

ENGAGE THE BRAIN
THE INTEGRATORS GUIDE TO ICT OF THE FUTURE
A PO Session
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I have a confession to make – I am addicted to chemical substances. Not only that, I am the dealer, I have access to a huge number of chemical substances that can send me into a euphoric state almost instantaneously. And they are free.

Every time I think, my neurones fire & I release a huge number of chemicals into my brain. The more thinking I do the more chemicals I release.

My brain makes a huge number of chemicals including its own marijuana type compounds, natural compounds called endocannabinoids. Marijuana just happens to resemble the endocannabinoids enough to activate the cannabinoid receptors in the brain, but not my brain, I use the stuff I can produce myself for free.
(ref: <http://www.cannabis.net/brain/marijuana.html>)

Thinking makes me feel great, it's my drug of choice, there is nothing quite like a crystal clear mind engaged in thinking, conversation, writing, art, mathematics or science. It's a joy to be in here.

It's pretty obvious, who's on a thinking high when you look around a classroom.

These guys aren't,



these guys are,



these guys have decided to get their neurones firing using creative alternatives.



This last guy has really nailed it -
The tyranny of the Pencil is over, we no longer need to cover to the boring limitations of pencil and paper based learning. Stick them anywhere you like but leave your hands free to use the computer. It's a slow old technology that has defined our current educational practices and limited our thinking, but no more. The magic box has changes all that.

Let's look at some big ideas

What is this....any ideas

<http://www.phy.ntnu.edu.tw/ntnujava/viewtopic.php?t=41>

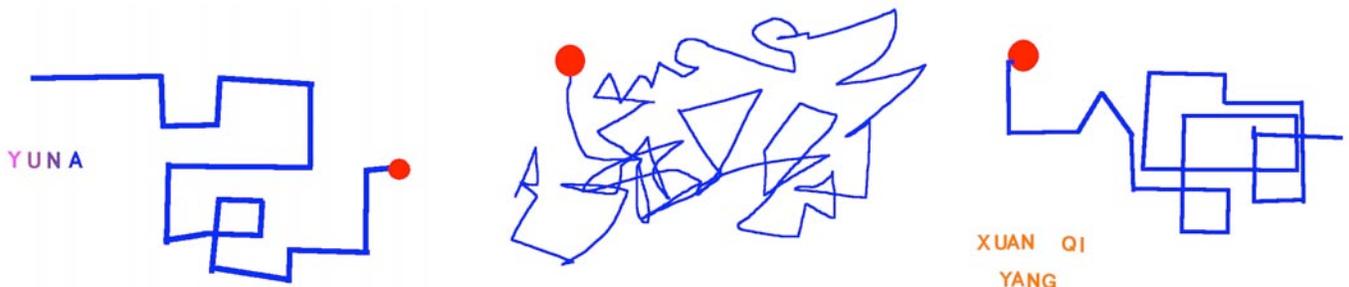
One description.....

"I think someone is walking along in the Walkathon. A red ball is bouncing alongside him and there are lots of butterflies flying around too!"

Story of Robert Brown, he noticed that pollen grains suspended in water jiggled about under the lens of the microscope, following a zigzag path like this one. These small random jumps are what make up Brownian motion. This simple observation by Brown led to Einstein's most cited paper on the theory of Brownian motion in 1905. For this work he received the Nobel prize.

I'd like you to draw the jiggling about of a particle of pollen.
Using Word (10mins) Here's how...

Here are the images from Year 1



What happened here:-

Students learned to
use the line tool
use the line style tool
use the Colour tool
use the circle tool
use the fill tool

They were introduced to a really big scientific idea that is really amazing
That things are made up of very tiny particles called atoms that are constantly moving about. BRILLIANT

Teaching Thinking as a Skill

We can't teach thinking indirectly, students need the skills to think, they need to learn these skills.

Debono is a great resource for thinking skill development strategies: _
PMI, CAF, APC, EBS, ADI, OVP etc, and of course the Six Thinking Hats.

Here are some pictures from Kindergarten using the White Hat, they added information to images of a Fairytale castle.
They were making worlds.

MICHELLE AND JUNE



TOM



Here's some simple ideas for older students using the six thinking hats to analyse books.

Six Thinking Hats – Books

White Hat

Information

Facts List the facts you learned from the book.

Describe the characters, setting, and plot.

Yellow Hat

Good Points What were the interesting parts of the story?

What are the positive aspects of the story?

Black Hat

Negative Points List what is wrong with plans made by a character in a book?

What were some of the problems encountered by the main characters? How/ Why did these occur?

Green Hat

Creativity Design something new for a character from your book.

Solve a problem a character has. Read a book to students. Don't show the title.

Children brainstorm a list of new titles for the book.

Red Hat

Emotions How did the feelings of the main character change throughout the story? How do you feel about the story? Keep a red hat reading record of all the books you read on this topic.

Blue Hat

Planning Reflection How has reading this novel/book contributed to your understanding of the topic?

If you had written the novel/book, what would you have done differently?

Using these simple techniques is great as it provides a huge variety of techniques to use.

And now for another neurone pumping activity with graphing

(some rules- Pass it onto the person next to you

Check out the other computers and ask them to explain)

Make 5 graphs using excel – which ones best??

<http://www.virtualteacher.com.au/graphing.doc>

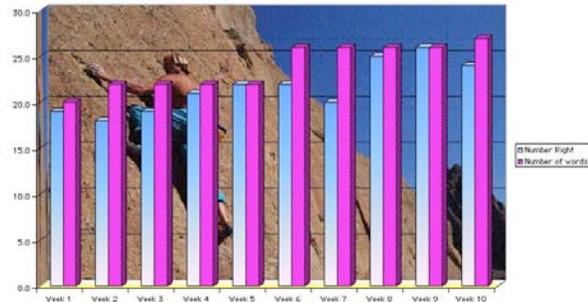
Graphing

Use digital camera to take shots for background....
(save to folder if possible to show on screen)

Were your neurons firing, were you thinking. How did you feel, were you a discoverer, an inventor.

Here's a year 5 response – this one was my best, because the picture showed a person climbing a mountain, and that's how it feels to me, when you get it all right it's like being at the top of the mountain it's exciting, you feel like you have really made it.

Sam's Spelling Results
Climbing Higher and Higher



To engage the brain we need a new agenda...

We need to be thinking about...

Develop skills of self-enquiry and learning autonomy

Kamakaze Learning

Sharpening the wondering skills

Use movement in thinking

Possibility thinking not critical thinking

Lateral thinking

Teaching thinking skills

Liquid Learning

Decay prone information(ditch the textbooks)

Library without borders

Everything up for debate make knowledge attainable

Developing the Aerobic Mind

The main role of the teacher is to inspire

Online Curriculum

I think it's a great idea, get your students to go to the BOS site and download the curriculum

<http://www.boardofstudies.nsw.edu.au/> It's easy

They can then work on the whole process of learning from development of the learning activity, evaluation strategy, do the evaluation, ask the questions, they can learn how to become autonomous life long learners.

By taking over these tasks teachers are robbing students of an opportunity to learn how to learn.

Do you think students want to learn using online curriculum teachers build specifically for schools?

Or do you think they want to go out into the real world and find out online info built for the world?

Basically online learning misses the point if teacher centric-learning is replaced by teacher-centric online learning. Once you have given students the permission to think, decide, select, evaluate and take charge of their own learning, you have seen the future, and it is edutopia.

Online Activity

The Online Curriculum is already there. With fantastic skill development websites, wonderful institutional sites, news sites, wikipedia, and a huge array of fantastic resources.

Use it, it's free, it's up to date, it's amazing.

Get students in on the ground floor of learning....

In classrooms you get all the answers before you've even worked out any of the questions. This doesn't happen anywhere else. You use questions when you don't know the answers. The questions are most important, if they are your questions, then you will want to work out the answers.

So go get some great questions – see what interests you what tickles your curious bone, find something you would like to research. Scour the internet, forage about, filter the info and

Investigate Einstein, Brownian Motion, Melbourne's forgotten Einstein, The theory of Relativity, Time Travel, Cern, come up with a great question. You've got 10mins to find a great question...

What are your great questions...???

The IES conference I did outlines the learning steps after the original question is developed...Where to take from here..

<http://www.virtualteacher.com.au/ies.html>

If we teach our young that everything changes that all things are up for debate, that new ideas are treasured, new thoughts valued that we don't have the answers, if the next generation can embrace change as a way of life rather than perpetuate the current system – how great that would be.

If students are thinking, if their brains are engaged, no artificial stimulates are necessary, if they are bored, if their contributions make no difference, they will seek stimulation elsewhere.

The inspired and amazing minds of our students can create the most amazing things, if given the power and freedom to take charge of their own learning.