Field Study 3 Technology In The Learning Environment

FS 3 PRT Dr. R.G. Gomez

Naomi M. Tabudlong

This field study course enriches student's experiences in developing and utilizing appropriate technology to facilitate learning. It also provides opportunities for students to practice their skills in ICT.

The observations for this field study were done at Echavez Elementary School, San Roque, Iligan City and Iligan City East High School, Sta. Filomena, Iligan City

Field Study 3 Technology In The Learning Environment

NAOMI M. TABUDLONG

EPISODE 1 | THE SCHOOL'S LEARNING RESOURCE CENTER

LEARNING RESOURCE CENTER OBSERVATION REPORT

School Observed: Iligan City East High School

List of Available Learning Resources in their Library and Computer Center

Available Learning Resources	Characteristics and Unique Capabilities	Teaching Approaches where the Resource is Most Useful
1. Print Resources • Books in Science, (Biology, Chemistry and Physics), also for English, Litereature, Values Education, • Encyclopedia, • Research studies of students	The books age appropriate, relatively new and is used by a good number of students for their studies.	The books are used mainly for research purposes of the students for their reports in class.
2. Audio Resources There were no audio recordings present		
3. Non-electronic visual resources Globes, maps	The non-electronic visual resources like their globe and their maps are still in good condition despite being used widely by the students in their history class.	The globe and the map are used in their history class as an instructional tool.

LEARNING RESOURCE CENTER OBSERVATION REPORT (continued)

School Observed: Iligan City East High School

List of Available Learning Resources in their Library and Computer Center

Available Learning Resources	Characteristics and Unique Capabilities	Teaching Approaches where the Resource is Most Useful
4. ICT Resources • Several computer units • Overhead projector	The ICT resources of their school are relatively new but still in tip-top condition.	The computer units are used for hands-on computer laboratory activities, while the overhead projector is for transparency slide presentations.
Impression: In all, the Iligan City East High School (ICEHS) has a very good number of available learning resources, which are still very relevant to the needs of the students and the teachers and the same time it is also congruent to their curriculum. Hopefully, when budget warrants, they will be able to obtain more resources to fully establish their science, arts and basic education curriculum.		

ANALYSIS

1. **Were the learning resources/materials arranged properly according to their functions and characteristics?**

   At ICEHS the learning resources/materials are arranged properly according to their functions, although they were assigned to different areas.

2. **Do the guidelines and procedures facilitate easy access to the materials by the teachers? Why? Why not?**

   Yes, the guidelines are pretty much simple and the teachers can easily access the materials because the in-charge of the facilities is always around.

3. **What are the strengths of this Learning Resource Center?**

   The main learning resource center of ICEHS is their library. One good thing about it is that it is always open even though the persons-in-charge are teachers. They have arranged their schedule well so that they can accommodate library users anytime of the day. Aside from this, the library also has a good number of books and encyclopedia that the students can use.

4. **What are its weaknesses?**

   The library needs better lighting especially during cloudy days and better ventilation on warm and humid days.

5. **What suggestions can you make?**

   When finances can suffice, it would be better to add more lighting fixtures and ventilation measures to the library.

REFLECTIONS

1. **Which of the materials in the learning resources caught your interest the most? Why?**

   Among the materials in the learning resources at ICEHS, the books really caught my interest because ever since I was a kid I really love reading books, despite some difficulty in relating to some topics.

2. **Which gadgets/materials are you already confident to use/operate?**

   Among the gadgets that I am confident to use are the computer and the overhead projector.

3. **Which ones do you feel you need to learn about?**

   Although I am confident that I can use the computer as an instructional tool, I definitely would like to learn more about the Web 2.0 tools like blogging and social bookmarking as well as the issues that may be encountered in using them for distance learning.

4. **Read an article about your answer in number 3. Paste a copy of the article here.**

   The article I have read for my answer in number 3 is from the Internet written by Laddie Odom, the multimedia producer of the Center for Support Instructio, University of Maryland University College. Its URL is http://deoracle.org/online-pedagogy/emerging-technologies/mapping-newly-identified-web2-benefits.html

   **the pdf version of the article will be submitted along with this portfolio*

Field Study 3 Technology In The Learning Environment

NAOMI M. TABUDLONG

EPISODE 2|BULLETIN BOARD DISPLAYS

BOARD DISPLAYS EVALUATION FORM

Topic of the Board Display: *The Smoker's Body*

Location of the Board Display in School: *School Clinic of Iligan City East High School, Sta. Filomena, Iligan City*

BOARD DISPLAYS EVALUATION FORM (continued)

Shade the column that indicates your rating. Write your comments to back up your ratings.

4-Outstanding 3-Very Satisfactory 2-Satisfactory 1-Needs Improvement

Criteria	1	2	3	4	Comments
Effective Communication Conveys the message quickly and clearly				■	The over-all impact of the display would really make you think twice about or do not even consider smoking as habit.
Attractiveness Colors and arrangement catches and holds interest				■	Although the depiction of the diseases one would suffer due to smoking is very vivid somewhat morbid even but the chosen colors for its design compliment it in a way giving it aesthetic value.
Balance Objects are arranged so stability is perceived			■		The design itself has stability but somehow lacks elements of balance.
Unity Repeated shapes or colors or use borders holds display together			■		There is unity among the elements used in the display. There are no repeated shapes because the design does not call for it.
Interactivity The style and approach entice learners to be involved				■	The style actually entices learners to do the reverse of so that they will not get sick.
Legibility Letters and illustrations can be seen from a good distance		■			The letters are not that visible from a good distance; the viewer needs to one to two meters from the display.
Correctness Free from grammar errors misspelled words, ambiguity				■	Despite its scientific nature, there are no mistakes, grammatically and conceptually.
Durability Well-constructed, items are securely attached				■	The display is very durable because it is made of tarpaulin.

ANALYSIS

1. **Did the board display design reflect the likes/interests of its target audience? Why? Why not?**

   Yes, the display actually reflects the interests of its target audience because teenagers actually like to experiment on things like smoking.

2. **Was the language used clear and simple for the target audience to understand? Why? Why not?**

   Yes, the language used is clear and simple – in fact the diseases are written in Filipino and in English.

3. **What do you think was the purpose of the board display? Was it effective? Why? Why not?**

   I think the display is very effective, in a sense that one would not smoke or even inhale secondhand smoke because of the visual message it delivers.

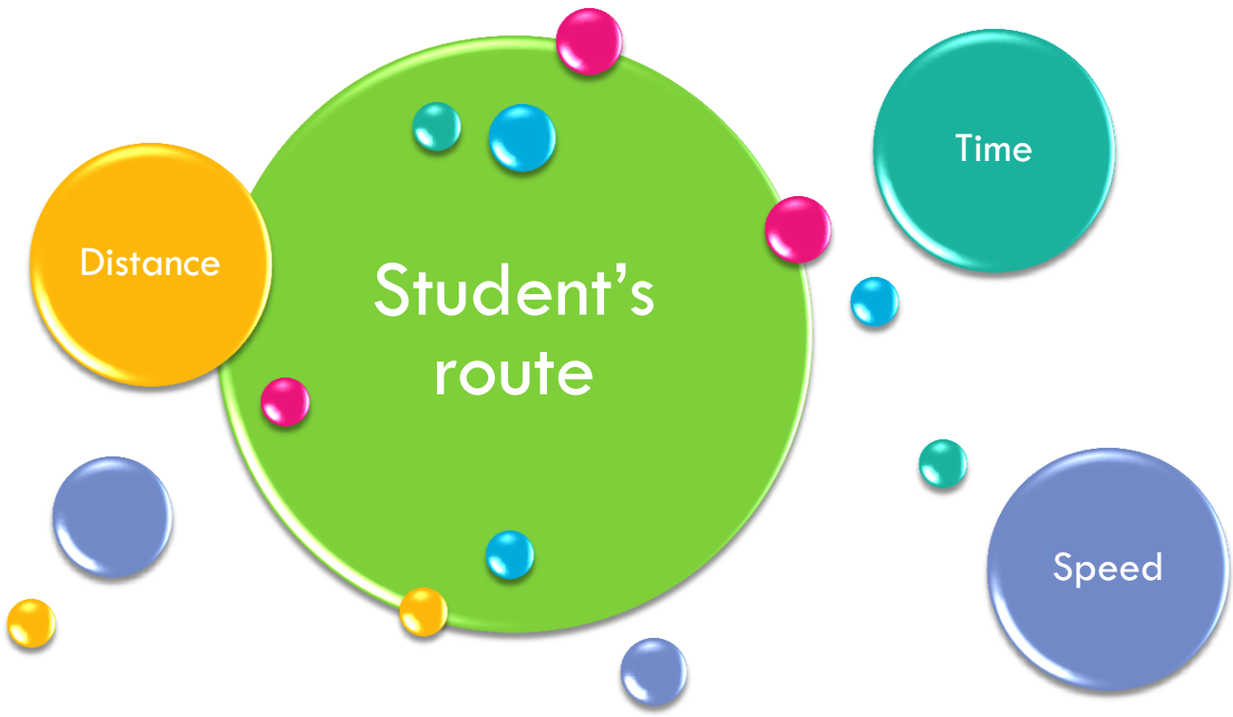
4. **What suggestions can you make?**

   Although the display is very effective, there must be another display to balance its somewhat negative impression, like perhaps what happens when one maintains a healthy lifestyle.

My Proposed Board Display

Theme: *Physics In Everyday Things*
Board Title: *Going To School With Physics*
Rationale: *This board display is intended to stimulate appreciation of physics concepts in everyday situations so that they will understand their physics lessons.*
Objective: *To teach students about the concept of kinematics or description of motion as they travel from their home to school.*
Best features of my proposed bulletin enhancement: *An example of a student's route in going to school.*
Content Resources (Name each needed resource and give each a brief description): *The display shall contain pictures depicting the following content resources:* *Time – the duration of travel from home to school* *Distance – the amount of space travelled from home to school* *Speed – the rate of travelling from home to school* *It will also include a map showing the hypothetical route from home to school of a certain student.*
Materials for aesthetic enhancement: *Pictures, Printouts of concepts, special papers, and strings aside from glue and scissors.*

My Board Display Lay-out



REFLECTIONS

1. **Name at least 5 skills that a teacher should have to be able to come up with effective board displays. Elaborate on why each skill is needed.**

   The skills that a teacher should possess in order to come up with an effective board display are

   - *Creativity – she/he must be able to come up with unique ways to portray lessons or concepts.*
   - *Elegance – she/he must strive for balance between vibrant and conservative design so that the message will be delivered properly.*
   - *Ingenuity – she/he will be able to apply problem solving skills in coming up with a display.*
   - *Resourcefulness – she/he will be able to come up with an effective board display using the available resources at hand.*
   - *Innovativeness – she/he will be able to introduce contemporary topics to his/her board display.*

2. **Which of the skills do you already have? Recall your past experiences in making board displays. How do you practice these skills?**

   The skills that I already have are creativity, resourcefulness and innovativeness. I do not have much experience in making board display, the one that I could clearly remember was in elementary, but I am able to practice these skills through the lessons in the EdTech course I am taking right now.

3. **Which skills do you still need to develop? Reflect on how you can improve on or acquire these skills.**

   I feel that I need to develop more elegance and ingenuity in coming up with designs not only in making a board display and other instructional materials. I can improve on these skills by constant practice and by research on various designs helpful in coming up with instructional materials.

Field Study 3 Technology In The Learning Environment

NAOMI M. TABUDLONG

EPISODE 3 | SEE AND SAY (UTILIZATION OF TEACHING AIDS)

UTILIZATION OF TEACHING AIDS FORM

Grade/Year Level of Class Observed:

Pre-school/kinder, afternoon session at Echavez Elementary School, San Roque, Iligan City

Date of Observation: *October 10, 20011*

Subject Matter: *English*

Brief Description of Teaching Approach Used By the Teacher:

The teaching approach used by the teacher is the individualized teaching approach – the students read the syllables on the board and at the same time write on their pad paper the syllable they have read. Then the teacher used a big book for storytelling to augment their focus on the lesson at hand.

Teaching Aids Used	Strengths	Weaknesses	Comments on the Appropriateness of the Teaching Aids Used
Word Charts	Clearly written	Not stored properly	It is appropriate to the lesson in reading; it encourages student participation.
Big book	Very colorful, age appropriate and insightful	Some of the students cannot relate to some of the things mentioned in the story.	Telling stories is an effective way to integrate values.

ANALYSIS

1. **What do you think prompted the teacher to choose the materials/learning resources that she/he used?**

   The one thing that prompted the teacher to use the materials in the lesson is appropriateness in fulfilling the lesson objective of the day through a method that the students will enjoy.

2. **What difficulties, if any, did the teacher experience? How can this be managed?**

   The difficulties that the teacher had while the class was going on, is primarily on making the students relate to the story (it was "Ang Tipaklong at ang Langgam", although the story was relayed in Cebuano by the teacher). She was able to manage by gently explaining the story and by pointing out experiences that they may have that relates to the story.

3. **Over-all, were the learning resources/materials used effectively? Why? Why not?**

   Yes, the big book really was effective in keeping the students attention at the same time it enhanced their imagination.

REFLECTIONS

Put yourself in the place of the teacher. What would you do similarly and what would you do differently if you will teach the same lesson to the same group of students? Why?

I would probably do the same with the recitations of the syllables and I would also have a storytelling session using a big book because of the positive response of the students. But I will probably not include the writing activity after the recitation because some students found the activity not so interesting, so they began standing up and began talking.

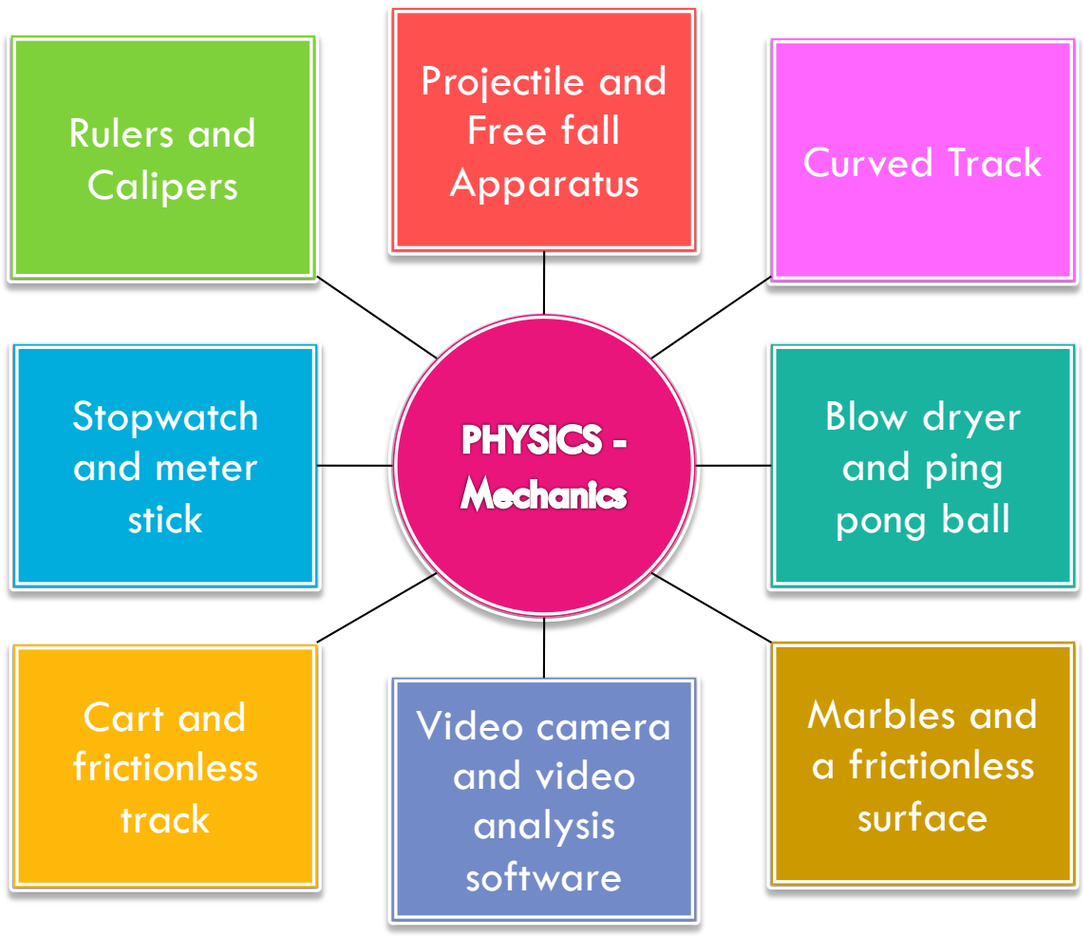
Field Study 3 Technology In The Learning Environment

NAOMI M. TABUDLONG

EPISODE 4 | TOOLS OF THE TRADE (TEACHING AIDS BANK)

LEARNING RESOURCES ON A SPECIFIC CONTENT AREA

TOPIC: *MECHANICS (Physics)* **Grade/Year Level:** *4th Year High School*



ANALYSIS

Give at least three benefits of doing a survey of available materials before making your own materials? Explain each.

If I do a survey of available materials before making my own, I can save time – instead of making my own and figuring out how my lesson will proceed, I can just focus on how to use the available materials for the lesson. Another is I can save money and material resources. Why do I have to spend when there are already appropriate resources available? Obviously, this is very trivial in these times of trying economic times. Third, I can also find out what other resources are available which can be used in the future lessons. This way I only need to have a yearly inventory and then plan the materials I will use throughout the school year.

REFLECTIONS

1. **Which of the materials did you like making the most? Why?**

   Although most of the materials I have listed are not fabricated nor synthesizes personally, I especially liked the using the video analysis software because it enables the class to analyze the components of motion of a certain object.

2. **What difficulties, if any, did you encounter in making the materials? How did you overcome them?**

   Making most of these materials on my own would be really difficult but some can be made with the help of professionals who have expertise and the proper equipment. In order to overcome such difficulties, I will just find alternative materials that are readily available and affordable.

3. **What tips can you give teachers regarding preparation of teaching materials?**

   The best tip I can give to teachers regarding preparation of teaching materials is make use of the resources available at home, in the school or can be bought at the convenience store for a low price. They can also search the Internet for creative ways to utilize such commonly found items in their lessons.

Field Study 3 Technology In The Learning Environment

NAOMI M. TABUDLONG

EPISODE 5 | PAPER WORKS! (PREPARING HAND-OUTS)

MY HAND-OUT PLAN

Subject Matter: *Series and Parallel*

Grade/Year Level *Fourth Year High School Students*

Outline

- **Resistors in Series Circuit**
- **Parallel Resistors Circuit**
- **Examples**

Type of Graphic Organizers/flow-chart/schema to use

- **Diagrams showing the circuit**
- **Real circuits using light bulbs**

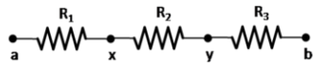
References

- Conceptual Physics by Paul Hewitt
- Modern Technical Physics by Arthur Beiser

SAMPLE HAND-OUT

Resistors in Series

— Single current path between points, so current through all the resistors is the same.



— The voltage difference across the three resistors are

$$V_{ax} = IR_1, V_{xy} = IR_2, V_{yb} = IR_3$$

— The total voltage across the three resistors is

$$V_{ab} = V_{ax} + V_{yx} + V_{yb} = IR_1 + IR_2 + IR_3 = I(R_1 + R_2 + R_3)$$

— The equivalent resistance of resistors in series is

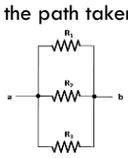
$$R_{eq} = \frac{V_{ab}}{I} = R_1 + R_2 + R_3$$

— In a series circuit, the equivalent resistance is equal to the sum of the individual resistances.

— The equivalent resistance is greater than any individual resistance.

Parallel Resistors

— Potential difference is the same across each element (it does not depend on the path taken).



— Current has alternative routes so current through each resistor is not equal.

$$I_1 = \frac{V_{ab}}{R_1}, I_2 = \frac{V_{ab}}{R_2}, I_3 = \frac{V_{ab}}{R_3}$$

— The total current is the sum of all current through the resistor is

$$I = I_1 + I_2 + I_3 = \frac{V_{ab}}{R_1} + \frac{V_{ab}}{R_2} + \frac{V_{ab}}{R_3} = V_{ab}\left(\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}\right)$$

— The reciprocal of the equivalent resistance of resistors in parallel is

$$\frac{1}{R_{eq}} = \frac{I}{V_{ab}} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$

— In a parallel circuit, the reciprocal of the equivalent resistance equals the sum of the reciprocals of their individual resistances.

— The equivalent resistance is always less than any individual resistance.

ANALYSIS

1. **What are the good features of a handout?**

   A good handout helps students prepare for the coming lesson. Also, it must give the students a clear description of the activities or procedures that they have to do in order to understand the lesson. Another, it should include pictures, graphs and other illustrations related to the lesson.

2. **Which of these features are present in the handout I made?**

   In the sample, I have already given a good contrast between the two circuits which also includes circuit diagrams.

3. **Which features are not present in the handout I made?**

   The sample I made lacks concept elaboration and examples for application and problem solving.

REFLECTION

1. **What difficulties, if any did you encounter in making the handouts? How did you overcome them?**

   The difficulty that I encountered while making the sample handout is in drawing the circuits. I was able to overcome it with the help of drawing tools, but it took me a while to finish it. But it is definitely better than drawing by hand.

2. **What tips can you give teachers regarding preparation of handouts?**

   In making handouts, it is always best to start with an outline so that one will be guided on what topics to include. Now, it might be time-consuming to create one's own illustrations, but then you can always use this illustrations for other instructional materials like exams and slide presentations.

Field Study 3 Technology In The Learning Environment

NAOMI M. TABUDLONG

EPISODE 6 | SLIDESHOW BIZ (SLIDE PRESENTATIONS)

SLIDE PRESENTATION PREPARATION ACTIVITY FORM

Title of My Presentation: *Series and Parallel Circuits*

Objectives: *To compare series and parallel circuits in terms of its structure,*

Subject Matter/Topic: *Physics/Electricity*

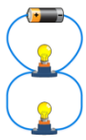
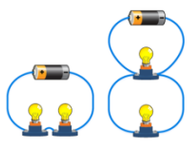
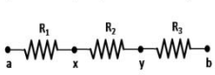
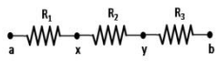
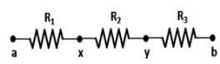
Enhancements (Check Appropriate Box):

☒Graphics ☒Animation (Slide transition) ☐Sound Effects	☐Music ☐Voice Narration ☒Stylish Fonts	☒Hyperlink ☐Others, please specify _____

Description of Appropriate Use:

This slide show presentation will be used to present the contrast between resistors in series and parallel resisors.

Presentation Story Board:

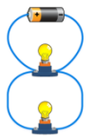
Slide 1	Slide 2	Slide 3
 SERIES AND PARALLEL CIRCUITS Naomi M. Tabudlong 	OUTLINE • SERIES CIRCUIT • PARALLEL CIRCUIT • EXAMPLES • APPLICATIONS 	 SERIES CIRCUIT
Slide 4	**Slide 5**	**Slide 6**
CURRENT IN A SERIES CIRCUIT • Single current path between points, so current through all the resistors is the same.  	**VOLTAGE OF A SERIES CIRCUIT** • The voltage difference across the three resistors are • $V_{ax} = IR_1, V_{xy} = IR_2, V_{yb} = IR_3$ • The total voltage across the three resistors is • $V_{ab} = V_{ax} + V_{yx} + V_{yb} = IR_1 + IR_2 + IR_3$ • $= I(R_1 + R_2 + R_3)$  	EQUIVALENT RESISTANCE • The equivalent resistance of resistors in series is • $R_{eq} = \frac{V_{ab}}{I} = R_1 + R_2 + R_3$ • In a series circuit, the equivalent resistance is equal to the sum of the individual resistances. • The equivalent resistance is greater than any individual resistance.  

SLIDE PRESENTATION PREPARATION ACTIVITY FORM (continued)

Presentation Story Board (continued):

Slide 7

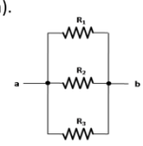
PARALLEL CIRCUIT

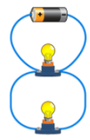


Slide 8

VOLTAGE OF A PARALLEL CIRCUIT

- Potential difference is the same across each element (it does not depend on the path taken).

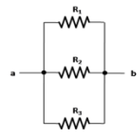




Slide 9

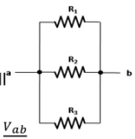
CURRENT IN A PARALLLEL CIRCUIT

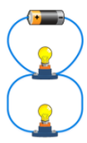
- Current has alternative routes so current through each resistor is not equal.
- $I_1 = \frac{V_{ab}}{R_1}, I_2 = \frac{V_{ab}}{R_2}, I_3 = \frac{V_{ab}}{R_3}$



Slide 10

- The total current is the sum of all current through the resistor is
- $I = I_1 + I_2 + I_3 = \frac{V_{ab}}{R_1} + \frac{V_{ab}}{R_2} + \frac{V_{ab}}{R_3}$
- $= V_{ab}\left(\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}\right)$

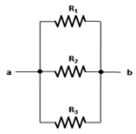


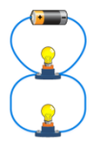


Slide 11

EQUIVALENT RESISTANCE

- The reciprocal of the equivalent resistance of resistors in parallel is
- $\frac{1}{R_{eq}} = \frac{I}{V_{ab}} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$





Slide 12

- In a parallel circuit, the reciprocal of the equivalent resistance equals the sum of the reciprocals of their individual resistances.
- The equivalent resistance is always less than any individual resistance.

Slide 13

EXAMPLES

Slide 14

APPLICATIONS

ANALYSIS

1. **What are the features of a good slide presentation?**

   A good slide show presentation must be concise, direct to the point and insightful at the same time. It can have transitions and animations to emphasize a point but should not be too much. Its design, lay-out and formatting should be balanced with the concept presented.

2. **Which of these features are present in the slide presentation you made?**

   Among the features mentioned above, the slide presentation I made has appropriate transitions and animations, where the format and design is congruent to the concept presented – it does not clutter the slide.

3. **Which features are not present in the slide presentation you made?**

   I am afraid that the slide presentation I made is neither short nor concise. Also, the text lay-out that I have made does not follow the rule on "six lines per slide, six words per line".

REFLECTIONS

What difficulties, if any did you encounter in making the slide presentation? How did you overcome them?

In making the slides, so far, the difficulty encountered is choosing the information that should appear on the slide, since there is a lot of information being discussed in the reference materials. To overcome them, I read the summarized form of the lesson and from there come up with an outline that would make the preparation of the slide easier.

Field Study 3 Technology In The Learning Environment

NAOMI M. TABUDLONG

EPISODE 7 | MY E-WORLD

WEBSITE VISIT ACTIVITY FORM

Name of Author:	*Tony R. Kuphaldt (he is the author of the textbook used on-site)*	
Name of Site:	*All About Circuits*	
Posting or Revision Date:	*Not mentioned on the site*	
Organization represented:	*All About Circuits published through Design Science License*	
Date of Access:	*October 15, 2011*	
URL:	http://www.allaboutcircuits.com/vol_1/chpt_5/1.html	
Brief Description of the material in the website:	*The above URL is just a portion of a series of textbooks on electricity and electronics that they have published online. In this part, it gives a bird's eye view of the contrasting characteristics of a series circuit and a parallel circuit.*	
Evaluation of the Website:	**STRENGTHS** *It is very informative and it really gives the reader a good head start about the similarities and differences between the two circuits.*	**WEAKNESSES** *Since it is part of an online textbook, it assumes that the reader is familiar with the terms being used by the author.*

REFLECTIONS

Through this episode, I was able to come across the role of the teacher in making a responsible choice in determining the appropriateness of the instructional tools especially when it comes from the World Wide Web. The teacher has to spend time in previewing and evaluating prospect sites to be used in the class. Although, the teacher has all the help he or she will need when looking for materials to use in class because there are a lot of sites that cater to their needs.