top paying jobs.

Quote : "The best way to prepare [to be a programmer] is to write programs"– Bill Gates, Microsoft co-founder

References

Biz training. (2011,January 1). *How to Write an Industry Leading White Paper.* Retrieved from https://youtu.be/7qpBO0P2E70

Brennan, K., Balch, C., Chung, M. (2014,August 7). Scratch Curriculum Guide. *An introductory computing curriculum using Scratch.* Retrieved from http://scratched.gse.harvard.edu/resources/scratch-curriculum-guide

Christopher,J., Jones, R. (2014, April 9). *Day-Long Event for college and high school students showcased opportunities for women in STEM fields and the innovative contributions women are making;high school students also competed in contest.* Retrieved from http://www.hccc.edu/templates/PBNewsDetail.aspx?id=3896

Goode, J., & Chapman, G. (2015). Exploring Computer Science. Retrieved from http://www.exploringcs.org/curriculum

Sakamuro ,S., Stolley, k., &, Hyde C.(2015, January 15). Purdue Online Writing Lab. *White Paper : Purpose and Audience.* Retrieved from https://owl.english.purdue.edu/owl/resource/546/1/

Promote Computer Science. Retrieved from https://code.org/promote/nj