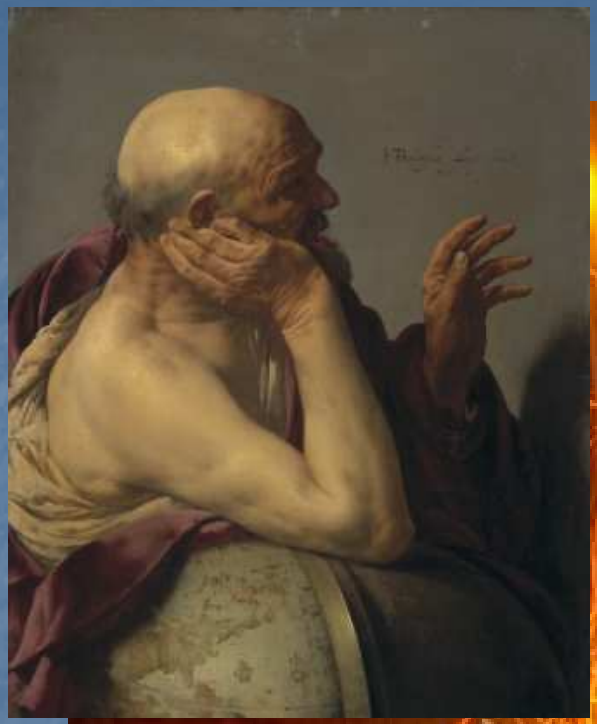
Herons, Hats & Hexagons

Steve Padget



"Education is not the filling of a pail, but the lighting of a fire."

Heraclitus

"I learned most, not from those who taught me, but from those who talked to me."

St Augustine

"Thinking skills are not mysterious entities existing somewhere in the mind.

They are not like mental muscles that have a physical presence in the brain.

The term thinking skills refers to the human capacity to think in conscious ways to achieve certain purposes.

Such processes include remembering, questioning, forming concepts, planning, reasoning, imagining, solving problems, making decisions and judgements, translating thoughts into words and so on.

Thinking skills are ways in which humans exercise the sapiens *part of being* homo sapiens."

Thinking skills from the National Strategy

Information processing	Finding relevant information	Organizing information Representing or communicating information
Reasoning	Giving reasons	Making inferences or deductions Arguing or explaining a point of view
Enquiry	Asking questions	Planning research or study Engaging in enquiry or process of finding out
Creative thinking	Generating ideas	Imagining or hypothesizing Designing innovative solutions
Evaluation	Developing evaluative criteria	Applying evaluative criteria Judging the value of information and ideas

Thinking skills can be taught and must be taught

Focusing

Information gathering

Remembering

Organising

Analysing

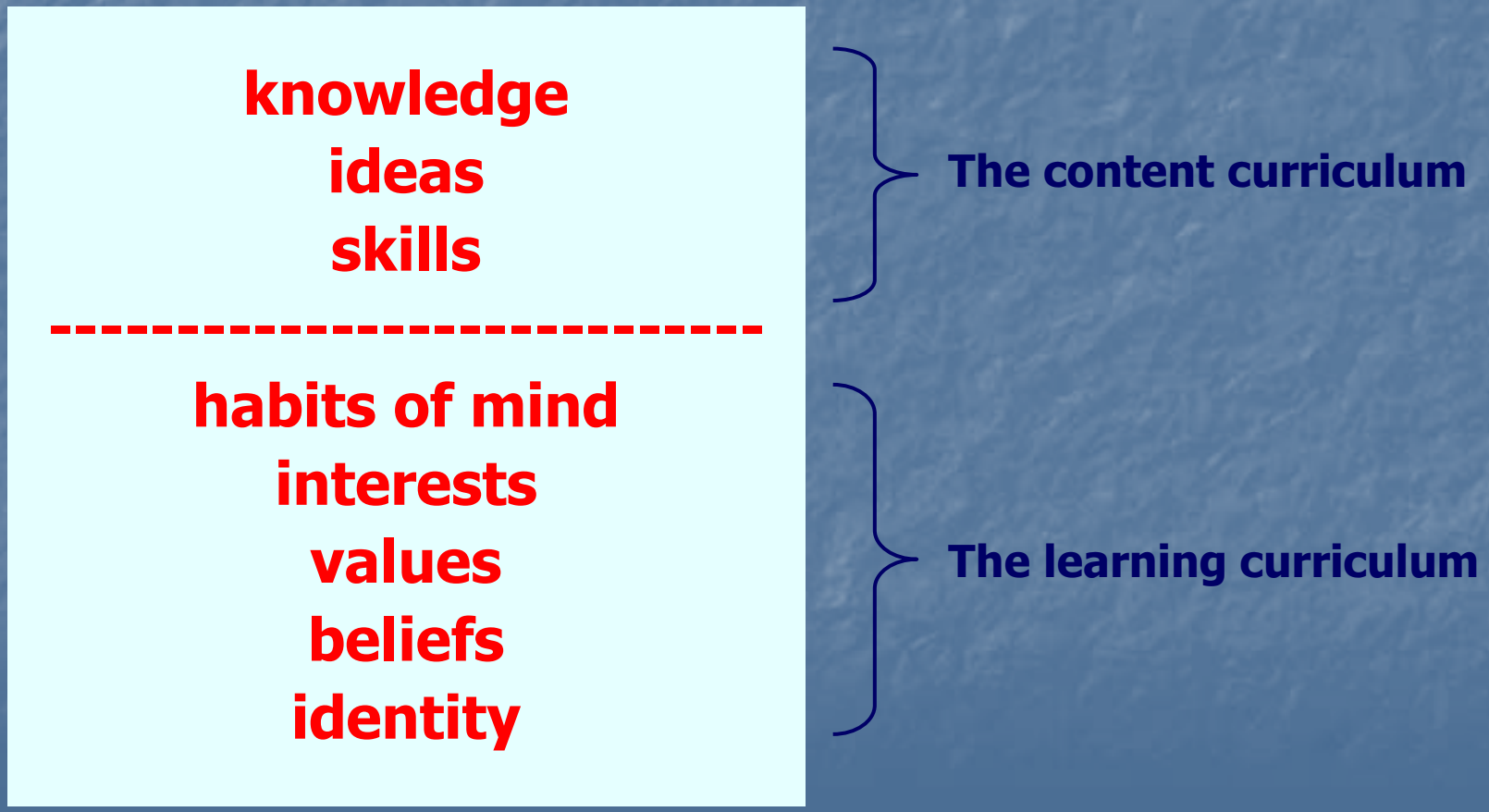
Generating

Integrating

Evaluating

'Teaching Students to Think' Dr John Langrehr

What Guy Claxton calls Deep Learning describes the layers of learning 'below the line'.



The Five Rs of lifelong learning
as devised by the Campaign for Learning

Readiness
Resourcefulness
Resilience
Remembering
Reflectiveness


EVERY CHILD MATTERS
PERSONALISED LEARNING
COMPETENCE BASED CURRICULUM
L2L
INDEPENDENT LEARNING
EMOTIONAL INTELLIGENCE

Learning Power dispositions from 'Building Learning Power in Action.'

Resilience	absorption	managing distractions	noticing	perseverance	
Resourcefulness	questioning	making links	imagining	reasoning	capitalising
Reflectiveness	planning	revising	distilling	meta-learning	
Reciprocity	interdependence	collaboration	empathy and listening	imitation	

Infusion methodology

An infusion methodology requires that thinking skills are embedded within and across the curriculum..

therefore effective teaching strategies for this approach depend on enabling teachers to infuse their curricular knowledge within a thinking skills' perspective. (split screen thinking)

The benefits of infusion were identified by McGuinness in the following ways:

- thinking skills can be matched directly with topics in the curriculum;
- content instruction is invigorated thus leading to deeper understanding;
- classroom time is used optimally;
- teaching for thoughtfulness is directly supported across the curriculum;
- and transfer of learning can be more easily promoted and reinforced at other stages.

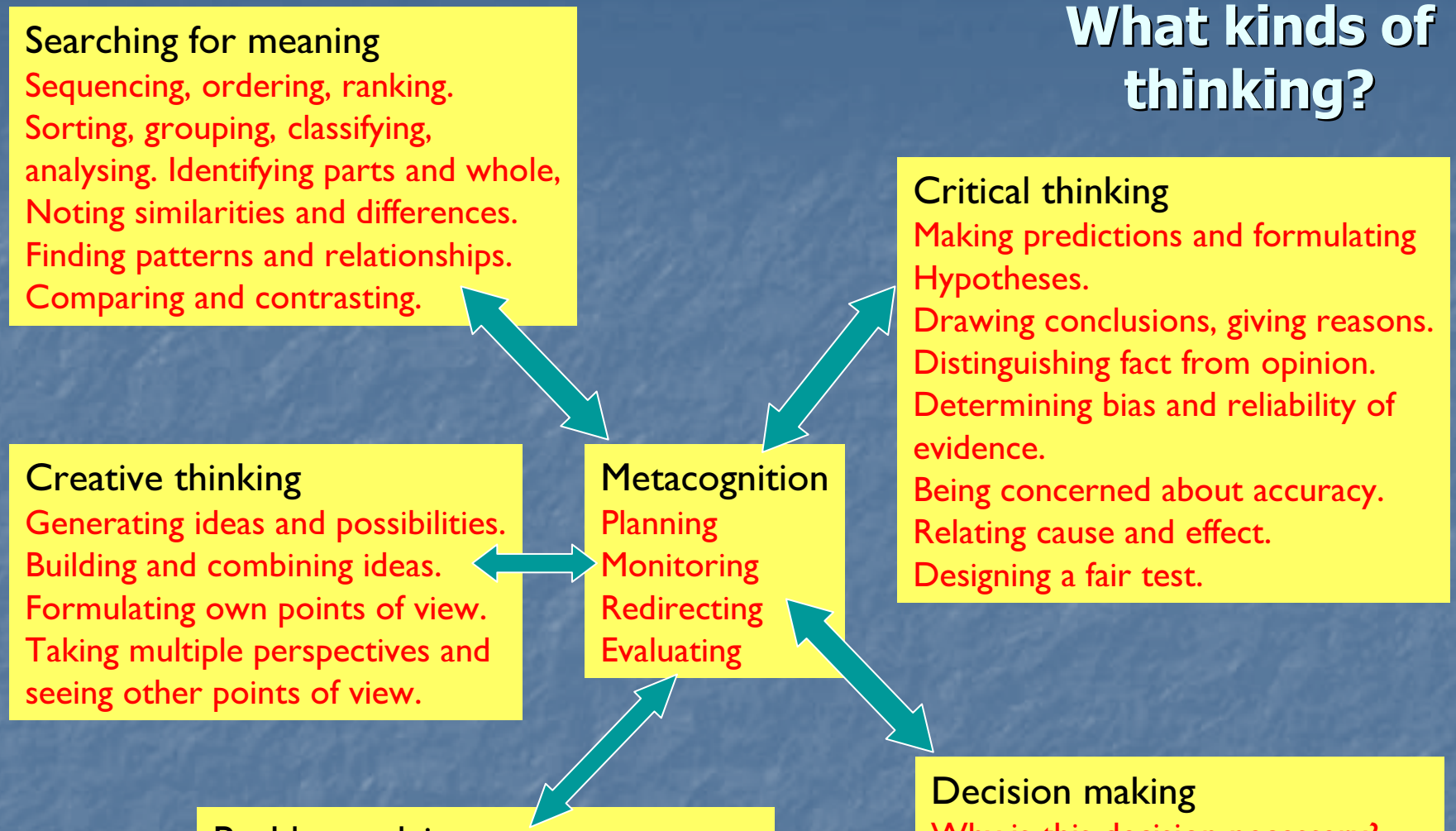
"Teachers, pupils and technologies interact with each other in certain ways."

"Classrooms which are characterised by talk and discussion and by questions and questioning need to be managed and orchestrated yet remain clearly focused on the learning objectives."

Carol McGuinness, Activating Children's Thinking Skills (ACTS)

The thinking classroom - a constructivist environment

What kinds of thinking?



After McGuinness ACTS II

Discuss in your group for five minutes…

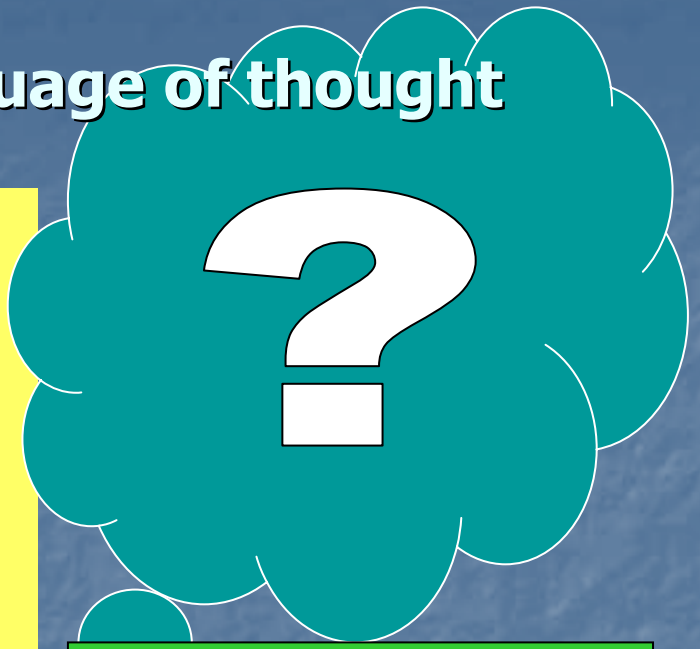
1. What strategies do you use to promote thinking skills in the class or what methods could you see yourself using in the future?

2. What advantages did you see or could you envisage arising from organising the learning in this way?

3. What problems have you faced or do you foresee in using techniques that demand a high degree of interaction?

classroom thinking strategies

The importance of the language of thought



How did you do that?

How else could you have done that?

Who did that in a different way

What was hard about doing that?

What could you do when you are stuck on that?

How could you help someone else do that?

What would have made that easier for you?

How could I have taught that better?

How could you make that harder for yourself?

What would happen if….?

I'm puzzled, my question is..

Suppose..

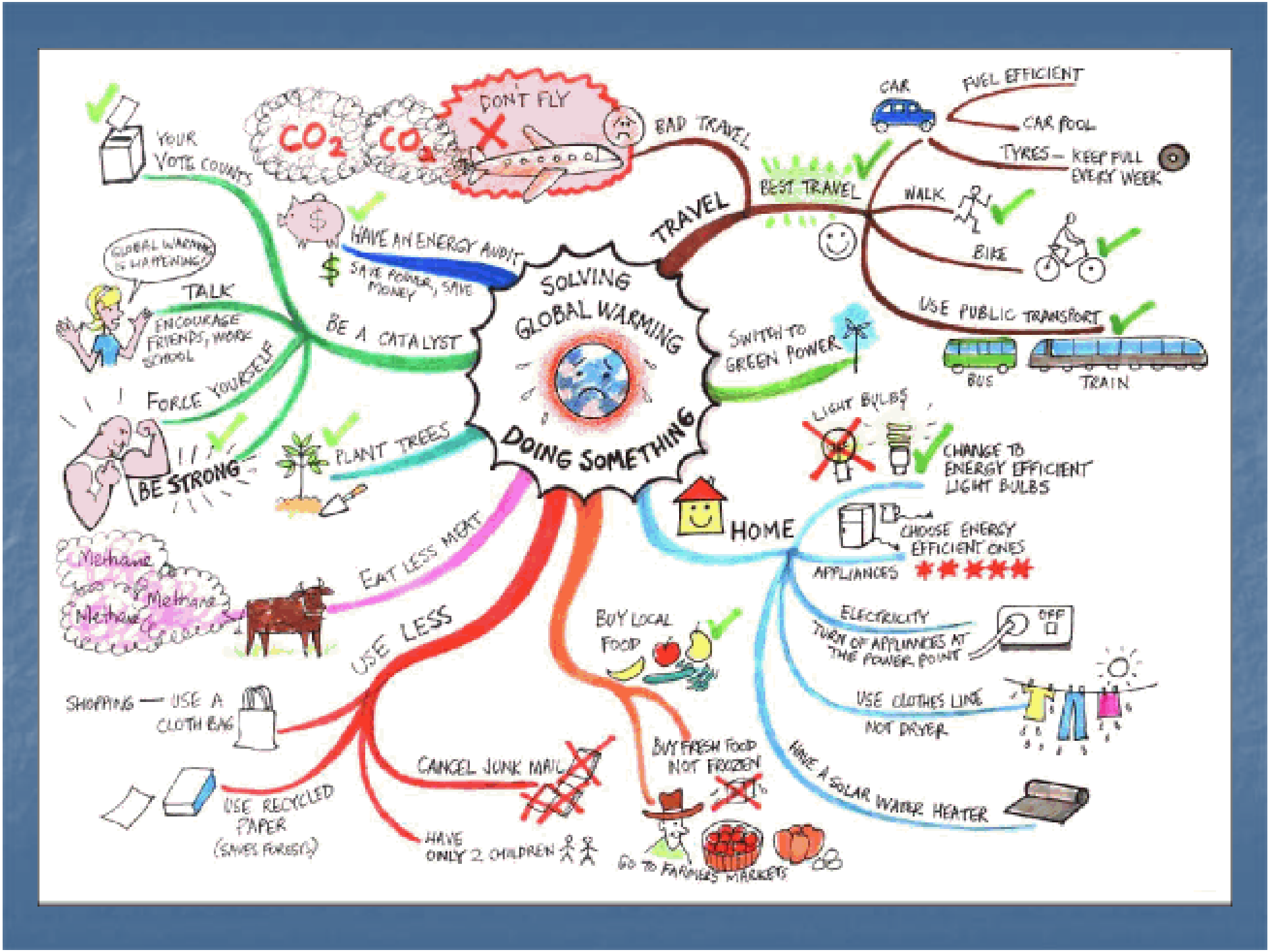
Imagine..

Predict..

I couldn't decide because…

Generating the right culture

- Language
- Potentiating activities
- Split screen thinking
- Wild topics
- Transparency and involvement
- Transfer thinking
- Progression
- Modelling the dispositions


SOLVING GLOBAL WARMING
DOING SOMETHING
TRAVEL
BAD TRAVEL
DON'T FLY
CO_2 CO_2
BEST TRAVEL
CAR
FUEL EFFICIENT
CAR POOL
TYRES — KEEP FULL EVERY WEEK
WALK
BIKE
USE PUBLIC TRANSPORT
BUS
TRAIN
SWITCH TO GREEN POWER
HOME
LIGHT BULBS
CHANGE TO ENERGY EFFICIENT LIGHT BULBS
CHOOSE ENERGY EFFICIENT ONES
APPLIANCES
ELECTRICITY
TURN OFF APPLIANCES AT THE POWER POINT
OFF
USE CLOTHES LINE NOT DRYER
HAVE A SOLAR WATER HEATER
BUY LOCAL FOOD
BUY FRESH FOOD NOT FROZEN
GO TO FARMERS MARKETS
CANCEL JUNK MAIL
HAVE ONLY 2 CHILDREN
USE LESS
SHOPPING — USE A CLOTH BAG
USE RECYCLED PAPER (SAVES FORESTS)
EAT LESS MEAT
Methane
Methane
Methane
PLANT TREES
BE A CATALYST
YOUR VOTE COUNTS
HAVE AN ENERGY AUDIT
SAVE POWER, SAVE MONEY
TALK
GLOBAL WARMING IS HAPPENING!
ENCOURAGE FRIENDS, WORK SCHOOL
FORCE YOURSELF
BE STRONG

Edward de Bono's CoRT1 techniques

CAF	(ask pupils to consider all factors)
C&S	(ask pupils to think of the consequences and sequel)
AGO	(ask pupils to consider their aims, goals and objectives which need not be strictly classified into these categories)
FIP	(ask pupils to think of the first important priorities)
APC	(ask pupils to run through the alternatives, possibilities and choices)
OPV	(ask pupils to look at the task from other points of view)

Think Links

Place the cards face down on the desk

In turn take two cards

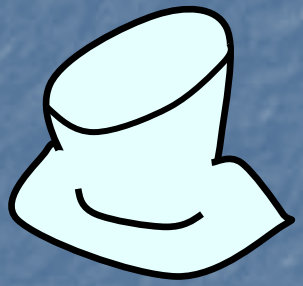
Look at them

Explain to your group the link that you see between the two images..you might have to be very imaginative!

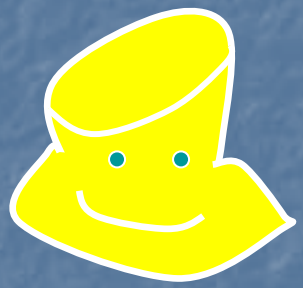
Replace the cards on the table face down

Six Thinking Hats

Intuitive



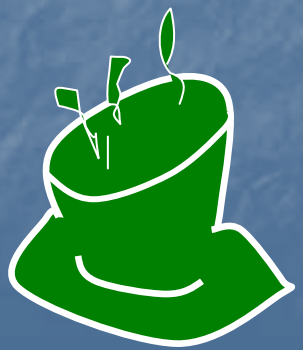
Informative

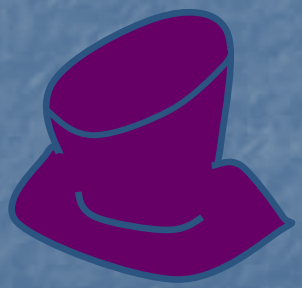


Constructive

Reflective

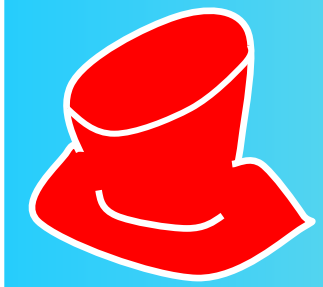
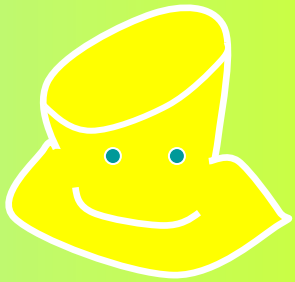
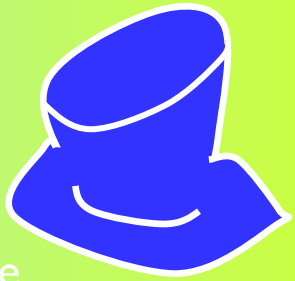
Creative





Cautious

Six Thinking Hats

 Intuitive	Reality	 Informative
 Cautious	Positive and negative	 Constructive
 Creative	Alternative solutions	 Reflective

Construct a food web of the pond ecosystem

Activity 1

using LogoVisual Thinking kits

In this activity we will be:

- **Making a best effort to create a food web, as evidence of our prior knowledge using MagNotes and boards.**

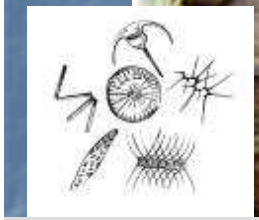
Construct a food web of the pond ecosystem

Moorhen

Tadpole

Great blue heron

Sedge



Phytoplankton

Stickleback (small fish)

Water pennywort

Pond weed

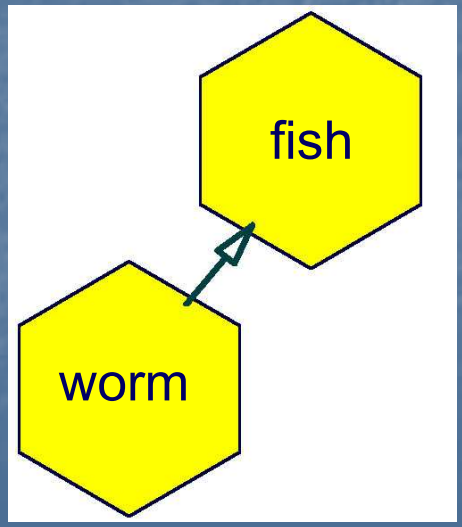
Water beetle

Sandelia fish (large)

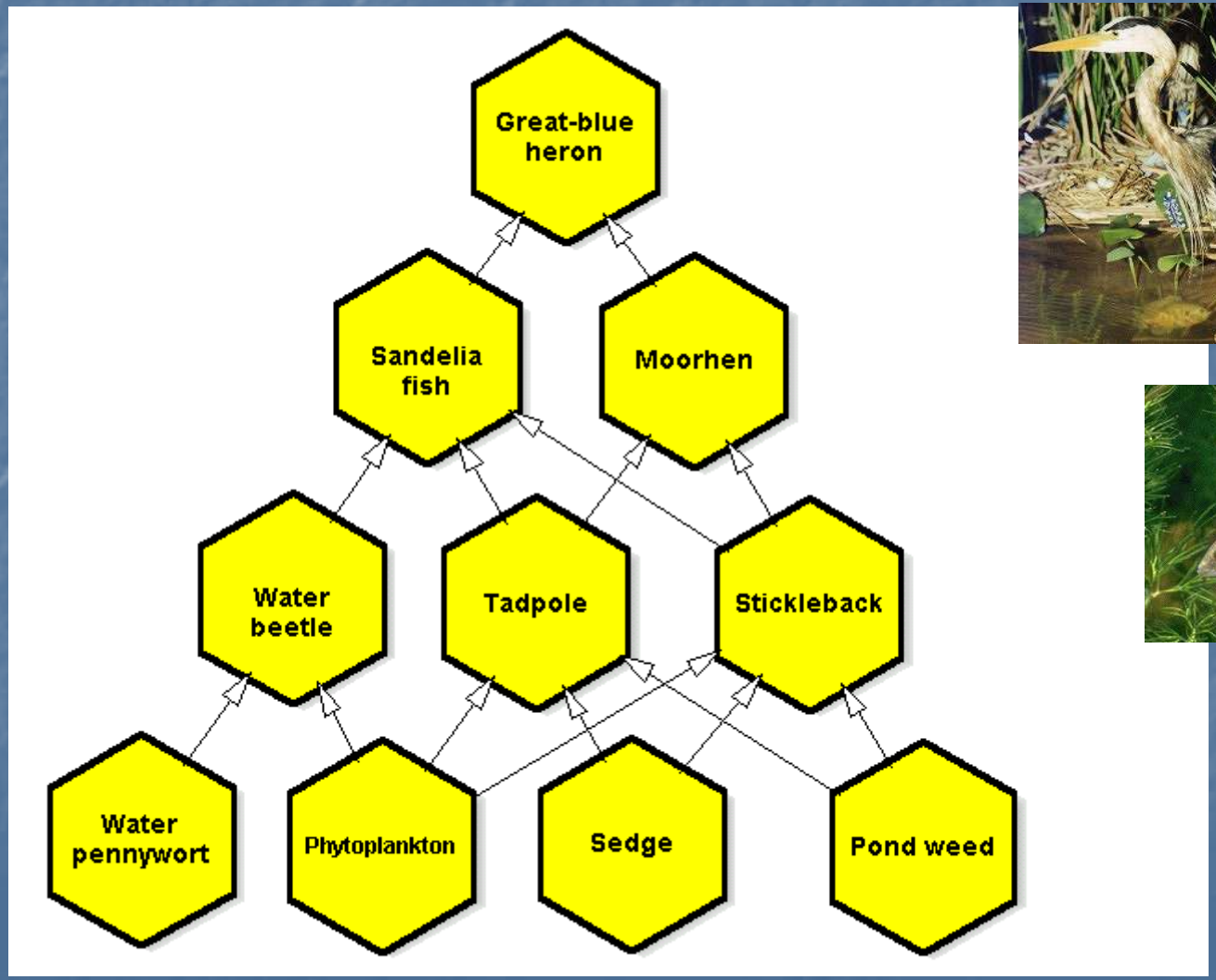
This is what you do..

- Write the name of each organism onto a separate yellow MagNote

- Arrange the MagNotes, and draw arrows on the board, to show the direction in which energy flows in the eco-system – e.g. fish eats worm…



A solution!


Great-blue heron
Sandelia fish
Moorhen
Water beetle
Tadpole
Stickleback
Water pennywort
Phytoplankton
Sedge
Pond weed

The core LVT process

LVT integrates verbal, visual and kinaesthetic intelligence into one process and in doing this supports a fourth aspect of intelligence – social: the ability to talk with others, to speak to listen to exchange ideas.

Activity 2

The core LVT process

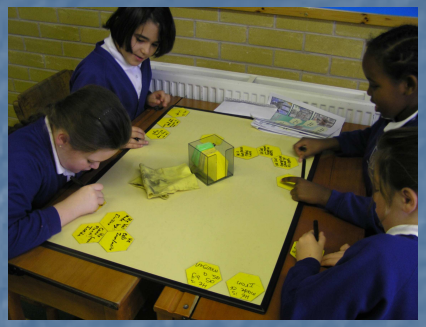
Focus

What are we going to think about?

Key question…

What would a thinking classroom look like?

The core LVT process



Gather

Generate ideas **in response to the guiding question.**

What do we know?

All ideas are relevant and can be based on the experience from any or all of these:

Décor…activities and behaviours of the pupils and the teacher … sounds … atmosphere … what would be distinctive … arrangement and nature of displays … organisation of the pupils … deployment of resources … and so on….

The core LVT process

Organise

When all the ideas are on the board you will have lots of disorderly statements on the board. “Messy thinking”.

What sense can we make of this?
What relationships do we see emerging?

- See how these thoughts can be ordered.
- What associations can you find?
- Form clusters of maybe up to six or seven ideas.
- Give the cluster a label using a green MagNote
  - or simply writing the label on the board.

The label should also include a verb.

The core LVT process

Understand

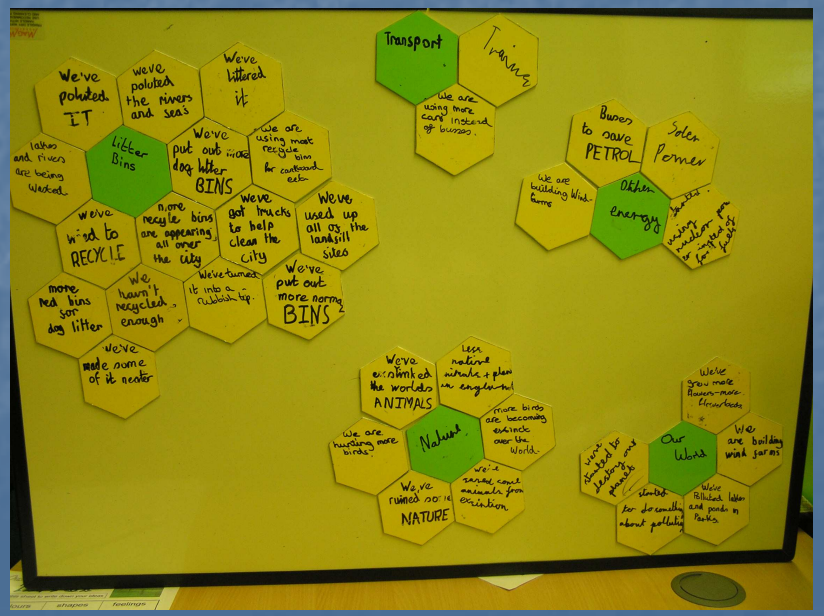
Making a pattern of the ideas and seeing them as a unity is considered as understanding.

Learners are able to say how this new pattern was generated.

Learners have ownership of the ideas and the process that generated them – they have an awareness of what they have achieved.

What meanings have we made?

What <u>new</u> meanings have we made?



The core LVT process

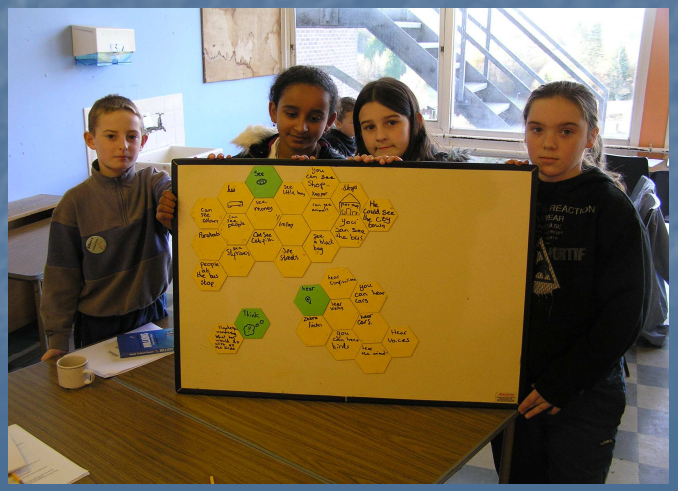
Apply

What should be the intended and/or recordable outcome?

How can the new understanding and learning be recognised?

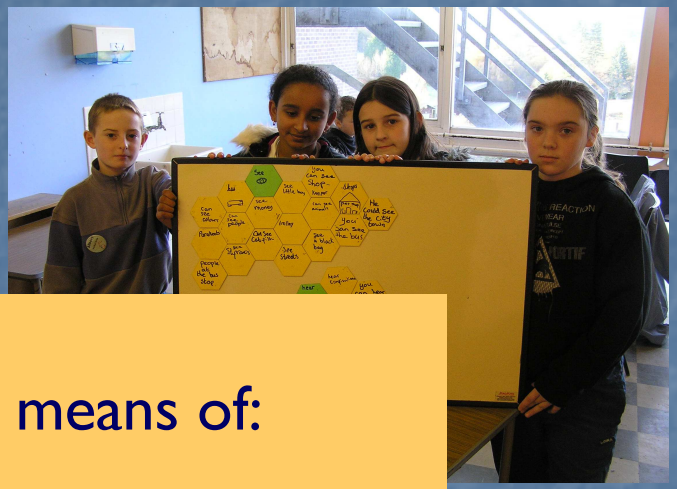
Making something of the meaning

Learners do something with the patterns that have emerged to show that a cognitive shift has taken place in their understanding or perception



The core LVT process

Apply



Outcomes can be expressed by means of:

- Writing in both factual and imaginative genres.
- Drawing, painting, visually in two dimensions.
- Modelling in three dimensions
- Speaking in a social dimension
- Acting and/or dance in a physical dimension

and so on…

The core LVT process - summary

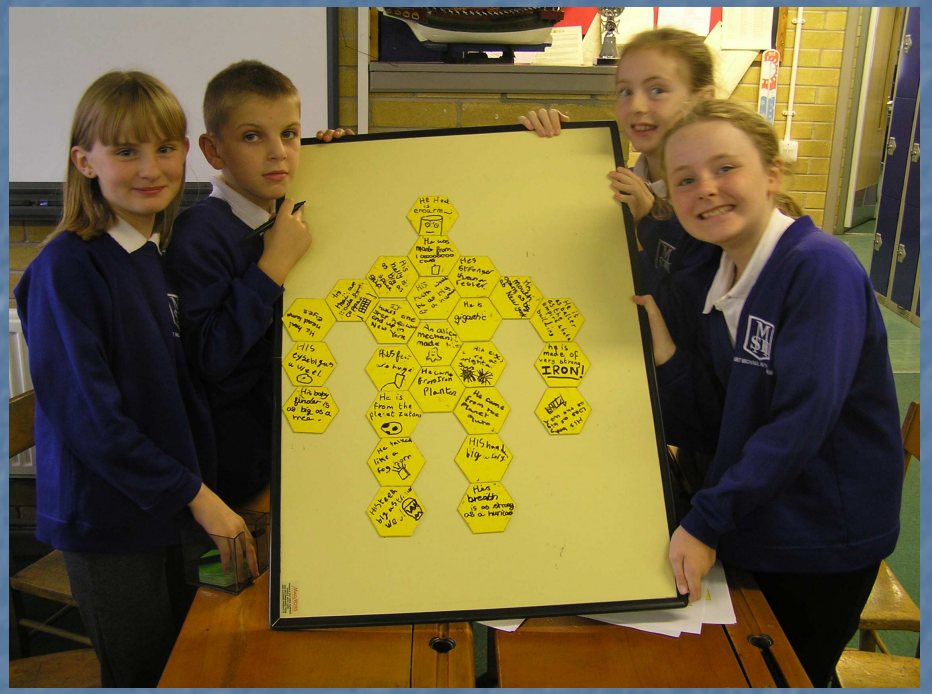
Focus:
what do we want to know?

Gather:
what do we already know?

Organise:
what sense can we make of this?

Understand:
what (new) meanings have we made?

Apply:
what can we make of these new meanings?



Carol McGuinness,
ACTS research (activating children's thinking skills)
and DfEE research report RR115 – *'From thinking skills to thinking classrooms'*

Edward de Bono, *CoRT1* materials, *'Six Thinking Hats'* Penguin

Adey and Shayer,
Cognitive Acceleration through Science Teaching described in *'Really Raising Standards'*, Routledge

Tony Buzan
'Get Ahead' , 'Make the most of your mind' ,
'Mind Maps for Kids' and many others.

Guy Claxton, in *'Building Learning Power'*