

An aerial, high-angle view of a dense urban landscape, primarily in shades of gold and brown. A prominent, tall, dark skyscraper stands in the center. The sky is filled with various floating elements: two large commercial airplanes, a helicopter, several birds, and a large, full moon. In the foreground, there are several modern buildings, including two circular ones. A wide road with cars and a green field are visible. Three white rectangular cards with text and diagrams are floating in the air. The overall atmosphere is surreal and dreamlike.

# Gd Afternoon

Template by Missing Link  
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# Gd Afternoon

Generation Gap 2008

MP3s

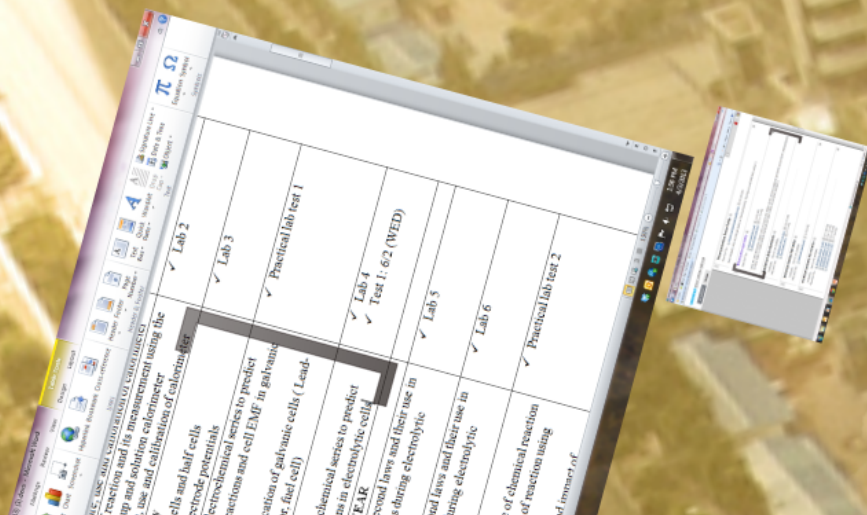
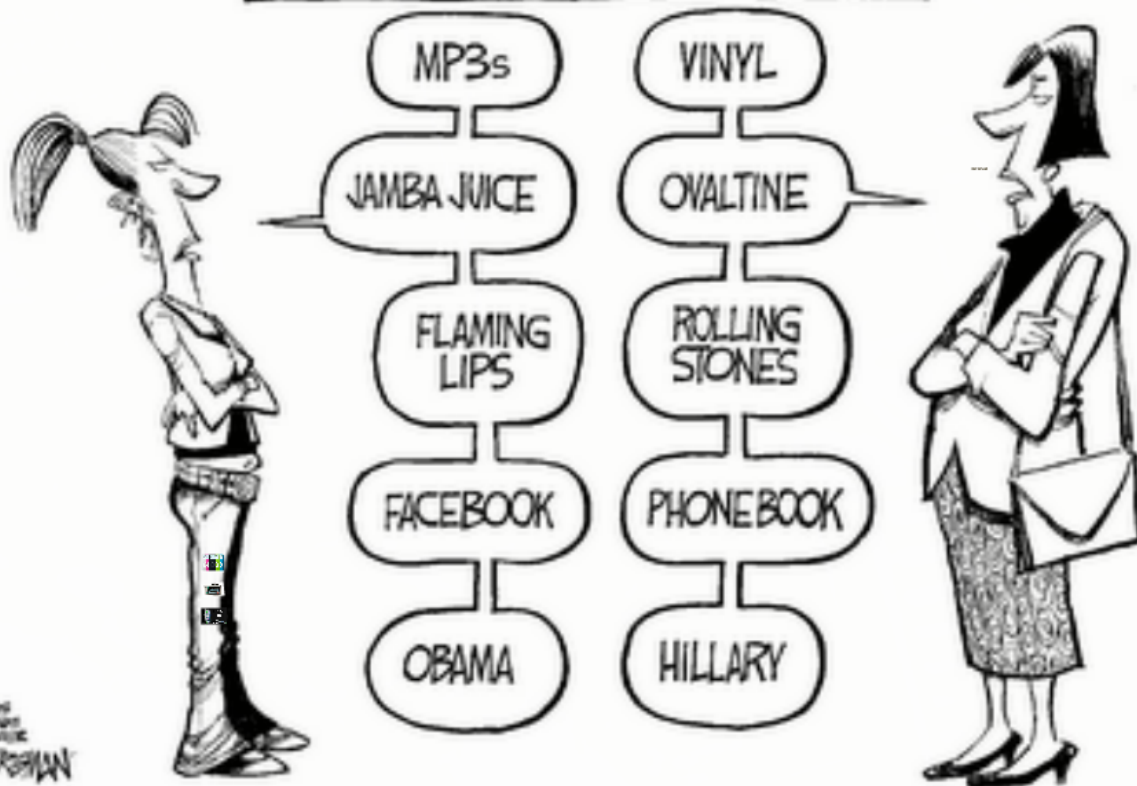
VIMs







# Generation Gap 2008

















## iPhone 10

The latest iPhone yet.

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**Old School**

# REDOX REACTIONS

Redox reaction involves the transfer of electrons from one chemical species known as the reductant to another known as the oxidant.

Metals and negatively charged ions (anions) are the common reductants. Meanwhile, non-metals and positive ions (cations) are the usual oxidants.

Reductants undergo a process known as oxidation; during this process their oxidation number becomes more positive.

Oxidants undergo a process known as reduction; during this process their oxidation number becomes more negative.

Oxidation numbers are numerical values assigned chemical species to represent the charges they carry in a compound.

In this part of the syllabus, we are only interested in balancing the redox reaction in an acidic medium.





# Generation Gap

MP3s

V

# Electrochemi-song

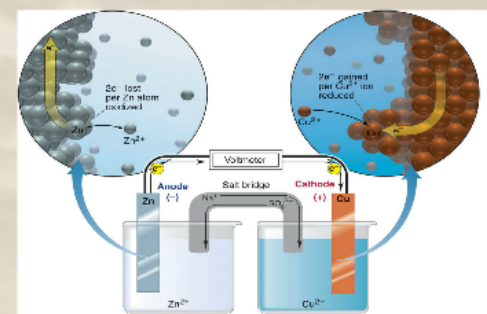
At the top of the ECS,  
They're the strongest oxidants,  
For voltaic cells you should know  
That anode is negative.

For the half equation, balancing and state symbols,  
They are vital plus deriving the overall equation...

## Chorus:

Oxidation,  
it always happens at anode,  
Reduction at cathode,  
For electrolytic and also for the galvanic cell...

For the galvanic cell,  
Cations in the salt bridge,  
They will move to the cathode  
to counter electrons gained....





	<ul style="list-style-type: none"> <li>✓ Structure, use and calibration of calorimeter</li> </ul>	
3	<ul style="list-style-type: none"> <li>✓ Heat of reaction and its measurement using the coffee-cup and solution calorimeter</li> <li>✓ Structure, use and calibration of calorimeter</li> </ul>	✓ Lab 2
4	<b>Electrochemistry</b> <ul style="list-style-type: none"> <li>✓ Galvanic cells and half cells</li> <li>✓ Standard electrode potentials</li> </ul>	✓ Lab 3
5	<ul style="list-style-type: none"> <li>✓ Use of the electrochemical series to predict products of reactions and cell EMF in galvanic cell</li> <li>✓ Common application of galvanic cells ( Lead-acid accumulator, fuel cell)</li> </ul>	✓ Practical lab test 1
6	<b>Electrolytic cell</b> <ul style="list-style-type: none"> <li>✓ Use of the electrochemical series to predict products of reactions in electrolytic cells</li> </ul>	✓ Lab 4 ✓ Test 1: 6/2 (WED)
7	<b>CHINESE NEW YEAR</b>	
8	<ul style="list-style-type: none"> <li>✓ Faraday's first and second laws and their use in determining quantities during electrolytic reaction.</li> </ul>	✓ Lab 5
9	<ul style="list-style-type: none"> <li>✓ Faraday's first and second laws and their use in determining quantities during electrolytic reaction.</li> </ul>	✓ Lab 6
10	<b>Rate of Reactions</b> <ul style="list-style-type: none"> <li>✓ Ways of measuring the rate of chemical reaction</li> <li>✓ Methods for increasing rate of reaction using collision theory</li> <li>✓ Understand the importance and impact of</li> </ul>	✓ Practical lab test 2

**Thermochemistry Power Points**

Attached Files: [\\_Thermochemistry\[students\]\(Bb7\).ppt](#) (38.629 MB)

Dear Students, Here are the ppt slides on Thermochemistry. We hope you will find them useful =)

**Electrochem ppt slides**

Attached Files: [\\_Electrochemistry\(1\).ppt](#) (4.486 MB)  
 [\\_Electrochemi-song.docx](#) (13.187 KB)

Dear All, The Electrochem slides r here in Course Doc folder, but it's not encouraged to print them out as there's Wwwwaaayyy so many slides. U could probably download and refer to them as and when needed =)

**Equilibrium Extra Questions**

Availability: Item is not available.

Attached Files: [\\_Equilibrium PYQ \(2\).docx](#) (49.576 KB)  
 [\\_Equi Answers.docx](#) (77.01 KB)

**Chemical Industry Ppt slides**

Availability: Item is not available.

Attached Files: [\\_Chemical industry.ppt](#) (2.236 MB)

**workbook answers for revision**

Availability: Item is not available.

Attached Files: [\\_Workbook answer 19.pdf](#) (211.998 KB)  
 [\\_Workbook answer 20.pdf](#) (252.131 KB)



## The Ester Song



In naming all the esters,  
You must state hydroxyl first,  
Followed by Carbo. Acid  
Then you will always be right.

But when drawing out the structures,  
The acid group must come foremost,  
Followed by Hydroxyl group,  
Guaranteed you'll be correct.

### Chorus:

The Ester World,  
Found in the fruits, solvent and oils  
Such sweet and fruity smells,  
Just Three Stages,  
In lab preparation of all esters.

The First Stage is Synthesis,  
The 2nd would be Isolation,  
Purification would be the last step in preparation...

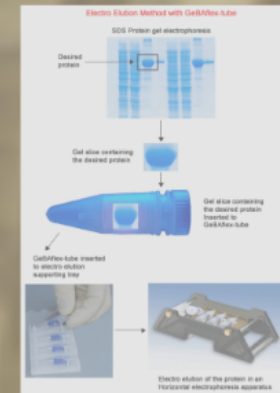
## The Protein Song

The isolation method,  
Depends on protein location,  
But both have common first steps,  
Dear class, you know what it is...

It's perfect to draw tables,  
Compare, contrasting the techniques,  
Like for micro- and ultrafiltering various proteins...

### Chorus:

This Protein song,  
Should be in each and all your hearts,  
It's not too difficult,  
Can take your time,  
In memorizing all of the lyrics.





## Extraction of DNA

You have to know the techniques,  
Two ways for the small plasmid,  
A.k. Denaturation and Caesium Chloride methods.

Absorbance at 260,  
Quantifies nucleic acids,  
What's the ratio to tell us if it's pure DNA?

### Chorus:

Isolation of nucleic acids is vital,  
It's good to draw flow charts,  
To see the flow,  
Then learning wouldn't be so difficult.



## Cardiovascular Song



The heart's conduction system is so great,  
It starts off at the Sinoatrial Node,  
Depolarization spreads to the AV,  
It's a node, where conduction is delayed.

From the AV Node, it spreads on to the Bundles,  
First noted by a man called Wilhelm His,  
It spreads on to the Left and Right Branches,  
Ending up in the Purkinje Fibers.

### Chorus:

Have you ever heard the beating of your heart?  
Or ask yourself all concepts being learnt?  
Can you try recalling...  
How to analyse ECG...

## **DNA Is In Your Cells**

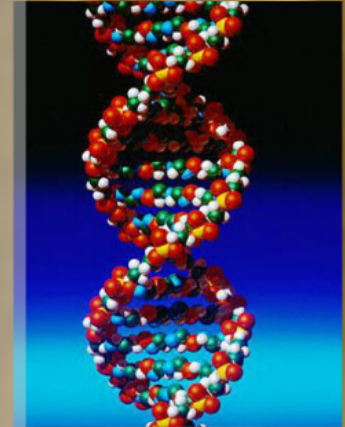
**DNA is special,  
Do you know what it stands for?  
De-oxy-ri-bo-nu-cleic  
It's an acid that's for sure.**

**It's made up of sugars,  
Phosphates and many bases.  
Four types of bases that will pair up based on  
Chargaff's Rule.**

### **Chorus:**

**A whole new world,  
DNA is in all your cells,  
Packaged in chromosomes,  
In your nucleus,  
That's where you will find your DNA.**

**This you must not forget,  
Adenine pairs with Thymine,  
Cytosine always pairs up with the humble guanine  
base**







## IDEA Song

To grow creativity,  
Apart from your core modules,  
It can be inculcated via this IDEA module.  
You learn 'bout Z-Brush Software,  
Ethnography and Five Senses,  
It's incomplete without a Project Presentation.



**Food cooler**

**Chorus:**  
IDEA Module,  
You might not see the relevance  
But it will do you good in the long term,  
We only want the Best for all of you.



# **Problem Based Learning**

**PBL is different,  
Inter-di-sci-pli-na-ry,  
That's the pure version, but the modified type also  
works..**



**It can be easily done,  
Added into tutorials,  
It has long term benefits,  
Such as problem solving skills...**



## **Chorus:**

**Wow! PBL...**

**Research has proven its success..  
Students take charge in learning,  
Not too much rote learning,  
Skills that'll equip them for a bright future...**

## PS: We love planet Earth

A **brownish** yellowish haze called PS,  
It's caused by NO and unburnt HCs,  
They're primary pollutants from exhaust fumes,  
Forming SP, like NO<sub>2</sub> and ozone,

The O<sub>2</sub> + NO gives NO<sub>2</sub>,  
HOO. + NO also gives you that  
NO<sub>2</sub> dissociates to NO and O,  
The NO formed will form NO<sub>2</sub> again....

### Chorus:

If we don't do our parts to save our planet Earth,  
Plants and animals will gradually die,  
Enhanced GE, PS and how about acid deposition.....  
La da da da da...



## **Equilibrium Song**

**A system at equilibrium is dynamic,  
The concentration of products and reactants,  
They'll always and forever be a constant,  
Rate of forward, reverse reactions will be same.**

**K<sub>c</sub> calculations are popularly tested,  
K<sub>c</sub> tells us how far a reaction occurs,  
If K<sub>c</sub> is much smaller than the value of 1,  
This means there is very little product formed...**

### **Chorus:**

**Le Chatelier's Principle is so important,  
When Temperature of the system increases,  
The equilibrium, it will shift to endothermic...  
La da da da da...**





### 3. Results and Discussion

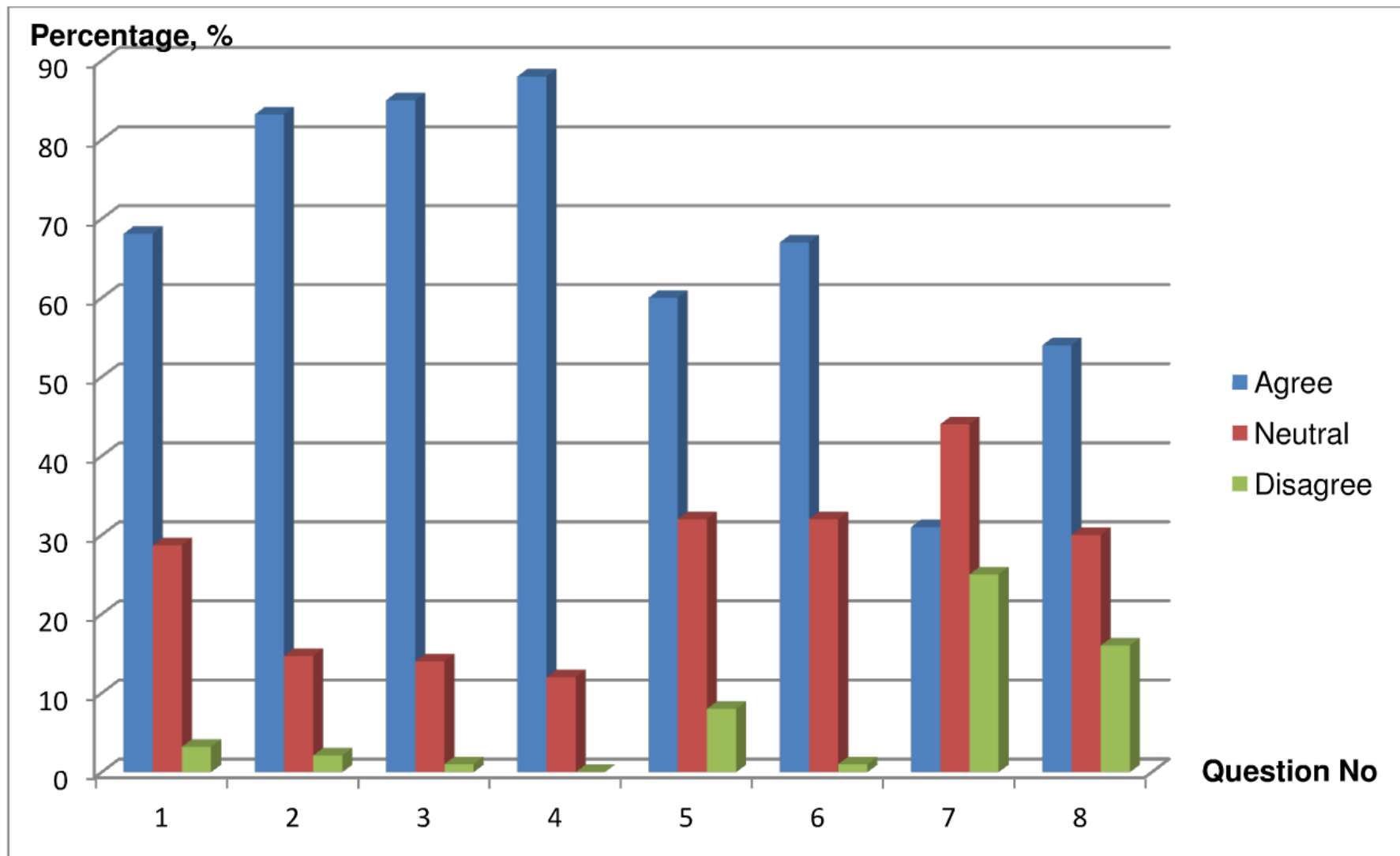


Figure 1: Analysis of questionnaire results based on action research conducted on 95 Monash University Foundation Year (Science) students. A questionnaire, consisting of 8 closed questions was administered: 1) Are songs helpful as a study tool? 2) Do you find songs stress-reducing? 3) Do songs add variety to teaching? 4) Are using songs enjoyable in the classroom? 5) Do songs help in recall of important facts? 6) Do songs assist you in your learning? 7) Will you practice singing the songs repeatedly? 8) Do Disney songs appeal to you? The results of the questionnaire were analyzed and displayed in a chart.



# PEASHA



**P – Presentation Skills**

**E – Examples**

**A – Audio Visual**

**S - Stories**

**H – Humour**

**A – Activities**

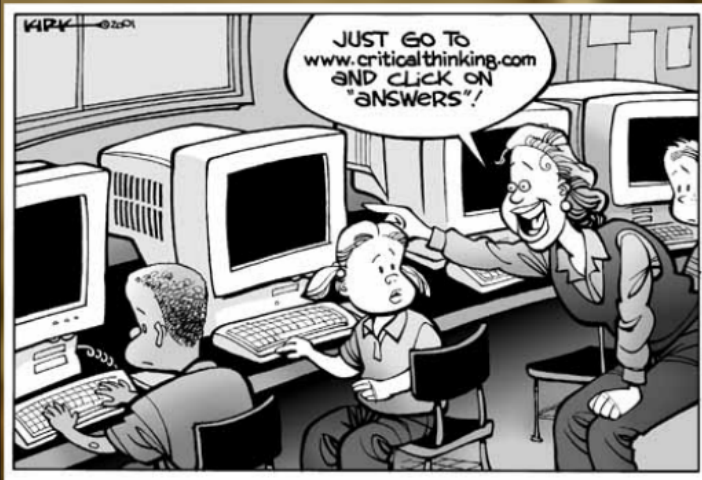




# **Presentation Skills**

- 1) Be well prepared in lessons.**
- 2) Speak clearly, confidently and with conviction.**
- 3) Deal effectively with questions.**
- 4) Engage well with students.**
- 5) Words, tone, body language etc.**

# Examples



Use eg. to illustrate:

- a) facts,
- b) concepts,
- c) principles and
- d) procedures

## **Audio-Visual**

**Audio** referring to that which we can **hear**, and **visual** referring to that which we can **see**.

**Eg:**

- 1) Demonstrations**
- 2) Mind maps**
- 3) Charts**
- 4) Videos & simulations**
- 5) Flash cards**
- 6) Animations**
- 7) Smartboard**



# Stories





# Audio Stories Human



**Stories**

**Humour**

**Activities**



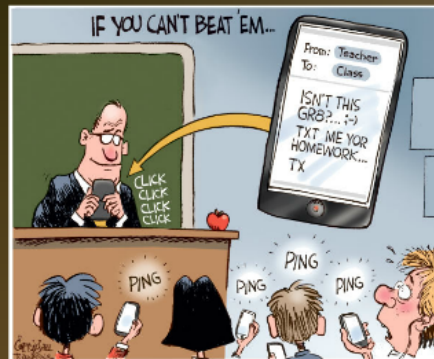
# Humour

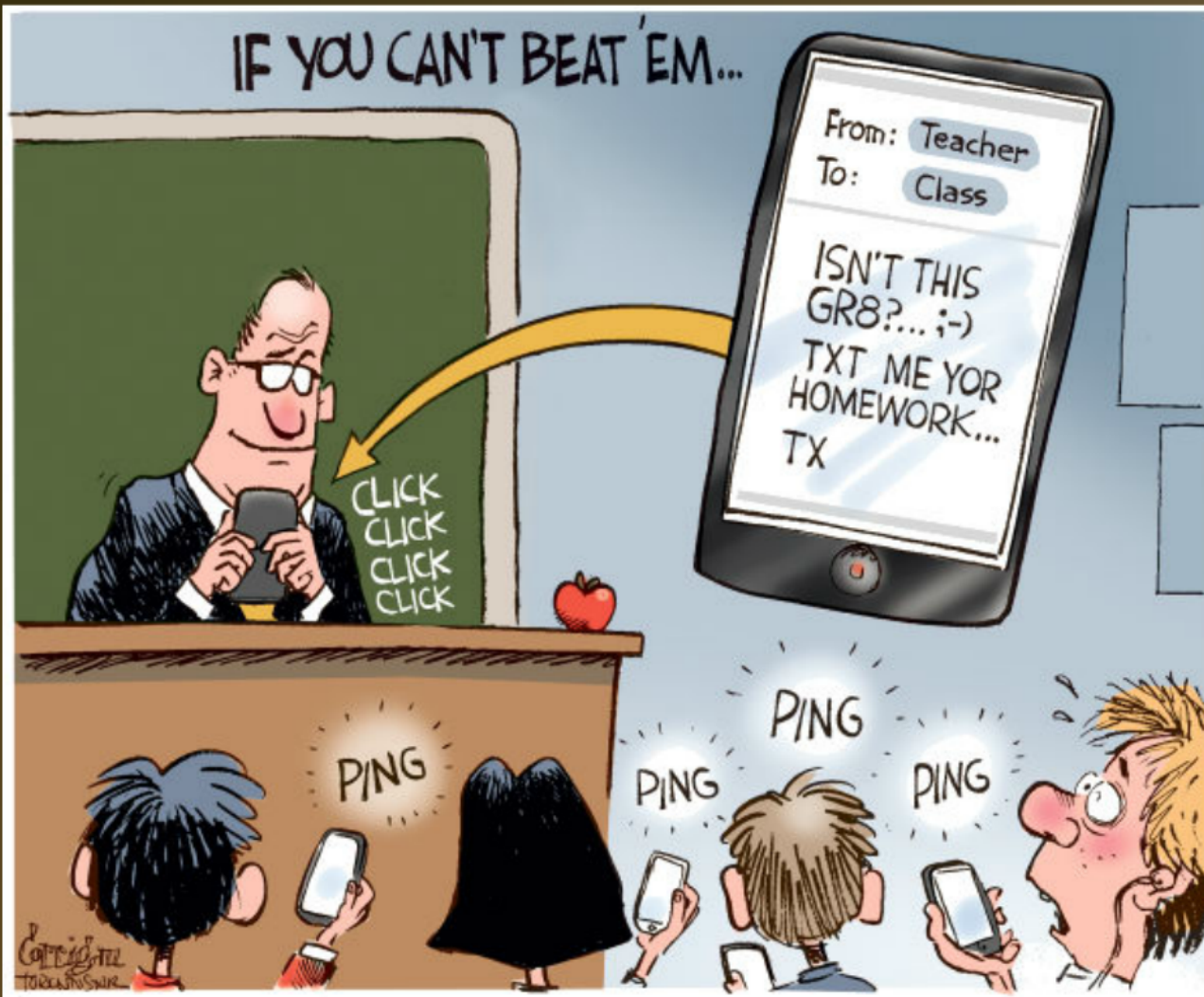
1) Humor can be an **effective** way to engage students & activate learning. Eg: Joke, laugh, dance, sing, funny voices.

2) It helps kids:

- a) Stay focused on the lesson,
- b) Remember ideas and
- c) Motivates them.

3) Dance while you give instructions, talk in an English accent, or sing the answers to a homework assignment.





# PEASHA



**P – Presentation Skills**

**E – Examples**

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**S - Stories**

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**A – Activities**





## Activities

Studies discovered that activities **lowers students anxiety** towards science & increases achievement scores.

Other exciting findings:

- 1) **Lowers stress levels** in students.
- 2) **Lowers boredom levels** (student participation is high)
- 3) Adds **variety** to classroom learning experience,
- 4) **Caters for students with diff. learning styles**
- 5) **Students enjoy & value active learning**

# PEASHA

**P – Presentation Skills**

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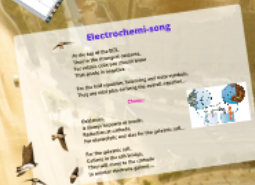
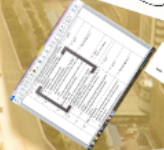
**H – Humour**

**A – Activities**





# Gd Afternoon





A blurred image of a white airplane in flight against a light sky. The text is overlaid on the image.

**Thank You Very Much**

**Isabel Yee**  
**[isabely@sunway.edu.my](mailto:isabely@sunway.edu.my)**