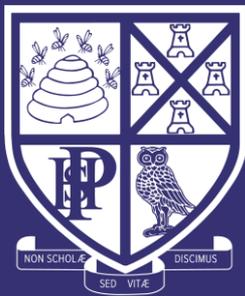


Thinking
Tools:

A guide
for
parents



“Thinking – like
all skills -
is something that
takes practice.”

What is a Thinking School?

“an educational community in which all members share a common commitment to giving regular, careful thought to everything that takes place. This will involve learning how to think, reflectively, critically and creatively, and employing these skills and techniques in the co-construction of a meaningful curriculum and associated activities.

Successful outcomes will be reflected in students across a wide range of abilities demonstrating independent and co-operative learning skills, high levels of achievement, and both enjoyment and satisfaction in learning.

Benefits will also be shown in ways which all members of the community interact with and show consideration for each other and in the positive psychological well-being of both students and staff.”

Prof. Bob Burden
University of Exeter
2006

Six Hats.

Infinite ideas.

Making decisions isn't always easy—especially in group discussions where ideas can clash, and emotions run high. That's why we use **Thinking Hats**, a strategy developed by Dr. Edward de Bono, to help students think more clearly, work collaboratively, and make better decisions.

Each “hat” represents a different way of thinking, helping students approach problems from multiple perspectives.

By using this approach, students become more thoughtful, adaptable thinkers—key skills for success in both education and life.

You can support this at home by encouraging your child to consider different viewpoints, organise their thinking, and explore creative solutions when faced with challenges.

By building these habits, we're preparing students not just for school, but for life.



The red hat

Feelings, reaction and vibes
How we feel: gut instincts, honest emotions, intuition



The green hat

Creativity and surprise
Alternatives, reframing, out-of-the-box ideas, what-ifs



The black hat

Caution and scepticism
Dangers, threats, risks, drawbacks, worst-case scenarios



The blue hat

Manages the process
Listens, directs attention, integrates, moves forward



The yellow hat

Sunshine and positivity
Optimism, possibilities, upsides, potential



The white hat

Data, facts and information
What we know, and what we ought to find out

Edward de Bono's Thinking Hats

The Thinking Hats are a creative problem-solving tool. They ensure that many perspectives are considered and given time.



The white hat

Data, facts and information
What we know, and what we ought to find out



The yellow hat

Sunshine and positivity
Optimism, possibilities, upsides, potential



The blue hat

Manages the process
Listens, directs attention, integrates, moves forward



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Feelings, reaction and vibes
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Dangers, threats, risks, drawbacks, worst-case scenarios



The green hat

Creativity and surprise
Alternatives, reframing, out-of-the-box ideas, what-ifs

Changing Minds.

One habit at a time.

We want students to do more than just memorise facts or pass examinations. What really matters is how students respond when they **don't** know the answer.

This is where **Habits of Mind** can help. These thinking dispositions help students navigate uncertainty, solve problems creatively, and reflect on their own learning

We want them to become confident, independent problem-solvers who can apply their learning to real-life situations. But learning isn't just about getting the right answers.

When faced with challenges—whether in religious studies, music, German, or everyday life—we want them to stay curious, think strategically, and persist, even when things are tough.

. Some key Habits of Mind include:

- **Persisting** – Sticking with a task, even when it's difficult.
- **Striving for accuracy** – Taking pride in doing things well.
- **Applying past knowledge to new situations** – Making connections between different subjects and experiences.

By developing these habits, students build confidence in their own thinking and become better equipped to handle challenges in school, work, and life.

As parents, you can support this at home by encouraging your child to ask questions, reflect on mistakes as learning opportunities, and approach problems with an open and curious mind.

Together, we can help our students grow into thoughtful, independent learners—ready to tackle whatever the future holds



Costa & Kallick's Habits of Mind

Great habits of mind will allow you to solve problems when the answer is not immediately obvious. Show these habits in class and your teacher may award achievement points.



Thinking About Your Thinking

Reflect and adjust

*Reflect on how you learn.
Reflect on the purpose of tasks.
Plan ahead and adjust when things don't work*



Listening With Understanding And Empathy

Try and understand others

Pay attention to others, respect different opinions and try to see their point of view



Finding Humour

See the funny side

A good sense of humour helps you to stay positive, relax and connect with others. Don't take yourself too seriously



Questioning & Posing Problems

Be curious. Ask why.

Ask deep questions, challenge ideas and look for answers to interesting problems



Thinking & Communicating With Clarity & Precision

Brief and to the point

Say what you mean, avoid confusion and explain your ideas in simple terms.



Gathering Data Through All Senses

Tune in. Pay attention.

Senses like smell, touch, sight, hearing and taste all play a role in learning new things.

Costa & Kallick's Habits of Mind

Great habits of mind will allow you to solve problems when the answer is not immediately obvious. Show these habits in class and your teacher may award achievement points.



Thinking Interdependently

Work well with others

Share ideas, be a team player and appreciate different perspectives. No main characters here!



Striving For Accuracy

Aim for 100% Try your best!

Aim for accuracy, check over your work, keep improving until you are proud of it. Remember that no one is perfect!



Applying Past Knowledge To New Situations

What do you know?

Connect past experiences and learning and use it to help with new challenges and unfamiliar situations



Remaining Open To Continuous Learning

Keep growing and improving

Never stop learning! Stay open to new ideas and take feedback positively.



Persisting

Stick with it!

Don't give up. Difficult and challenging work is part of PHSG life. Stay focused and learn from mistakes



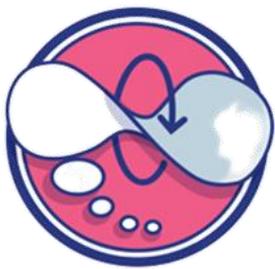
Responding With Wonderment & Awe

Stay curious. Stay excited.

Enjoy learning. Be amazed by new discoveries and keep asking 'why?' and 'how?'

Costa & Kallick's Habits of Mind

Great habits of mind will allow you to solve problems when the answer is not immediately obvious. Show these habits in class and your teacher may award achievement points.



Thinking Flexibly

Be open-minded

Be flexible in your thinking and willing to try new ideas and approaches



Creating, Imagining and Innovating

Think differently

Think outside the box, experiment with ideas and find unique solutions to problems



Managing Impulsivity

Think before you act

Take your time, stay calm, and make smart choices instead of rushing into things



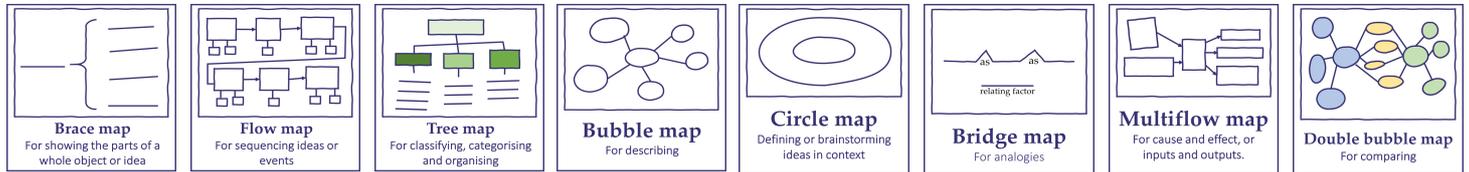
Taking Responsible Risks

Give it a go!

Think outside the box, experiment with ideas and find unique solutions to problems

Mapping minds.

Exploring ideas.



We use **Thinking Maps** to help students organise information, structure their thoughts, and make connections. These eight visual tools, designed by Dr David Hyerle, represent different thinking processes, making learning more effective.

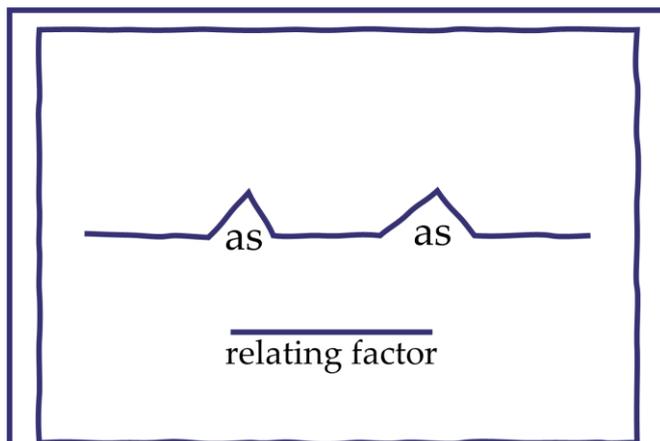
Thinking Maps provide a structured way of thinking, helping students to problem-solve, analyse, and communicate ideas clearly. They are used across all subjects and year groups to support deeper learning and understanding.

You can encourage your child to use Thinking Maps at home when revising, planning essays, or solving problems. They are designed to be easy to draw.

By making thinking visible, things become clearer. These tools help students become more confident and independent learners.

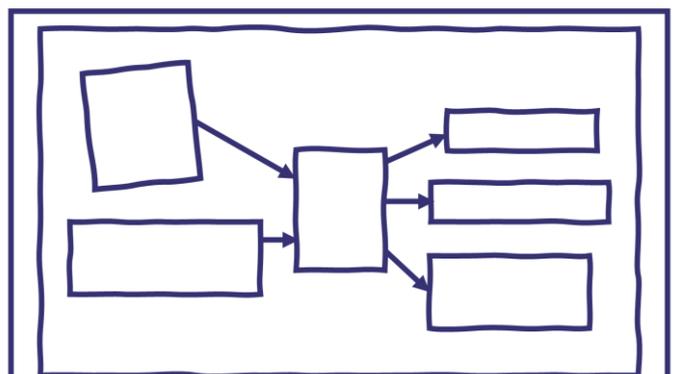
David Hyerle's Thinking Maps

The eight Thinking Maps are useful visual tools which allow information to be displayed in different ways.



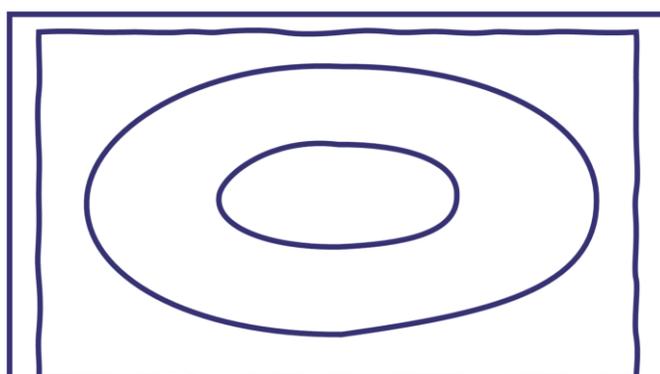
Bridge map

For analogies



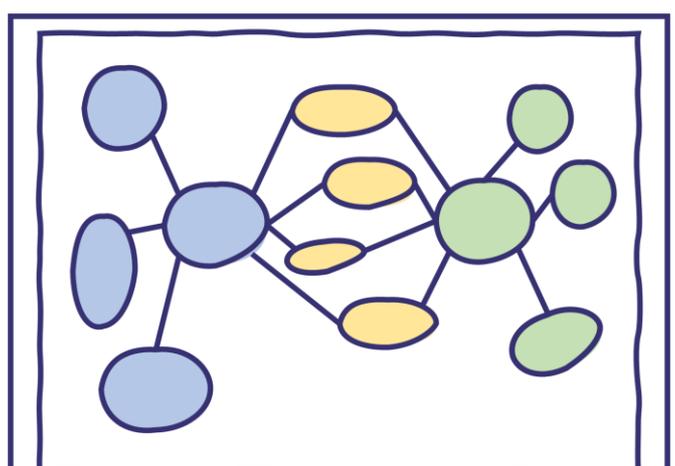
Multiflow map

For cause and effect, or
inputs and outputs.



Circle map

Defining or brainstorming
ideas in context

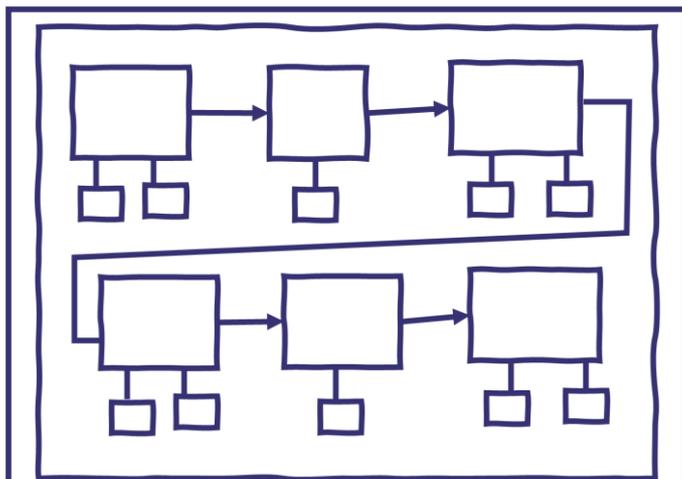


Double bubble map

For comparing

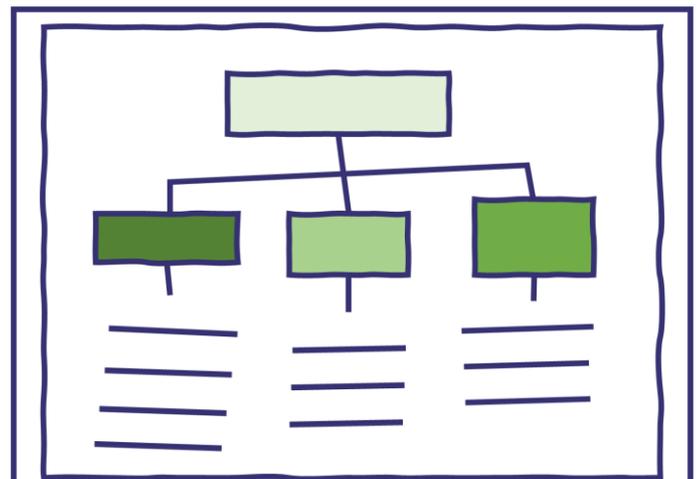
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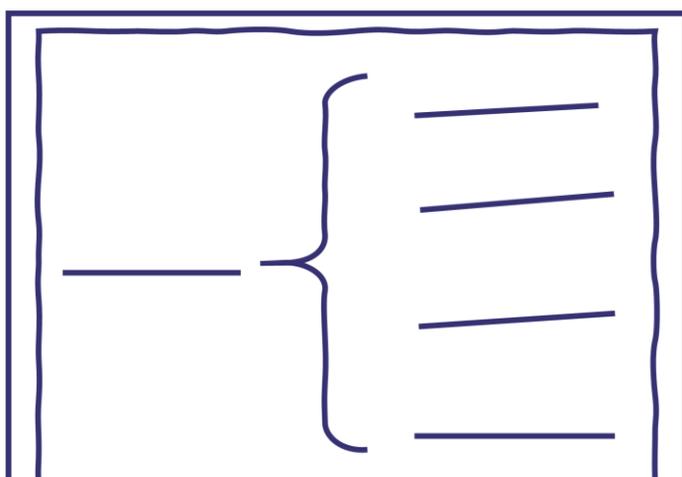
Flow map

For sequencing ideas or events



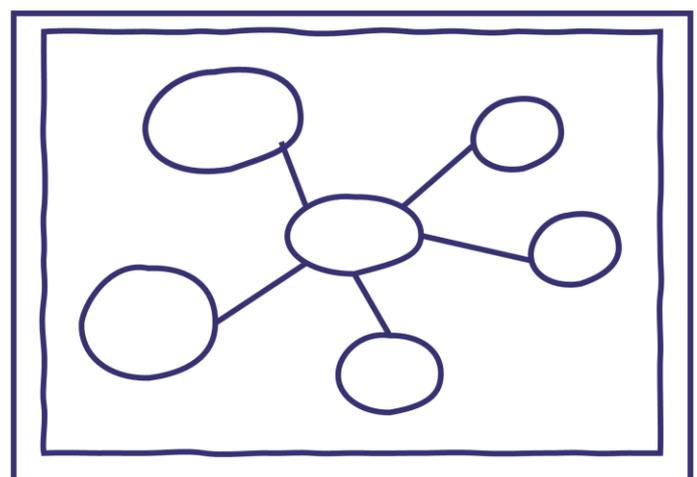
Tree map

For classifying, categorising and organising



Brace map

For showing the parts of a whole object or idea



Bubble map

For describing

Unlocking critical and creative thinking.

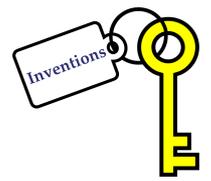
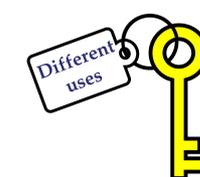
We use **Thinker's Keys** to help students develop flexible and independent thinking. Designed by Tony Ryan, these 20 question starters encourage both critical and creative problem-solving, helping students to analyse, innovate, and explore different perspectives.

Each key focuses on a different way of thinking. Some keys encourage students to challenge assumptions (the Reverse Key), while others push them to imagine new possibilities (the What If Key). Some develop problem-solving skills by breaking issues down into smaller parts (the Variations Key), and others encourage students to design and invent (the Invention Key). These different approaches help students to think more deeply, ask better questions, and come up with creative solutions.

Parents can support their children by asking Thinker's Key-style questions at home. For example:

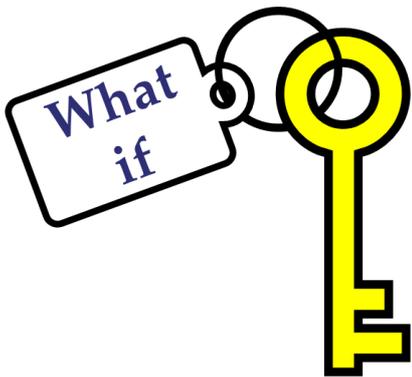
- Ask, “**What if** everyone in the world spoke only one language” or “What if gravity doubled?” to spark imaginative discussions.
- When reflecting on their own work, have them consider the elements of the **BAR key** – what element would you make bigger? What would you add? What would you replace?

By encouraging open-ended, creative thinking, parents can help children build confidence in their ideas and develop essential problem-solving skills for life.



Tony Ryan's Thinker's Keys

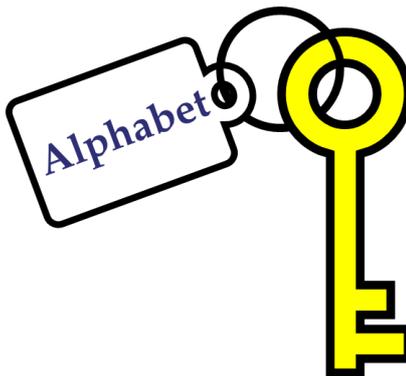
The 20 Thinker's Keys show us a range of different ways in which we can 'unlock' critical thinking.



You can ask virtually any 'what if' question. They can be useful introductions to new topics, or a way of generating new ideas:

"What if the price of petrol doubled?"

"What if gases were more dense than liquids?"



Choose a topic and create a list of words from A to Z which connect. To shrink the task, use fewer letters: e.g. A to E

"A to E for the Munich Agreement"

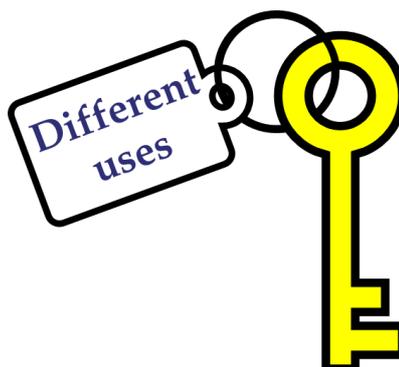
Appeasement | Britain | Czechoslovakia...



List the solutions to a problem, or give all of the knowledge you have for a topic.

"How could we encourage people not to drive their cars?"

Paid to walk. Free bikes. Higher vehicle taxes...



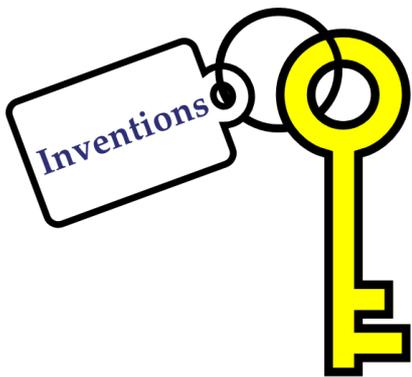
Think of a variety of different uses for every day objects or ideas. This is a great way to think flexibly and problem-solve.

"Different uses of sound waves"

"Different uses of National Parks"

Tony Ryan's Thinker's Keys

The 20 Thinker's Keys show us a range of different ways in which we can 'unlock' critical thinking.



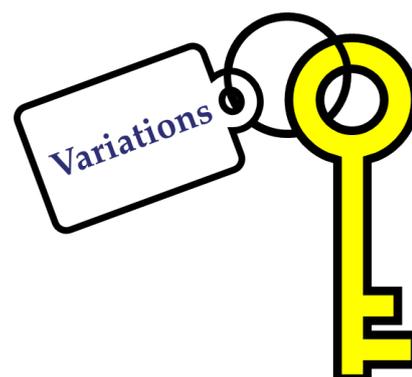
Invent objects or machines that solve a problem in our lives. Include a description or basic diagram.

"Invent a better way of catching mosquitos"
"Invent a new style of poem"



Make a statement that might seem at first impossible, silly or 'too difficult' and then try to show why it could work.

"The Government should fit solar panels in every home"
"Learning to play musical instruments should be required"



"How many ways can you...." is an important question as it expands your thinking.

"How many ways can you modify a sport to make it more accessible?"
"How many ways can you create a portrait?"



Choose an object or idea and list its disadvantages. Then find ways to correct or eliminate these disadvantages.

"What are the disadvantages of using acrylic?"
"What are the disadvantages of using AI tools?"

Tony Ryan's Thinker's Keys

The 20 Thinker's Keys show us a range of different ways in which we can 'unlock' critical thinking.



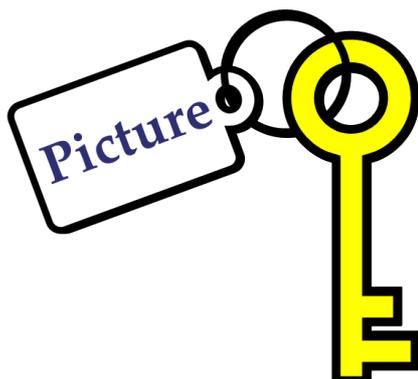
Find two different objects and list their different features in a table. Then combine some of the features to form a new object.

A leaf and a mousetrap: a mini mousetrap placed on leaves that kill insects that try and eat the leaf.



Think of a statement that is generally unquestioned or unchallenged and then think of alternative solutions.

Governments must collect taxes: People could instead pay for services as required instead.



A picture is provided with no immediate connection with the topic. Students then try to find links or connections.

Topic: tectonics. Picture: broken glass



Decide upon two ideas/objects where it seems they have nothing in common. Students must find things in common.

*Shakespearean tragedy and a modern graphic novel
Fashion designer and an engineer
Graffiti and cave paintings*

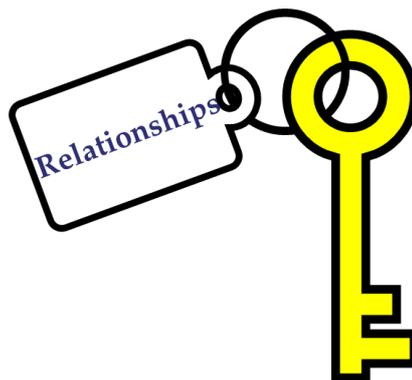
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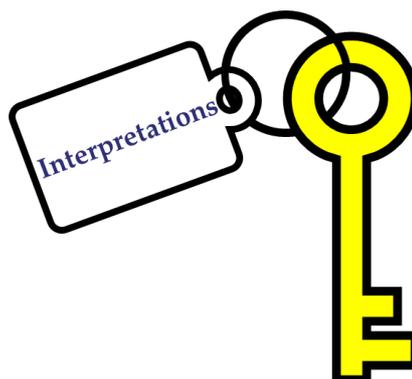
List ways in which to complete a task without the normal methods or tools. This forces you to think creatively to solve a problem.

*How could a community function **without** a leader?
How could you create a portrait **without** showing a face?*



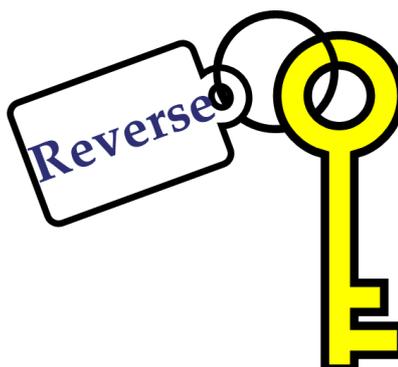
Take four disconnected objects and use them to solve a problem.

*What if an organism had the features of a: **bird, cactus, jellyfish and a butterfly?**
What parts of a courtroom function like a: **beehive, clock tower, a maze and a spotlight***



Describe an unusual situation and then think of some different explanations for that event.

*A group of fish in a lake have started glowing. **What is the cause?**
A dry desert suddenly floods with water after centuries. **Why?***



Create a list of questions that include the words "cannot", "never" or "not".

*List 5 products that could **never** be sold online
Name three words that **cannot** be directly translated from German to English.*

Tony Ryan's Thinker's Keys

The 20 Thinker's Keys show us a range of different ways in which we can 'unlock' critical thinking.



This is a useful reflection tool, when considering an idea or piece of work.

*What could be **bigger**?*
*What would you **add**?*
*What would you **replace**?*



Give a series of predictions for a particular situation.

Predict how the rate of reaction changes with a 10°C rise
Predict how augmented reality may change graphic design



Provide an answer to a question, and then create five questions which could have that answer.

Answer: Force
Questions: What causes acceleration?, What describes a pull/push that change motion of objects



From a collection of simple construction materials, ask students to build something.

Build the highest self-supporting structure
Build the highest platform which will suspend a house brick