LESSON PLAN

Subject:	Information Technology	**Date:**	18/01/2013	**Duration:**	40 mins
Class:	Form 5's	**No in Class:**	20	**No. Present:**	15
Unit:	Data Integrity and Security			**Prepared by:**	Sunita Gopee
Topic:	How can data be kept safe?				

Previous Knowledge:

Students should know what is data and information. They should know what viruses are.
They should be able to work in groups.

Specific Objectives:

Objectives	Assessment
Students should be able to:- (Cognitive & Psychomotor) • Explain what is data integrity • List some of the ways that data could lose integrity • Create a chart showing the different methods of securing data. • Categorize the different methods of securing data as physical or software methods (Affective) • Value the importance of data that has integrity. • Recognize the importance of protecting data.	Graphics organizer - Activity 1 Activity 2 Activity 3 Activity 4

Resources & Materials:

Multimedia; laptop; ActivitySheets1, 2, 3 & 4

Set Induction (2 min)

Intentionally ask a student by calling her full name (not correct though) to help share out material needed for an activity. Ask students if there is another student (use an incorrect name again). Explain that I got an email with a list of students' names from your teacher. Something must have gone wrong. Any suggestions?

Method and Procedure		
Teacher 3 mins	Ask students to work in groups to determine through brainstorming the different ways that data integrity can be compromised. Activity 1- Graphic organizer (Describing wheel)	Interpersonal Verbal/Linguistic
Students 5 mins	Each group present one answer orally	
Teacher 2 mins	Ask students to suggest how data can be secured. Clarify that security measures used to protect data can be categorized as either physical or software-based.	Verbal/Linguistic Interpersonal Bodily/Kinesthetic
Students 7 mins	Collaborate in their groups to suggest ways to secure data and justify whether it is physical or software-based. Each group present one answer and writes it on the correct chart.	
Teacher 5 mins	Ask students why are antivirus programs necessary. Ask students to identify some examples of antivirus. Ask students what is encryption and clarify any misunderstandings.	Verbal/Linguistic Visual/Spatial
Student	Participates in discussions	
Teacher 2 mins	Gives student group exercise on encryption, Activity 2	Interpersonal Bodily/Kinesthetic Mathematical/Logical
Students 5 mins	Completes Activity 3 to assess understanding of data security methods	Verbal/Linguistic
Teacher 3 mins	Corrects Activity 3	
Students	Gives answers	
Students 5 mins	Write a reflection on the topic: Physical security is more important than software-based security. Activity 4	Intrapersonal
Closure (1 min)		
Emphasize the importance of securing data to ensure its integrity		Verbal/Linguistic
Teacher's Reflections		

Lesson Objectives While the objectives included the cognitive, affective and psychomotor domain and were well written and achievable, not all were met. Higher order thinking objectives should have been included. Multiple intelligences were targeted and identified in the lesson but there was no emphasis on any specific type.

Lesson strategies Although there were opportunities for students to collaborate and there was consistent interaction between students and teacher, the lesson was still skewed towards being teacher-centred. Classroom management was effective as well as time management. The varying student activities promoted student engagement. There was a smooth transition from one stage of the lesson to another. The teaching strategies were suited to the lesson. The most effective component of the lesson was the set induction and there was improvement in that there was closure. Two of the four activities accommodated for student differences in learning styles for both the gifted and resource students. The lessons did not include any extensions.

Use of resources The resources stimulated learning and growth was also evident in the increased competency of the effective use of technology.

Assessment Both formative and summative assessments were used. The assessments matched the objectives. They were suited to the lesson, varied and comprehensive. Verbal and direct feedback was used which was sufficient. All students got feedback during the lesson. Samples of activities are attached - Activity 1; Activity 2; Activity 3; Activity 4; Assessment Summary.

Lesson Content The content was suitable to the class but the volume could have been condensed. While content was accurate the transition from one segment to another could have been more clearly demarcated and sequenced. The content was aligned to unit objectives. Overall I felt comfortable with the delivery of the lesson, the anxiety of being in a different school was short lived as the lesson progressed I became more comfortable; the time factor was a concern but the lesson only exceeded the scheduled time by two minutes. The students were very attentive, cooperative and interactive. There was warmth which was demonstrated through their smiles and there was no tension in the class even in the activities that involved group work. What percentage of students achieved objectives? Objective 1 – 47% of the class were able to correctly explain the term data integrity Objective 2– 100% of the class was able to list some of the ways that data could lose its integrity Objective 3- 100% of the class were able to identify different types of security measures and determine whether it was physical or software-based
Objective 4 – 100% of the students recognized the importance of protecting data as a means to maintaining the integrity of data and this was evident through their reflections
The main strategy of the lesson was discussion. Students were engaged in learning. There was evidence of teacher planning and preparation.

Supervisor's Comments