LESSON PLAN **Subject**: Information Processing

Materials/Aids Required: Overhead – Review of IP Cycle Steps, 2 poster boards, IP Cycle Comparison assignment and rubric, board management plan, rubric for marking, graphic organizer example

Unit	Module 7: Developing Information Processing Skills for Personal Use
Topic	Information Processing Cycle
Content	Explain the importance of information processing in personal life and business activities.

Objectives:	Evaluation:
1.) After the lesson, SWBAT explain their own comparison of how the IP cycle is like _____ because using a graphic organizer.	1.) Students will complete the given assignment and will be evaluated based on the rubric attached to the assignment.

Pre Requisite Learning: Module 2. Knowledge of the different parts of the information processing cycle (input, process, output, distribute)

Prep for Lesson: Write Bell Work on the board, Create 2 different poster boards. One with the heading How is the IP cycle and the Brain alike? and the second with the heading How do the IP cycle and the Brain differ? create a graphic organizer example.

Presentation	Classroom Management
Bell Work: (2 min) List the four stages in the information processing cycle and give a brief description.	- as students are working, take attendance - handout the assignment and rubric for IP cycle analogy handout (attached) facedown on each desk
Set: (3-5 mins) Once the attendance is done and handouts have been distributed, tell students to stop writing and ask if anyone can tell you what the first step in the information processing cycle is. Have them give you a brief description of the step. Repeat this process for the other 3 steps in the cycle. Once all of the steps in the cycle have been reviewed, tell students that we are going to put the whole process together.	- Tell them you want everyone to be participating - If students cannot remember all of the steps, place an overhead up that describes the 4 steps in the cycle to review. Take away the overhead and ask students to describe the steps again to check for understanding.
Development: (35-40 mins) 1. Ask students to think about the function of their brain. What is its purpose? Tell students that we are going to compare the IP cycle to our brain.	- Have students copy the lists in their books - When students work with their partners circulate to ensure they are on task

2. Follow the format attached under BOARD MANAGEMENT to place the analogy of the IP cycle on the board. Start writing the title in the center of the top of the board. 3. Sticky tack the poster to the board with the heading How is the IP cycle and the Brain alike? Ask students to talk with their neighbor about why they are alike. After ~5 minutes, call on a student to give you a reason they think the IP cycle and the brain are alike. Write it on the poster board. Continue doing this until all of their answers are up or until there are 15-20 reasons listed. 4. Discuss the list with the students and ask if there is anything else they can think of to add to the list. Now ask students to think about how the IP cycle and the brain are different. 5. Sticky tack the poster to the board with the heading How do the IP cycle and the Brain differ? Ask students to talk with their neighbor about why they are different. After ~5 minutes, call on a student to give you a reason they think the IP cycle and the brain are alike. Write it on the poster board. Continue doing this until all of their answers are up or until there are 10-15 reasons. 6. Discuss the lists on each of the poster boards. Comment on ideas that are very strong on each page. Ask students after looking over them if there is anything else they can think of to add. 7. It is now the students turn to create their own analogy. Ask students to think about another concept to compare the IP cycle to. Explain the assignment for the day with the expectations and the rubric (attached). Place your graphic organizer on the board as an example. 8. Tell students that they will have the next 15-20 minutes (time permitting) to work on the assignment. Tell them the assignment is due at the beginning of	- Be sure partners are discussing in a proper tone and not distracting other students - If the discussion between partners seems like too much or too little time, change accordingly - When calling students attention back to the front, put your hand up and ask for the eyes to be up front again - When discussing the assignment have students repeat the instructions back - Tell students they can talk quietly with their neighbor or listen to iPods when they are working on their assignment but they must stay on task and keep the noise level to a minimum. If the noise level gets to high, give one warning. If it continues to be loud, tell students this has just become a silent assignment.

class tomorrow so if they don't have time to finish in class they can finish at home.	
Closure: (5 mins). Call students attention back to the front of the class. Ask a student to state the comparison we made during class today. Ask 4 different students to compare the 4 steps of the IP cycle to the brain. Remind students that their comparisons will be due at the start of class tomorrow.	
Adaptive Dimensions: - supply graphic organizers for students to use as ideas to make their comparisons - help students generate comparisons they may use for the IP cycle.	

Target For Professional Growth

1. How did I relate the brain to the IP cycle? List the relations that were made.

2. How did I state the differences between the brain and the IP cycle?

3. Was the analogy of the brain and IP cycle easily understood by the students? How did the students react to the analogy given?

4. If students were struggling creating their own analogy, how did I help them move in the right direction?

BOARD MANAGEMENT

Chalk Board #1 – follow this format for writing on the board

The Information Processing Cycle is like a Brain Because…

Sticky Tack Poster Board #1
How…are alike?
HERE

Sticky Tack Poster Board #2
How do they Differ?
HERE

Some possible answers for how they are alike:

- both process information
- receive information (from sights & sounds, from input)
- make decisions
- can store information (in memory, as a document)
- can send information (to other body parts, to other parts of the computer)

Some possible answers for hoe they are different:

- one has cells
- one is living, one is not
- IP cycle needs electricity
- information processing is done with a computer

The assignment example for the graphic organizer should include the above information. In the middle will be the picture of a brain that is drawn and the IP cycle steps will be listed around the brain. Complete the organizer by adding the information in an organized way.

Overhead – Review of IP Cycle Steps

IP CYCLE STEPS

INPUT – anything entered into a computer. This includes keystrokes, talking into a microphone, or mouse movements.

PROCESS - computer will make decisions, do calculations, and organize data

OUTPUT – anything that comes out of a computer either electronically or physically (screen, printed items)

DISTRIBUTE – information needs to be sent elsewhere (stored) so it can be used later

Information Processing Cycle Analogy Assignment

"The IP Cycle is like _____ because…"

Your assignment is to fill in the blank of the above statement. What is another item, concept or thing we can compare the IP cycle to? Create a comparison and use a graphic organizer such as a concept map to explain your analogy. You will be marked on your creativity in the analogy and the display of your graphic organizer. Be sure to include all the steps of the IP cycle.

Evaluation: Rubric

	1	2	3	4	5
Creativity	Student showed some creativity in their idea and almost none in their graphic organizer		Graphic Organizer was pleasant to look at, put thought into coming up with idea		Graphic Organizer and idea were unique, extremely creative with idea and display
Organization	Idea and display were hard to follow		Most of the display was organized, but some parts were confusing		Display was extremely easy to follow and understand
IP Cycle Present	Did not label any steps in the IP cycle		Had some steps labeled, with a few descriptions		All steps present with descriptions
Comparison	Comparison not given directly		Only some steps are compared		All steps are compared with a reason why they are alike

Total: /20

Student Name:_____

Comparison Made: _____

Evaluation: Rubric

	1	2	3	4	5
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Total: /20

Comments:

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Strategy Name: Synectics

Explanation of Strategy

This is a teaching strategy using metaphors and analogy to increase the understandings of students about a particular topic or issue. They can also help develop student's ability to think creatively because it can deliberately force strange things together and form uncommon connection.[1] Synectics can be used at the end of a unit as a review before a test.

Why This Strategy Works

Teaching with analogies and metaphors helps students increase their critical and creative thinking skills by making them think outside the box. Often when we do analogies it is easy to remember especially if we make the connection ourselves. When create analogies it is useful to relate two very different concepts so that students really have to think out of the box. This also creates a mental representation that is easy to recall during tests.

Business Education Content that Could be Taught Using this Strategy

Accounting - 1.23 To introduce the accounting cycle and explain how each activity to follow will relate to this cycle.

- Students can relate the accounting cycle to an object. This will help them remember each step of the accounting cycle.

Information Processing - 19.1 Define desktop publishing and describe the desktop publishing cycle.

- Students can relate the desktop publishing cycle to an object

[1] Regina Public Schools and Saskatchewan Learning (2003.) *Synectics,* Best Practices: Instructional Strategies and Techniques. Online. http://www.saskschools.ca/curr_content/bestpractice/synectics/index.html