TOPIC: What is cloud computing and how can we utilize the applications?

STANDARD(S) & INDICATOR(S):
8.2.12.G1 Analyze the interactions among various technologies and collaborate to create a product or system to demonstrate their interactivity

OBJECTIVE(S): SWBAT
- Identify the different hardware components of a personal computer
- Define what cloud computing is.
- Explain how and where the data is stored in “the cloud”
- Describe the connection between the different component of a personal computer and what that particular hardware component does.

MATERIALS:
- Internet access
- Damaged/Non working personal Computers
- Tools to dissect the PCs
- The students used their smart phones to take photographs of the different hardware components found in their PC

LIST OF HANDOUTS (attach original copies of each handout)
- Computer Hardware Web quest Handout
- Rubric for the Grading of the Product, that is the presentation of the Hardware components that teams created using Google Presentation and Google Drive
- Rubric for the Actual Presentation of the Computer Hardware Presentation

BACKGROUND INFORMATION:
Last year I created a lesson on reverse engineering using old personal computers, a hardware definition web quest and a camera. The sophomore Intro to STEM students dissected damaged PCs that I had collected over the years to connect them with the internal working of the personal computers. The teams documented the dissection by photographing the hardware components with a camera. The teams them uploaded the photos onto Aviary and alter their photos and added labels.
EDUCATION TECHNOLOGY INTEGRATION:
Google Presentation was used to create the presentations
Students took their photos using the camera on their smart phones
The pre and Post questionnaire was administered to the students via Socrative.com

CLASSROOM ACTIVITY DESCRIPTION (LABORATORY/EXERCISES/PROBLEMS) including detailed procedures:
Day One: The programming students completed a computer hardware web quest handout. They were allowed to complete the hard copy of the handout or send their digital copy to me via Google Drive. The next day I gave them a pre test survey on what cloud computing meant to them. The students then watched a movie I created in my graduate class on the hardware components of a personal computer.
Days Two and Three: The students dissected and documented the hardware components of the computer. Taking photographs of the computer hardware components
Day Four: Students watched a Smartboard presentation on cloud computing with two videos presentation on what is cloud computing and a video tour of Facebook’s Data Center.
Day Five: Student completed their hardware of the computer presentations and took a brief online questionnaire on what cloud computing means to them.
Day Six: Students presented their presentations to the class, for discussion.

SAMPLE QUESTIONS TO ELICIT CLASS DISCUSSION:
What is cloud computing? What companies use cloud computing? Watch a short you tube video on what computing means presented by children, watch a short you tube video on Facebook Data Centers.

HOMEWORK ACTIVITY/EXERCISES/PROBLEMS
Hardware web quest
The dissection of the Personal Computer
Creation of the Google Presentation on the Hardware of the Computer

PARAMETERS TO EVALUATE STUDENT WORK PRODUCTS:
Pre and Post questionnaire for an informal assessment of the students understanding of cloud computing
Grading Rubric for the Product of the Google Presentation
Grading Rubric for the Group Presentation of the Hardware Components of the computer

REFERENCES:
This material is based on work supported by the National Science Foundation under Grant No. 1054754. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

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Supporting Program: Center for Pre-College Programs, at the New Jersey Institute of Technology

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