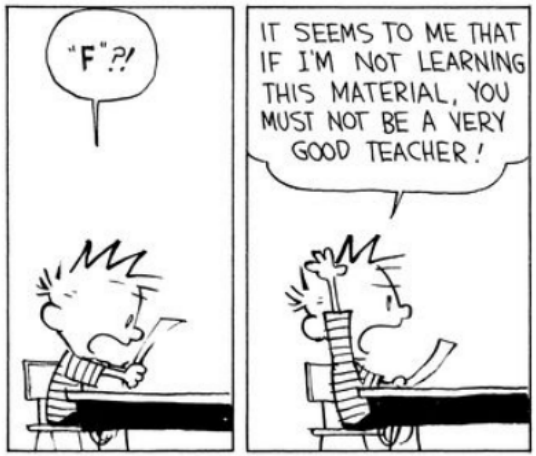
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Y Drindod Dewi Sant
UNIVERSITY OF WALES
Trinity Saint David

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Principles of Pedagogy



Children as Learners



Canolfan Addysg Athrawon De-Orllewin Cymru
The South West Wales Centre of Teacher Education

Aims

- [x] Consider the following questions...

What should children learn?

Is learning more than remembering?

What are some key learning theories?

Where does learning happen?

What qualities do learners need?

How do we learn?

What are the learning Myths?

Is learning more than remembering?



Shall we play a game?

Thick wall it tea of Myrrh seize knots trained

Spend a few moments trying to remember the above group of words.

Learning and memory



contents structured
Lifetime

easily displaced
secs!





Once information is passed into LTM, unless it is used or recalled in some other way, it is again forgotten.



Brain judges it of no use...throws it out!

Make sense to learner

Info must be processed and structured

LTM



STM

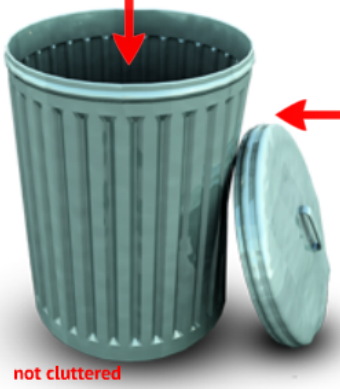
majority info stored/processed and...

other senses

New info given too quick
not enough time to process
so...



Thinking



not cluttered

Forgetting



not under direct conscious control

Aim = only retain useful info that it comes across regularly



Forgetting

Learning and Mem



ntents structured
Lifetime

easily displaced
secs!

Make sense to learner

Info must be processed
and structured

LTM



STM

majority info
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so...





Make sense to learner

and structured

M

S



majority info stored/processed and...

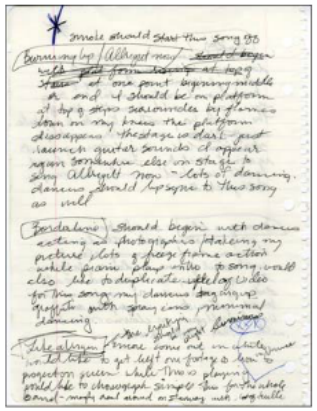
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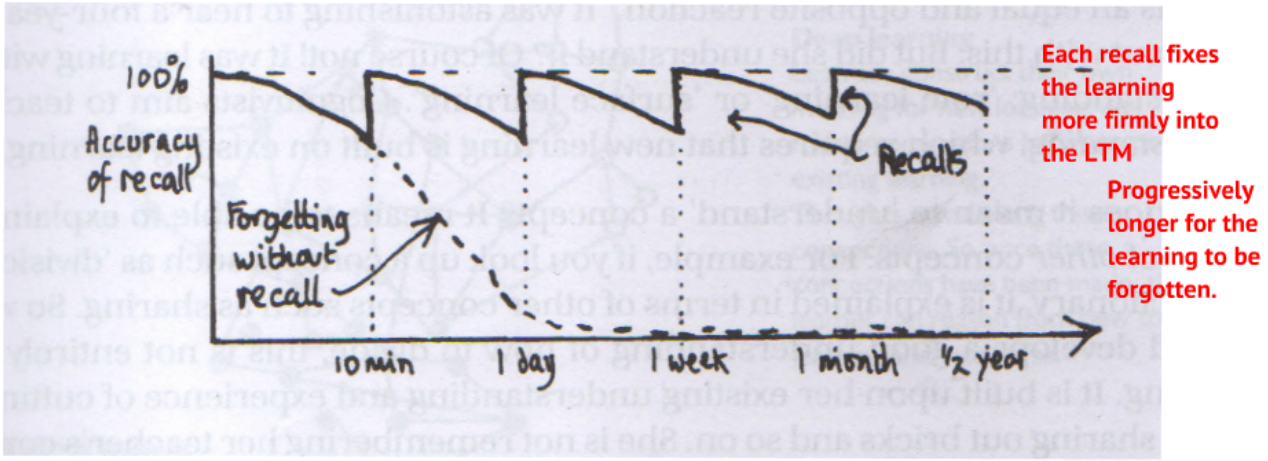
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Aim = only retain useful info that it comes across regularly

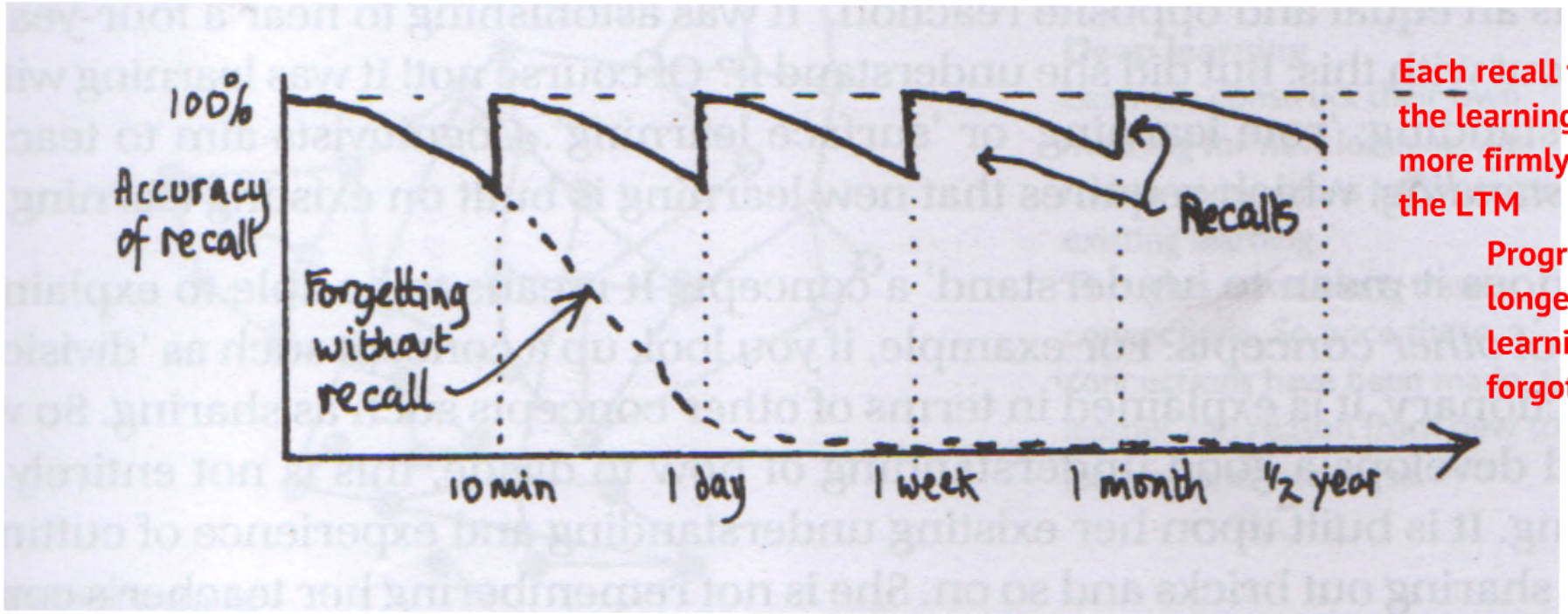
So how do we ensure our children don't forget what we teach?

Repetition

We must ensure that information is recalled and used frequently.



J.B Watson = Remembering depended on "frequency and recency"



J.B Watson = Remembering depended on "frequency and recency"

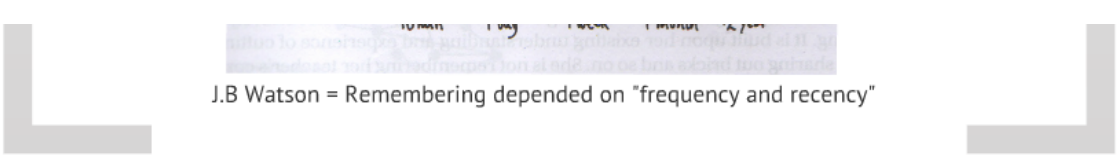
Are there any exceptions to this thinking?



Emotional significance



There are exceptions…that one off memorable experience!



J.B Watson = Remembering depended on "frequency and recency"

Our knowledge of memory suggests the following:

- Don't cover new material too quickly
- Slow down
- Leave a silence after an importance sentence
- Children need activities which encourage them to process new material.
- Allow children to use and personally restructure the information
- For information to be stored in LTM it must be recalled and used often

How do we learn?

How do we learn?



Let's take a closer look at how YOU like to learn.



Desert Assignment



Imagine you must travel entirely alone, in a Land Rover, from A to B on the map. 100's of miles across the Sahara Desert.

In order to survive you must learn one skill.



Practical skill

You must be able to dismantle, clean and reassemble the carburettor.

It is a matter of life and death that you learn effectively!

How would you want to learn this skill?

You may choose any and as many learning experiences you like…no expense spared!

Explanation (listen to a teacher explain)

Reading (relevant reading set)

Test (Simple or realistic, marked by teacher)

Class practical or exercise (Practice under supervision)

Note-taking (Notes or handouts given to provide permanent record to refer to during trip)

Demonstration (watch a teacher show how it's done)

Question and Answer (ask questions to teacher)

Watch a video (includes content on location in Sahara)

Summarising (given summary of most important aspects)

Investigation (explore the topics for yourself)

Role-play (take part in realistic simulations – even in a desert!)

Others?



What order do you want them?

To learn how to clean a carburettor



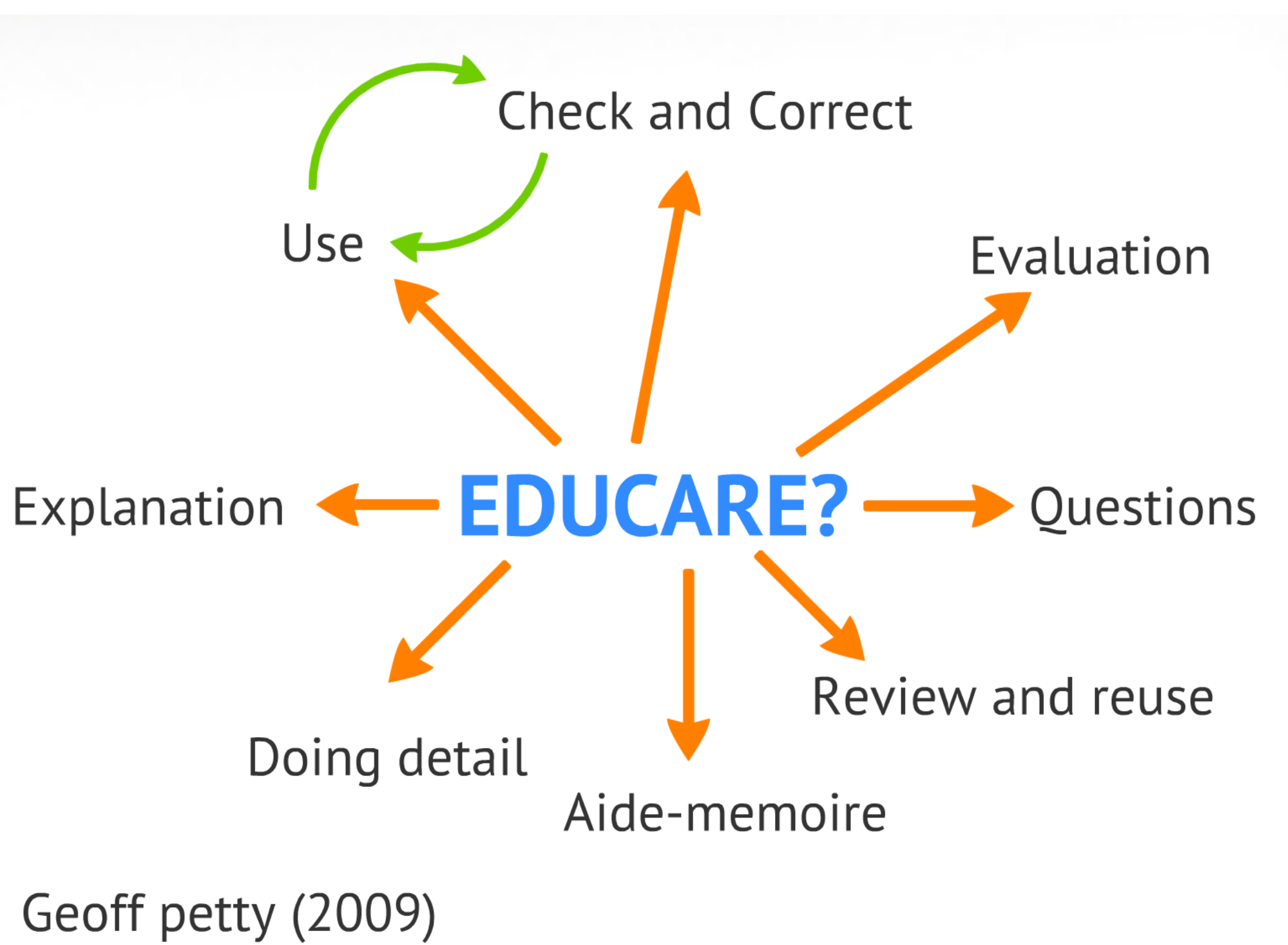
1) Explanation – Function/ where it is/ how it works/ plenty of visual aids and specific handouts (Land Rover). **Understanding**

2) Demonstration – Removal/ dismantling/ cleaning/ reassemble/ notes with warnings and tips and hints. **Actively working it out for themselves**

3) Class practice – Do 2) themselves under supervision. **Doing-detail**

4) A realistic field practice test – In desert, unsupervised/ assessed by teacher (emergency support please) **Skill evaluated**

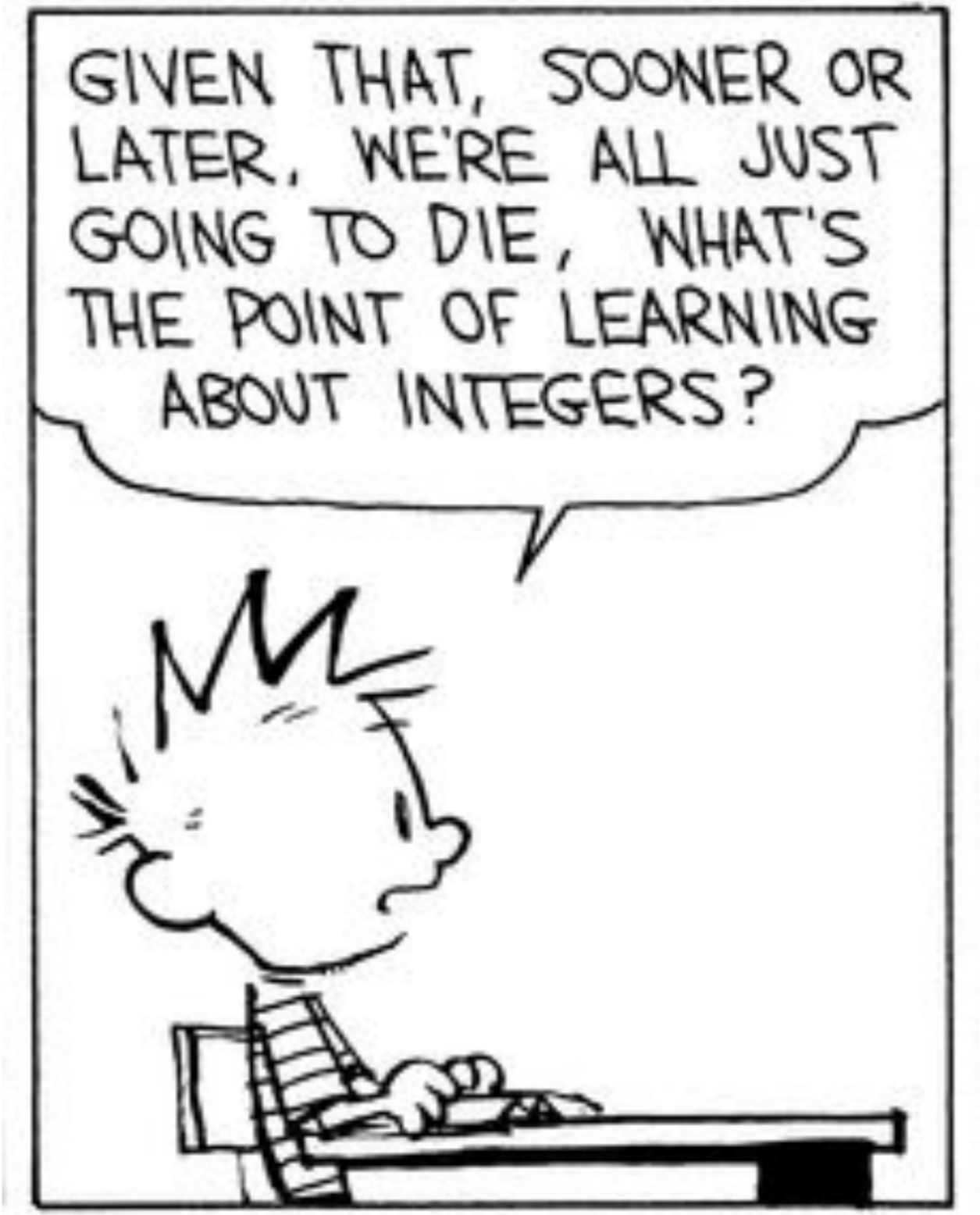
We all have learning NEEDS…which must be met.

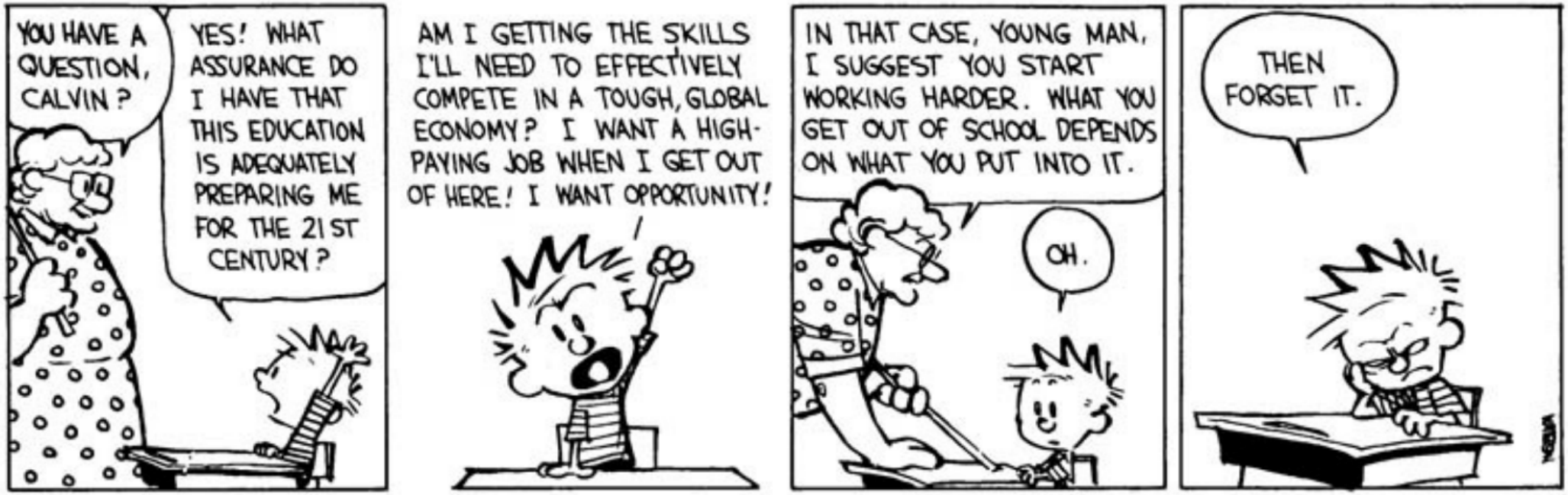


Geoff petty (2009)

What should we learn?

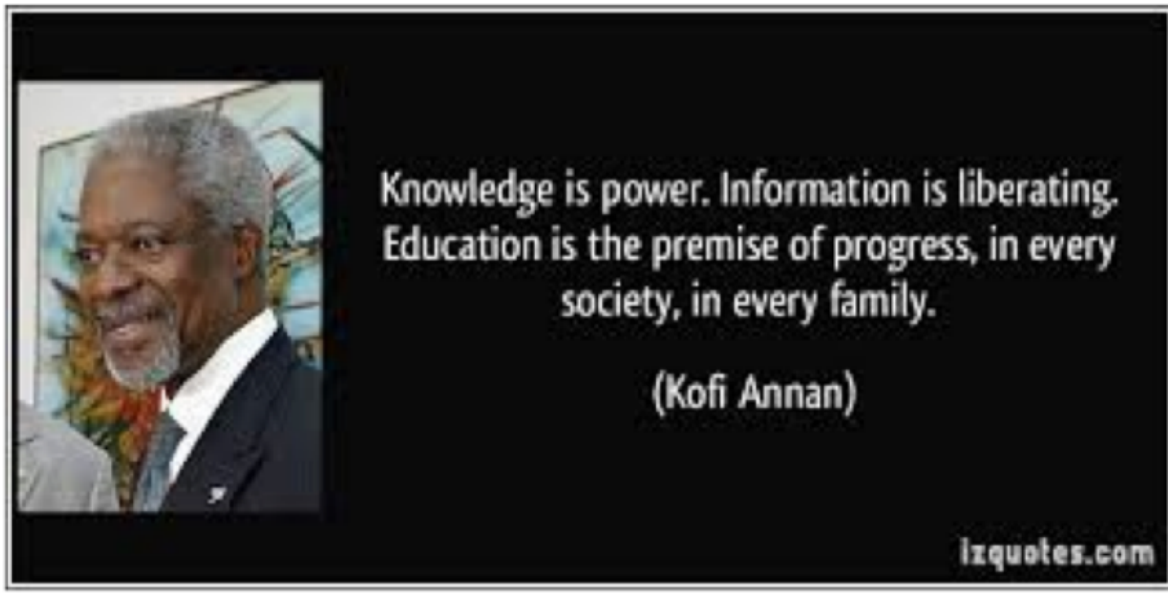



GIVEN THAT, SOONER OR LATER, WE'RE ALL JUST GOING TO DIE, WHAT'S THE POINT OF LEARNING ABOUT INTEGERS?


YOU HAVE A QUESTION, CALVIN?
YES! WHAT ASSURANCE DO I HAVE THAT THIS EDUCATION IS ADEQUATELY PREPARING ME FOR THE 21ST CENTURY?
AM I GETTING THE SKILLS I'LL NEED TO EFFECTIVELY COMPETE IN A TOUGH, GLOBAL ECONOMY? I WANT A HIGH-PAYING JOB WHEN I GET OUT OF HERE! I WANT OPPORTUNITY!
IN THAT CASE, YOUNG MAN, I SUGGEST YOU START WORKING HARDER. WHAT YOU GET OUT OF SCHOOL DEPENDS ON WHAT YOU PUT INTO IT.
OH.
THEN FORGET IT.

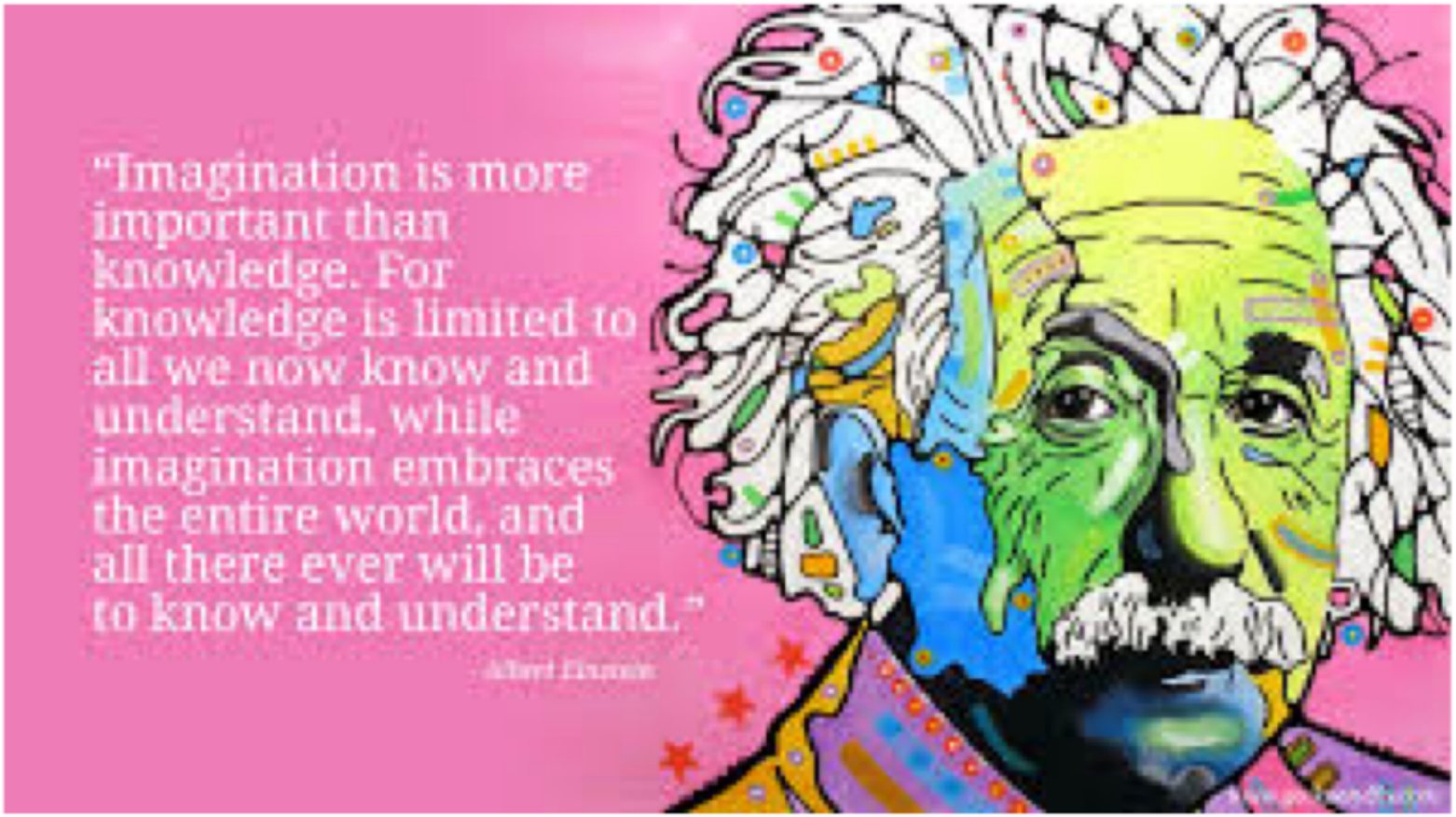
What should children learn?

The function of education is to
teach one to think intensively
and to think critically.
Intelligence plus
character - that is the
goal of true education.
Martin Luther King, Jr.
VERYBESTQUOTES.COM



Llywodraeth Cymru
Welsh Government

Right you, outside, let's sort this out in the alley!





Balance:

- A.S.K.


Triangle of Success
Goal Setting
Time Management
Reasoning
Communication
Inter-personal Skills
Skills
Attitudes
Knowledge
Self-Motivation
Self-Confidence
Integrity
Honesty
Optimism
Enthusiasm
Co-Operative
Commitment
Basics, Theories, Information, Facts, Figures,
Descriptions, Learning, Science etc.

Where does learning take place?



Motivation, opportunity and resources.



What qualities do learners need?





www.todaysmeet.com/pgcepop

NEVER GIVE UP!



When we no longer know what to do we have come to our real work and when we no longer know which way to go we have begun our real journey.



The mind that is not baffled is not employed.

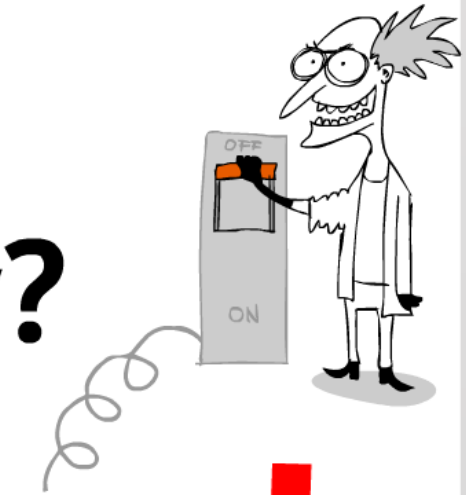
Wendell Berry

Who?

What?

Why?

How many?

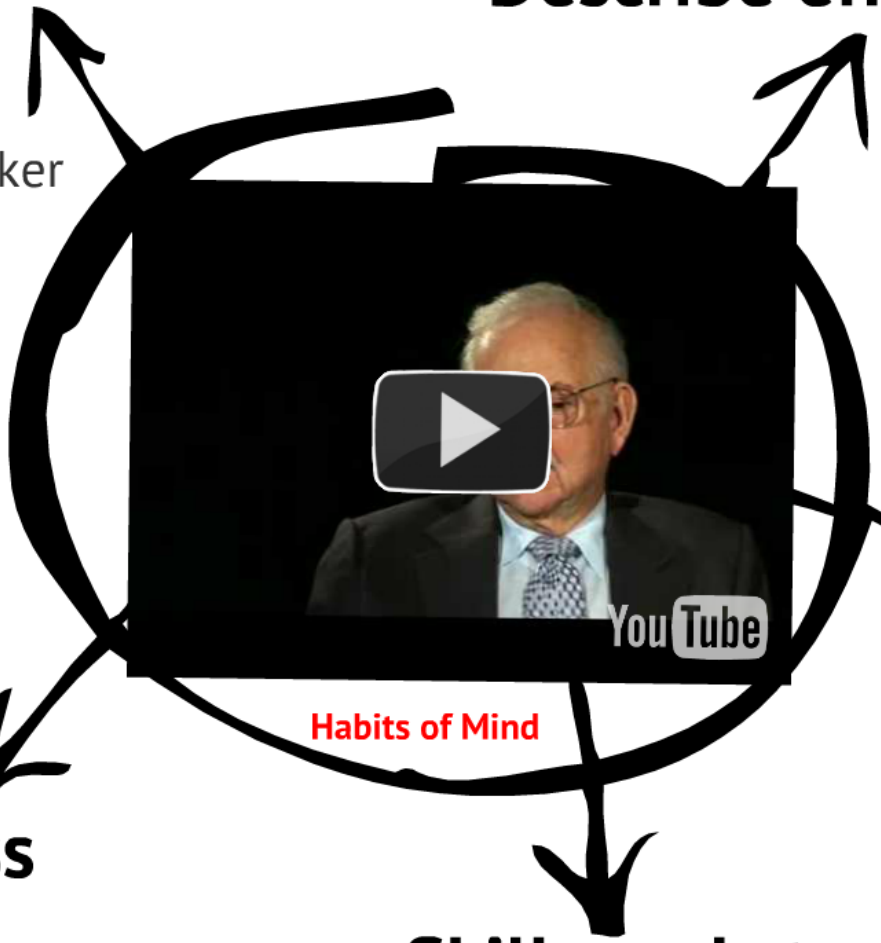


Habits of Mind

Set of dispositions

- Expert problem solver
- Thoughtful decison maker
- Creative thinker

Describe effective thinkers



Art Costa + Bena Kallick

Guide decisions in day to day life

Internal compass

- Solving problems
- Resolving conflict

Skills and strategies used when the answer is not known

The 16 Habits of Mind


















Persisting



Stick to it!

Persevering in a task through to completion; remaining focused.

Managing Impulsivity



Take your time!

Thinking before acting; remain calm, thoughtful and deliberate.

Listening with Understanding and Empathy



Understand others!

Devoting mental energy to another person's thoughts and ideas; holding in abeyance one's own thoughts in order to perceive another's point of view.

Thinking Flexibly



Look at it another way!

Being able to change perspective, generate alternatives and consider options.

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Taking Responsible Risks



Venture out!

Being adventuresome; living on the edge of one's competence.

Finding Humour



Laugh a little!

Finding the whimsical, incongruous and unexpected; being able to laugh at yourself.

Thinking Interdependently



Work together!

Being able to work in and learn from others in reciprocal situations.

Remaining Open to Continuous Learning



I have so much more to learn!

Having humility and pride when admitting we don't know; resisting complacency.

Taking Responsible Risks



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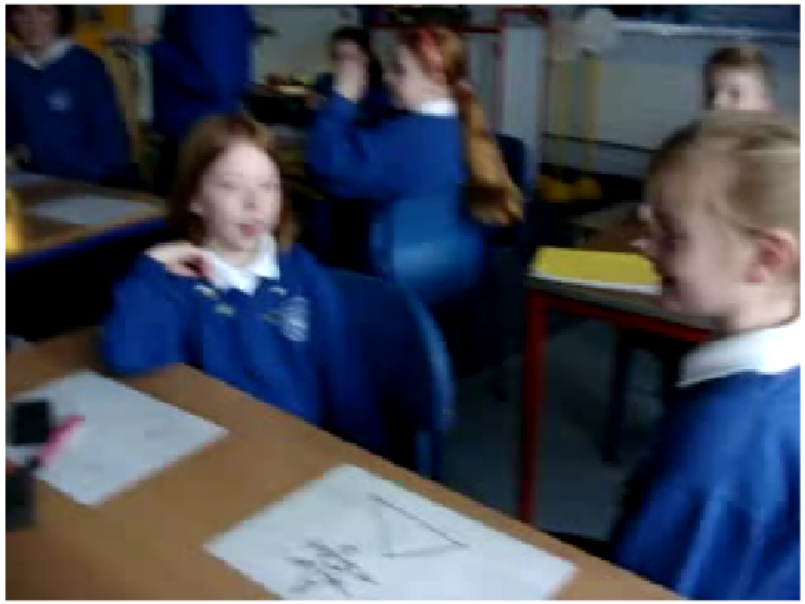
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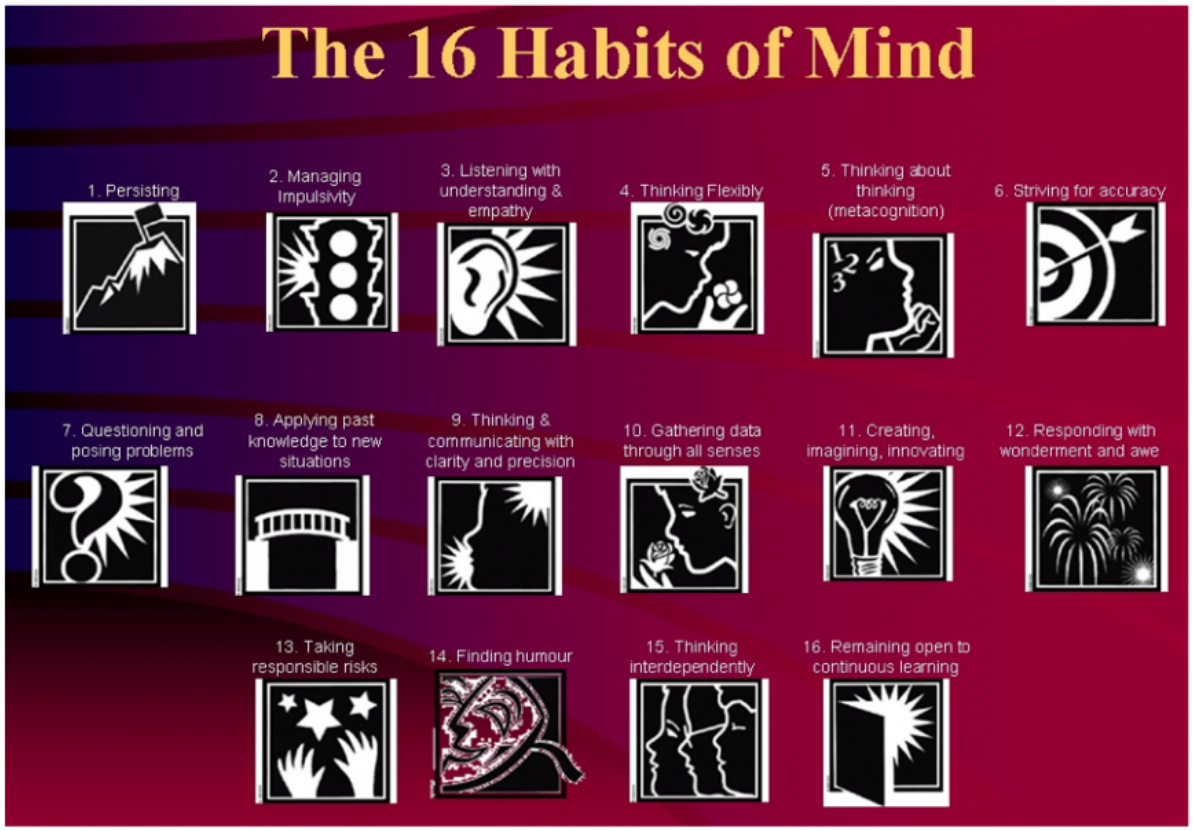
Remaining Open to Continuous Learning



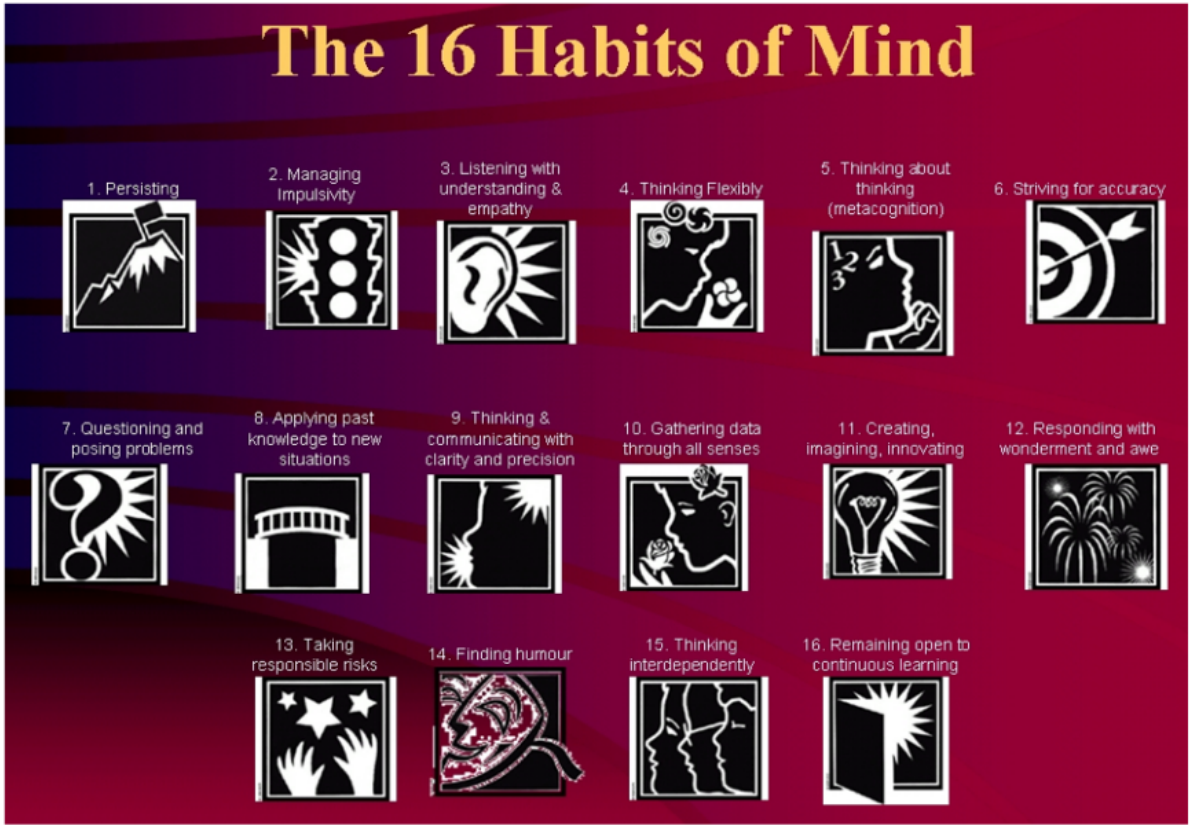
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The 16 Habits of Mind
1. Persisting
2. Managing Impulsivity
3. Listening with understanding & empathy
4. Thinking Flexibly
5. Thinking about thinking (metacognition)
6. Striving for accuracy
7. Questioning and posing problems
8. Applying past knowledge to new situations
9. Thinking & communicating with clarity and precision
10. Gathering data through all senses
11. Creating, imagining, innovating
12. Responding with wonderment and awe
13. Taking responsible risks
14. Finding humour
15. Thinking interdependently
16. Remaining open to continuous learning




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Have you ever lost track of time when doing an activity?



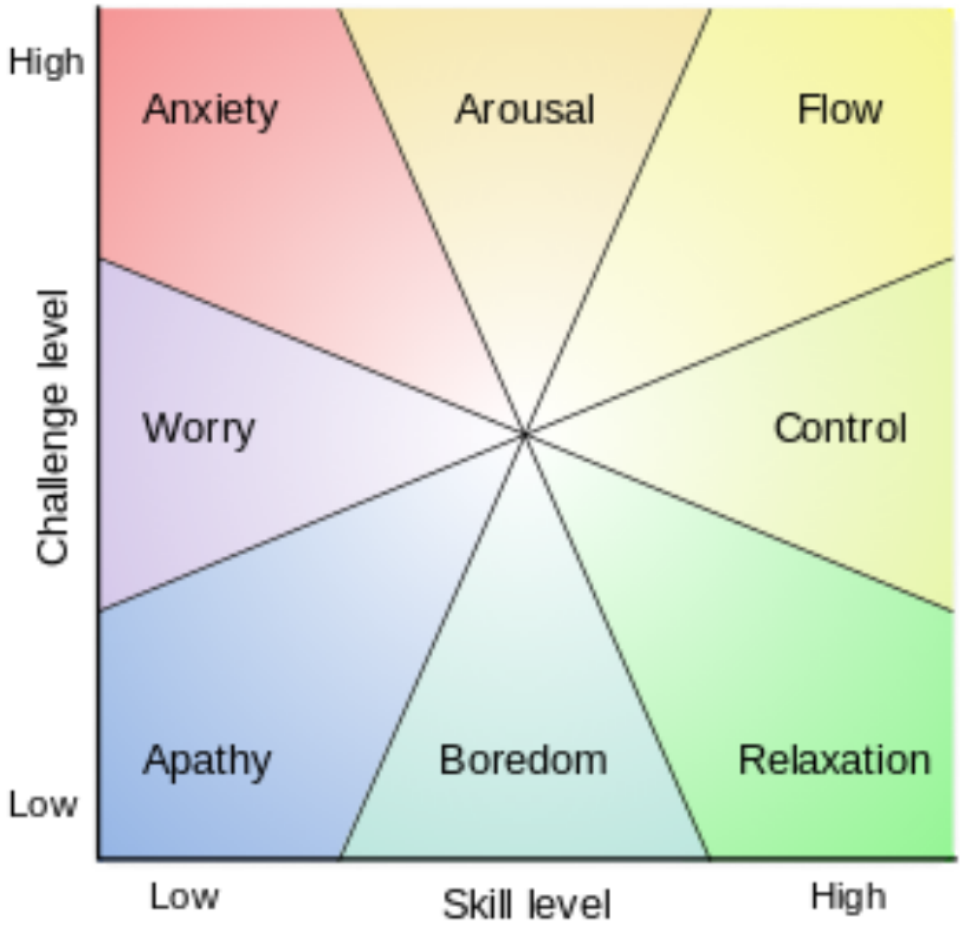
The theory of 'Flow'

psychologist Mihaly Csikszentmihalyi

"Just call me Mike!"

FLOW - a state of concentration/ absorption with the activity at hand.

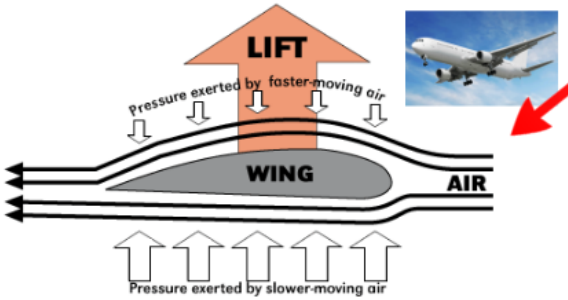
- So involved in an activity that nothing else seems to matter.
- Involves *intrinsic motivation,* where the person is fully immersed in what they are doing.
- This is a feeling everyone has at times, a feeling of great absorption, engagement, fulfilment, and skill.



Most inspirational picture I've ever seen!



Bernoulli Principle



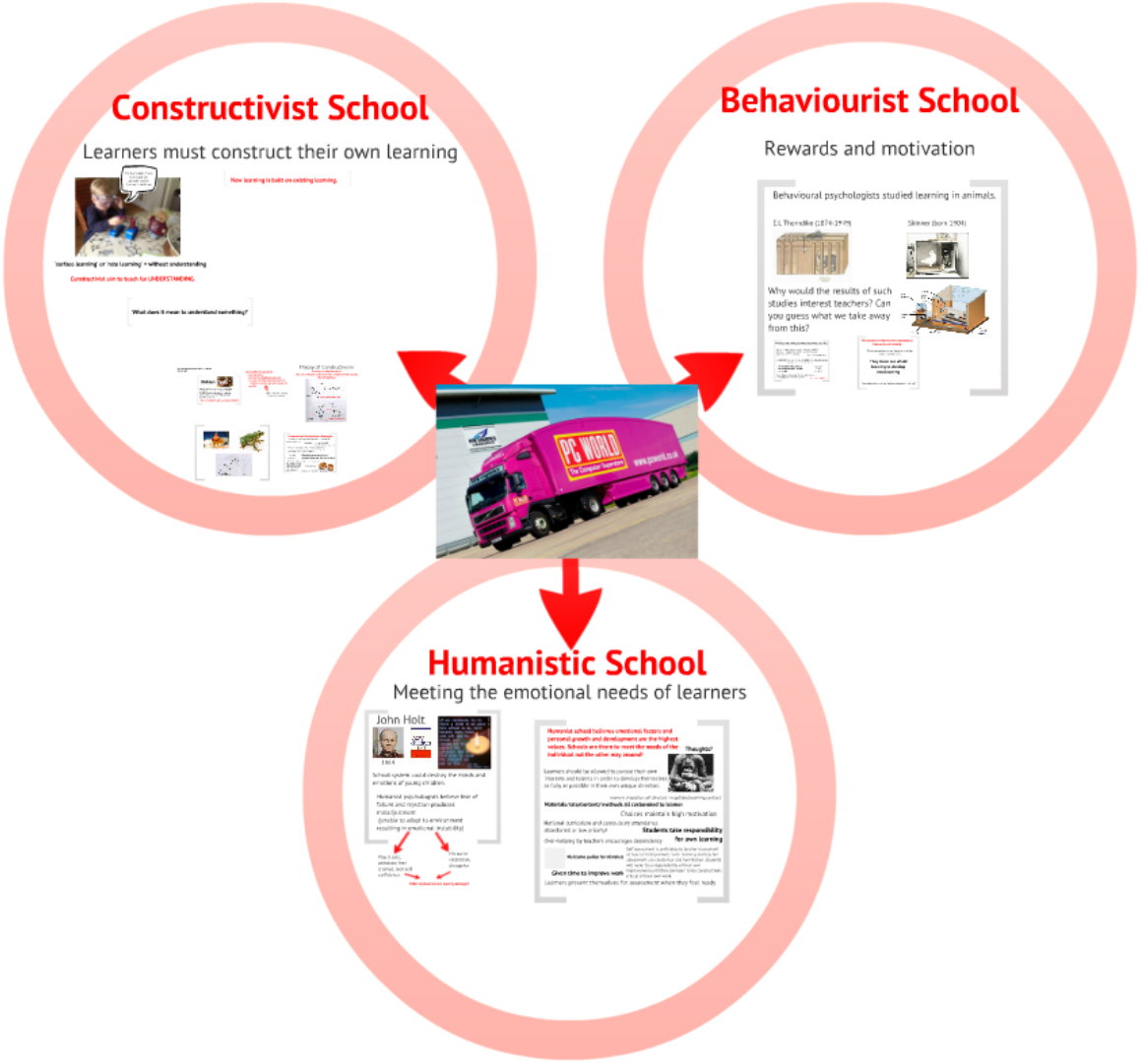
Educational Theory

Memory
Cognitivist school
Behavioural school
Humanist school



Keep in mind your classroom

Shall we play a game?



Three schools of learning in psychology



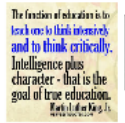




Motivation, oppo



What should





Constructivist School

Learners must construct their own learning

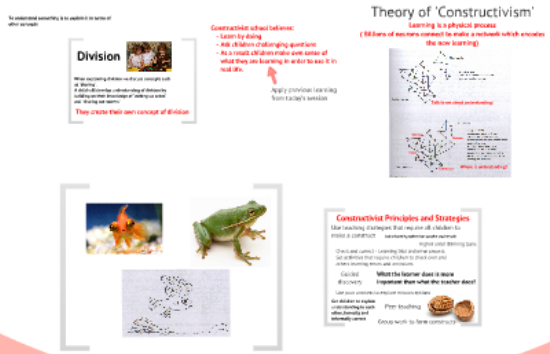


'surface learning' or 'rote learning' = without understanding

Constructivist aim to teach for UNDERSTANDING.

New learning is built on existing learning.

What does it mean to understand something?







'surface learning' or 'rote learning' = without understanding

Constructivist aim to teach for UNDERSTANDING.

ning" – without understanding

each for UNDERSTANDING.

What does it mean to understand something?

To understand something is to explain it in terms of other concepts

Division

onstruct their c

New learning is built on existing learning.

Division



When explaining division we discuss concepts such as 'sharing'.
A child will develop understanding of division by building on their knowledge of 'cutting up cakes' and 'sharing out sweets'

They create their own concept of division

Constructivist school believes:

- **Learn by doing**
- **Ask children challenging questions**
- **As a result children make own sense of what they are learning in order to use it in real life.**



Apply previous learning from today's session

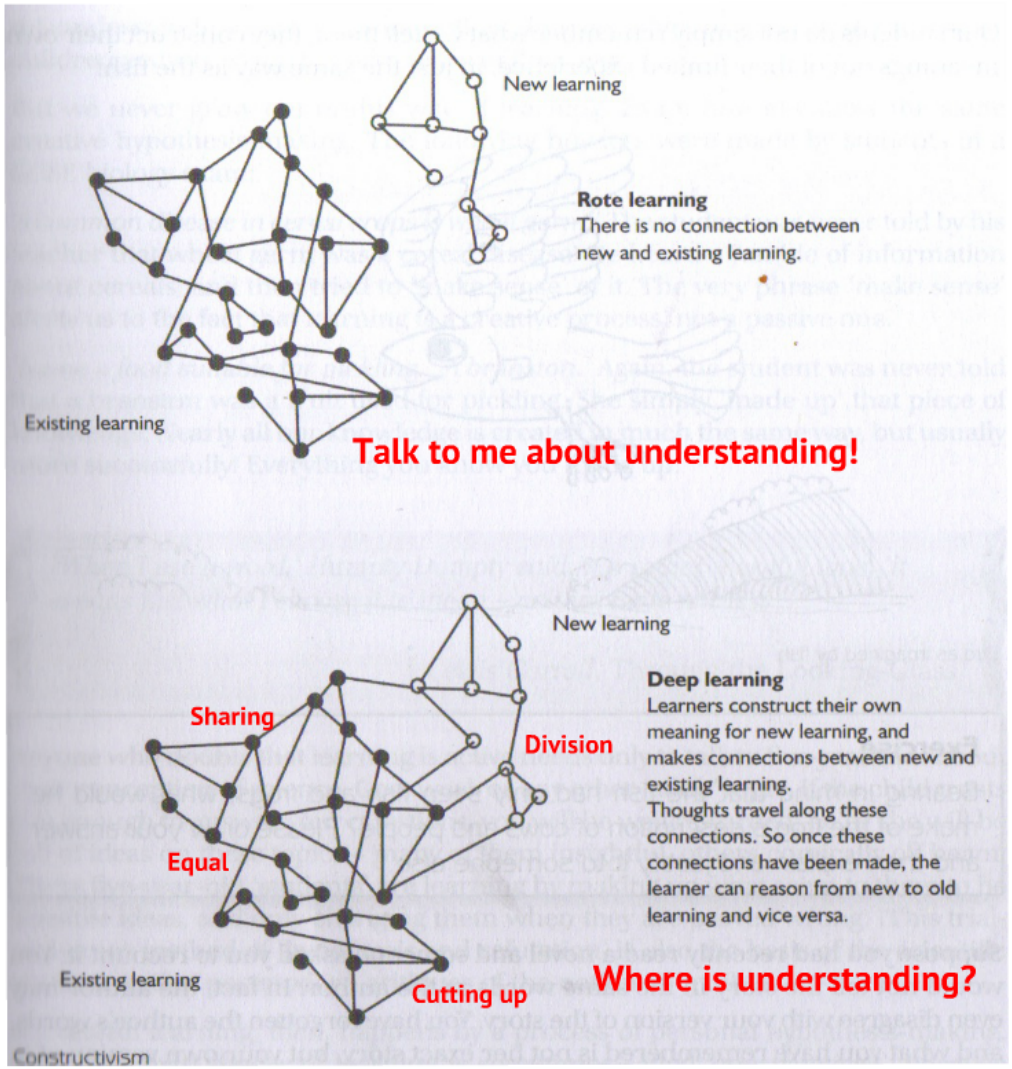
Theory of 'Constructivism'

Learning is a physical process

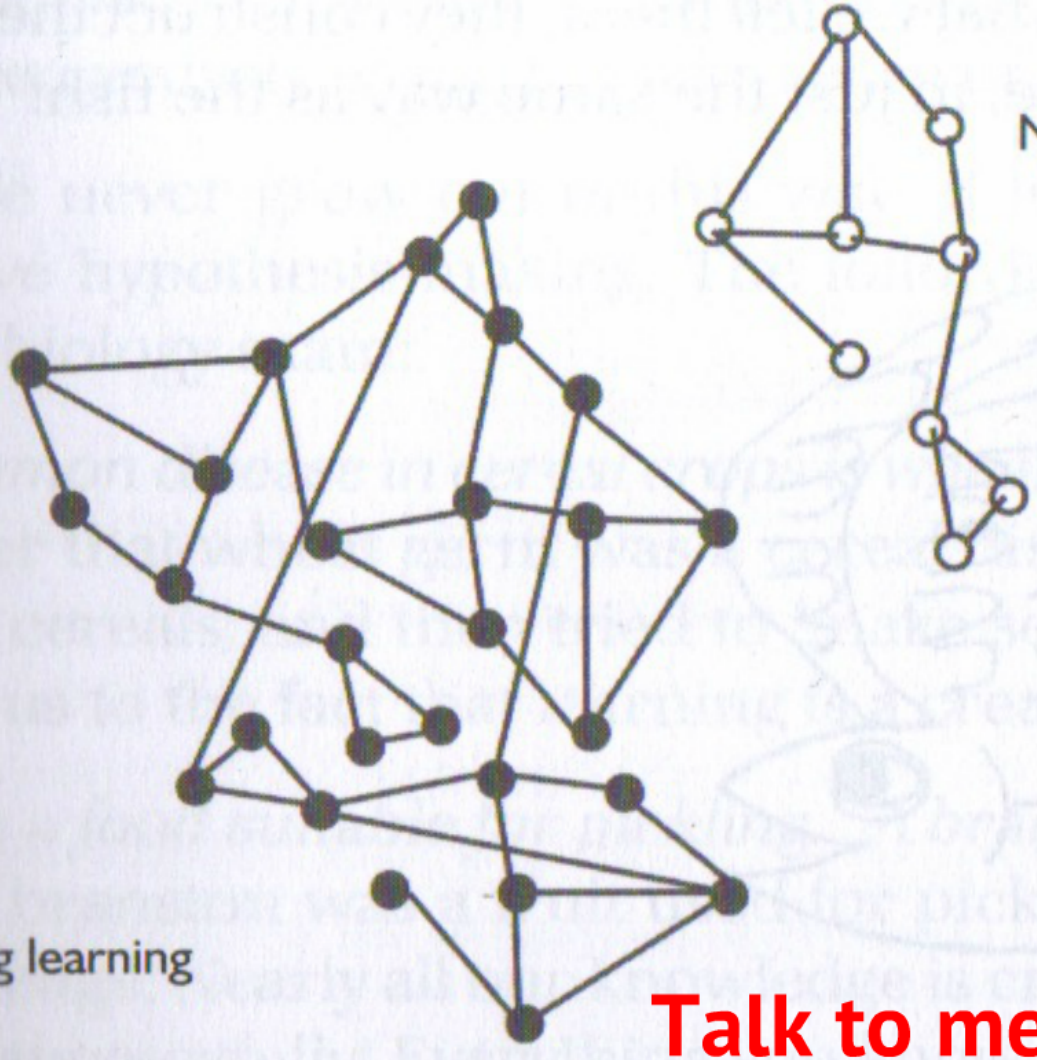
(Billions of neurons connect to make a network which encodes the new learning)

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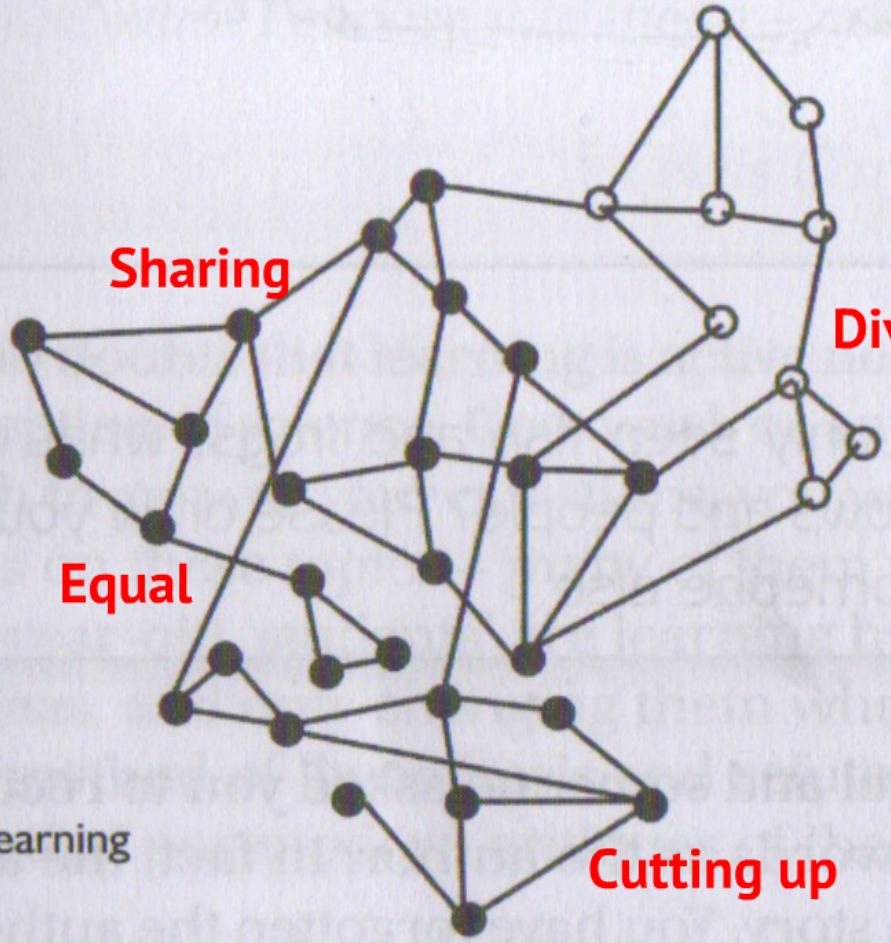
the new learning)



Rote learning
There is no connection between new and existing learning.

Talk to me about understanding!

Talk to me about understanding!

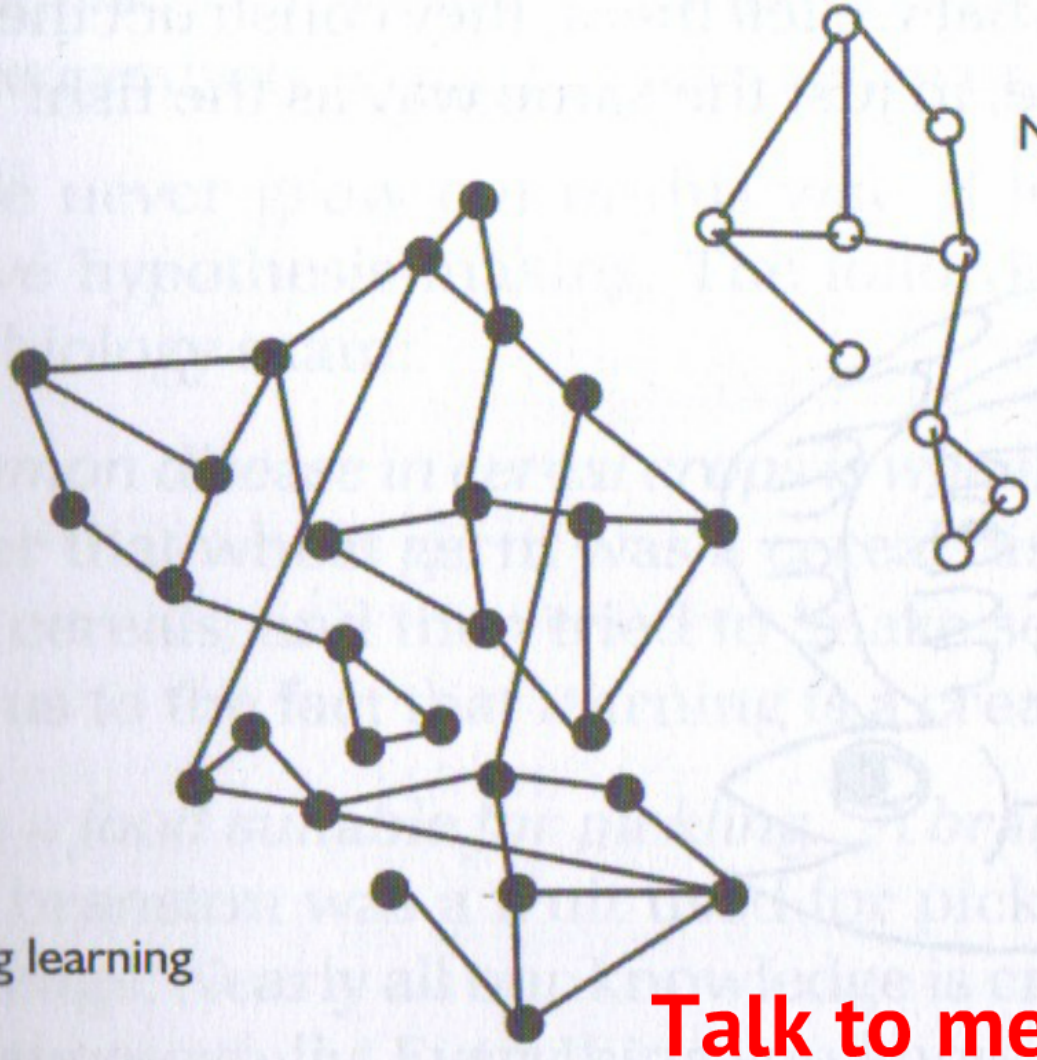


Deep learning
Learners construct their own meaning for new learning, and makes connections between new and existing learning.
Thoughts travel along these connections. So once these connections have been made, the learner can reason from new to old learning and vice versa.

Where is understanding?

onstructivism

the new learning)



Rote learning
There is no connection between new and existing learning.

Talk to me about understanding!

Constructivist Principles and Strategies

Use teaching strategies that require all children to make a construct

Active learning rather than passive teacher talk

Higher order thinking tasks

Check and correct - Learning trial and error process.
Set activities that require children to check own and others learning errors and omissions

Guided discovery

What the learner does is more important than what the teacher does!

Use poor answers to explore misconceptions

Get children to explain understanding to each other..formally and informally correct

Peer teaching



Group work to form constructs

Behaviourist School

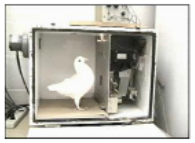
Rewards and motivation

Behavioural psychologists studied learning in animals.

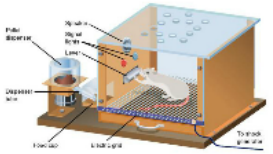
E.L Thorndike (1874-1949)



Skinner (born 1904)



Why would the results of such studies interest teachers? Can you guess what we take away from this?









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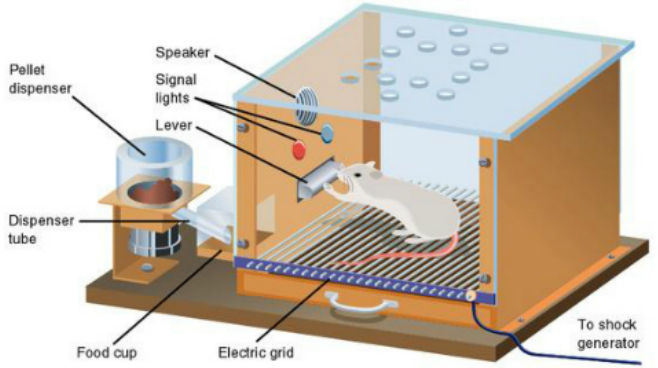
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Why would the results of such studies interest teachers? Can you guess what we take away from this?



Principles of learning according to behaviourist school

Learners require some reward or 'reinforcement' for learning (Learners motivated by expected reward - praise or satisfied curiosity)

Set achievable tasks for learners

Divide long tasks into a number of smaller ones

Make sure learners are successful regularly

Reinforcement should follow the desired behaviour as soon as possible.

feedback while working!

Learning is step by step not all at once and is strengthened by repeated success

No success = soon give up!

We remember what we have experienced frequently and recently

Effective teachers stress key points at the start/ end of lessons

They make use of old learning to develop new learning

Does education violate the behaviorsts' findings?

Principles of learning according to behaviourist school

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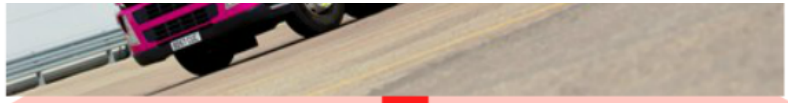
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Humanistic School

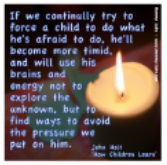
Meeting the emotional needs of learners

John Holt



1964





School system could destroy the minds and emotions of young children.

Humanist psychologists believe fear of failure and rejection produces maladjustment
(unable to adapt to environment resulting in emotional instability)

Play it safe, withdraw, feel crushed, lack self confidence.

Hit out in retaliation, disruptive

Either way learners and learning damaged!

Humanist school believes emotional factors and personal growth and development are the highest values. Schools are there to meet the needs of the individual not the other way around!

Thoughts?



Learners should be allowed to pursue their own interests and talents in order to develop themselves as fully as possible in their own unique direction.

Learners should be self directed - negotiated learning contract

Materials/rate/content/ methods all customised to learner

Choices maintain high motivation

National curriculum and compulsory attendance abandoned or low priority!

Students take responsibility for own learning

Over-helping by teachers encourages dependency

No blame policy for mistakes

Self assessment is preferable to teacher assessment as teacher tests promote 'rote' learning and teacher assessment can create fear and humiliation. Students will never take responsibility of their own improvement until they can learn to be constructively critical of their own work.

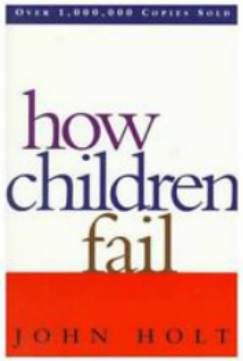
Given time to improve work

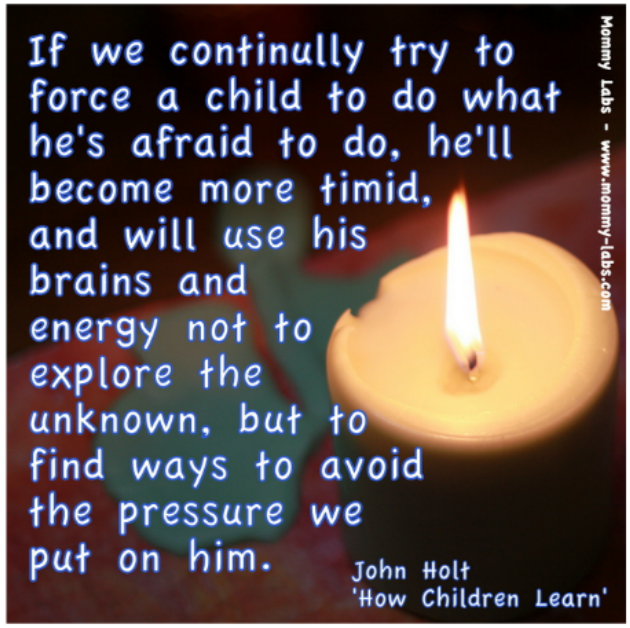
Learners present themselves for assessment when they feel ready

John Holt



1964





School system could destroy the minds and emotions of young children.

Humanist psychologists believe fear of failure and rejection produces maladjustment
(unable to adapt to environment resulting in emotional instability)

Humanist psychologists believe fear of failure and rejection produces maladjustment
(unable to adapt to environment resulting in emotional instability)



Play it safe, withdraw, feel crushed, lack self confidence.

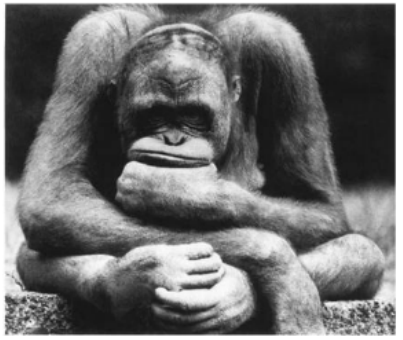
Hit out in retaliation, disruptive



Either way learners and learning damaged!

Humanist school believes emotional factors and personal growth and development are the highest values. Schools are there to meet the needs of the individual not the other way around!

Thoughts?



Learners should be allowed to pursue their own interests and talents in order to develop themselves as fully as possible in their own unique direction.

Learners should be self directed - negotiated learning contract

Materials/rate/content/ methods all customised to learner

Choices maintain high motivation

National curriculum and compulsory attendance abandoned or low priority!

Students take responsibility for own learning

Over-helping by teachers encourages dependency

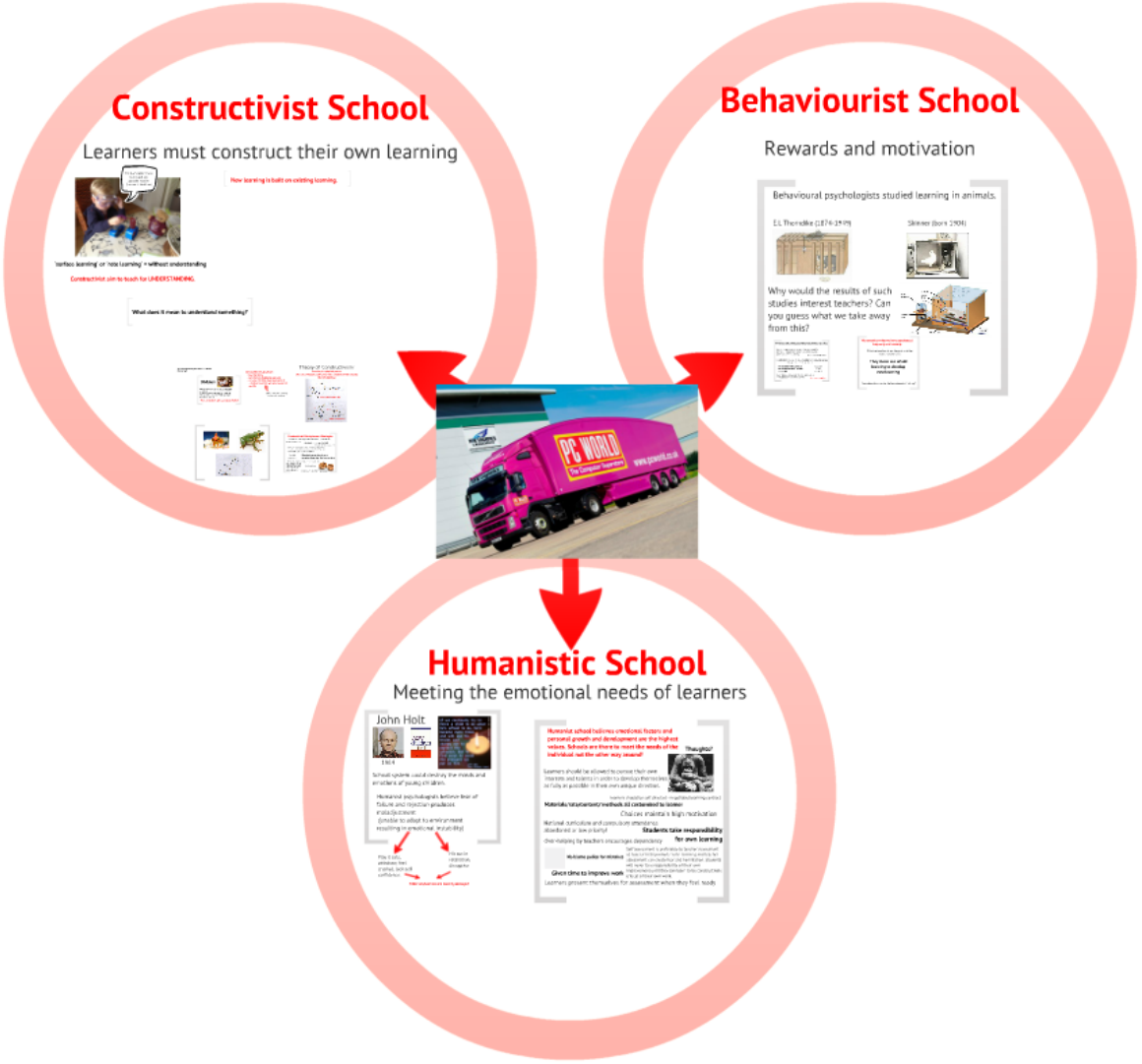


No blame policy for mistakes

Given time to improve work

Self assessment is preferable to teacher assessment as teacher tests promote 'rote' learning and teacher assessment can create fear and humiliation. Students will never take responsibility of their own improvement until they can learn to be constructively critical of their own work.

Learners present themselves for assessment when they feel ready



Three schools of learning in psychology



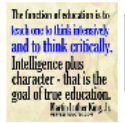




Motivation, oppo



What should





Can you remember the list of words?

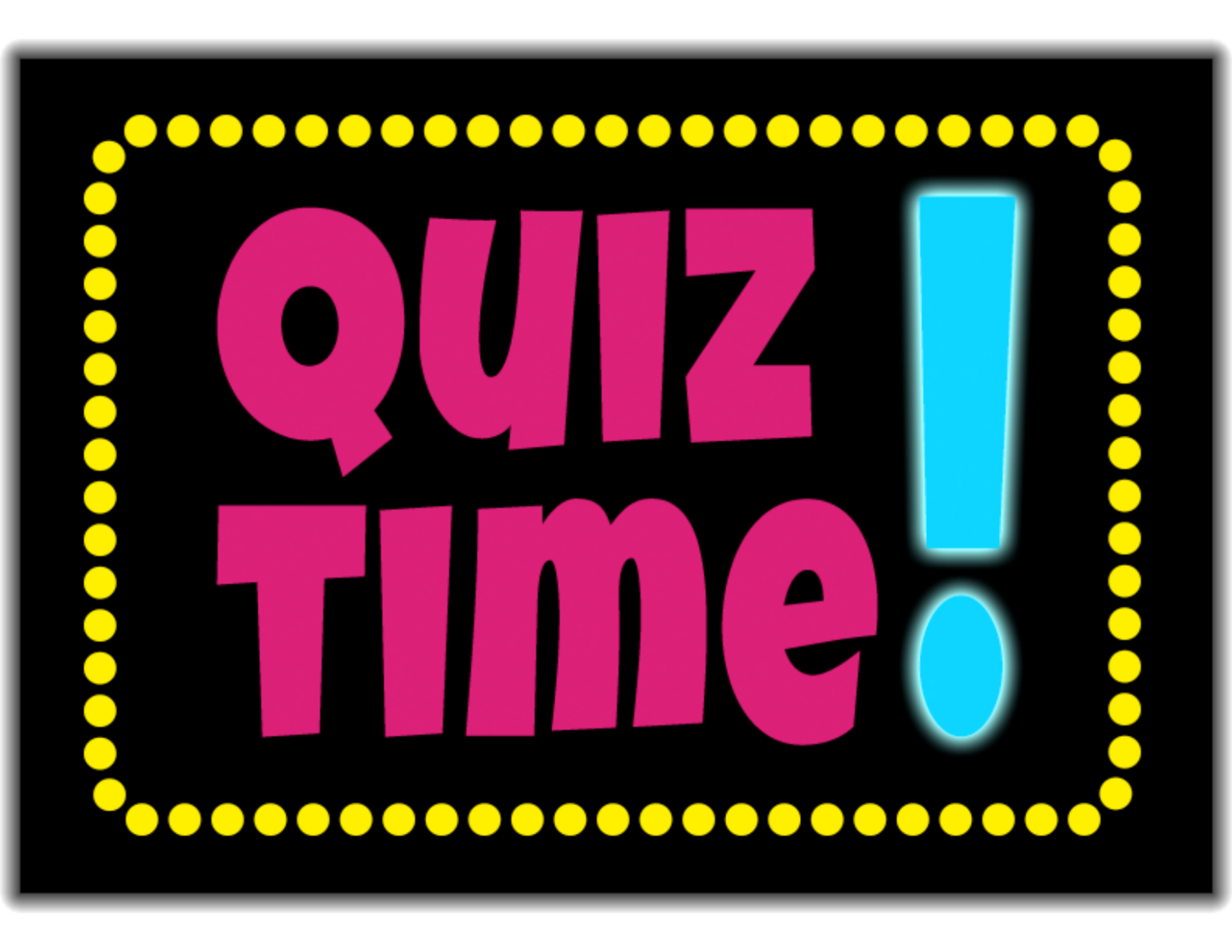
Thick wall it tea of myrrh seize knots trained

Nearly phonetically identical to...

The quality of mercy is not strained

Makes sense?

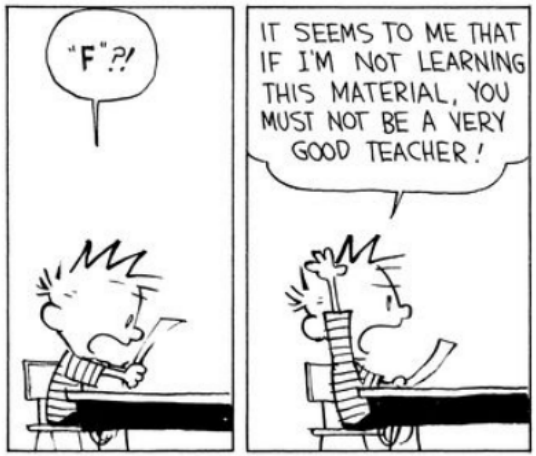
On the whole we don't remember words, we remember meanings and these meanings we must make ourselves!


Quiz
Time!

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Y Drindod Dewi Sant
UNIVERSITY OF WALES
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Principles of Pedagogy



Children as Learners



Canolfan Addysg Athrawon De-Orllewin Cymru
The South West Wales Centre of Teacher Education