

**SHOWCASING  
CREATIVE THINKING  
AT  
HURSTVILLE PUBLIC SCHOOL**

**NSW DEPARTMENT OF EDUCATION CONFERENCE  
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# TEACHING STANDARDS

**2.1: Content and teaching strategies of the teaching area**

**3.3: Use teaching strategies**

**3.6: Evaluate and improve teaching programs.**

**5.1: Assess student learning**

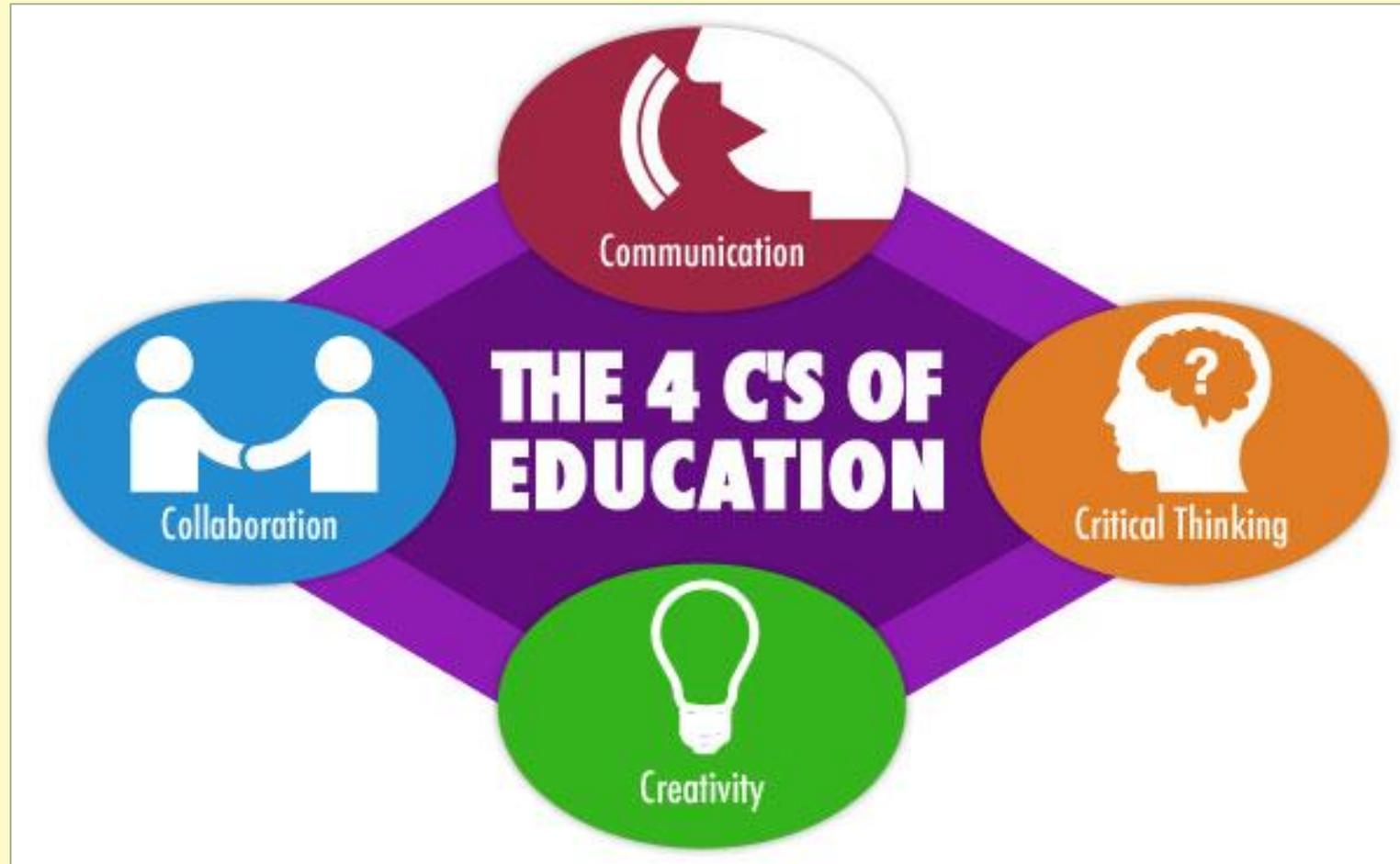
**5.4: Interpret student data**

**6.2: Engage in professional learning and improve practice**

**6.3: Engage with colleagues and improve practice**

**7.4: Engage with professional teaching networks and broader communities.**

# 21ST CENTURY LEARNING



# OPENING THOUGHTS....

- “Being creative has as much to do with the quality of thought taking place and the process or journey as with what is ultimately produced”.
- “Creativity does not happen in a vacuum. Pupils need subject specific knowledge and skills for their creativity to flourish”
- “If creative thinking and behaviour are to become a part of a pupils’ life in school, they must be expected and valued by the school as a whole”.

# CREATIVE THINKING GOALS @ HURSTVILLE PS

- To respond to our school's strategic plan on 21<sup>st</sup> Century Learning and the 4Cs
- To reflect on our teaching practice and consider ways to promote creative abilities and skills to enrich students' learning across the curriculum.
- To provide opportunities and a quality learning environment in which particular conditions of creativity can be realised and nurtured.

# HURSTVILLE CREATIVE THINKING FRAMEWORK

- One way to support the implementation of creative thinking as a whole school approach in line with our school plan was to refer to one framework.
- The Framework was devised to:
  - reflect on our teaching rather than to assess our students.
  - identify where our class/cohort were at in their creative thinking and identify aspects that needed development.
  - Not be a ‘measurement tool’ (“you are/are not a creative thinker”) but used to help us determine what skills of creative thinking needed development among our students and consider how we might best do this.

# HOW THE FRAMEWORK WAS DEvised

- Drawing on national and international literature on creative pedagogies.
- Feedback and reflections from staff on their understanding of creative thinking and on the learning needs of our student body.
- Reference to ACARA documentation (e.g. Critical and Creative Thinking learning continuum).

# CREATIVE THINKING FRAMEWORK – SEE HANDOUT

Creative thinking Skill	General Capability of Creative Thinking (ACARA)	Elements of Creative Thinking Process	1	2	3	4
<b>Idea Generation</b> Explores a variety of ideas from broad to purposeful and of value for the topic area.	Imagine possibilities and connect ideas	Fluency, Elaboration Originality	Creates a small number of ideas to meet the task but the ideas do not clearly connect the task.	Creates a small number of ideas to meet the task.	Creates several ideas to meet the challenge and ideas include enough detail to meet the task	Creates an extensive number of clear ideas to meet the task and uses a unique and imaginative approach when generating ideas
<b>Taking Risks/Tolerating Ambiguity</b> Open to explore ideas, make mistakes and 'have a go'	Consider alternatives	Flexibility	Stays strictly within the guidelines of the task. Is not prepared to 'have a go' at trying out new ideas. Is not willing to make mistakes.	Attempts to consider new directions or approaches beyond the guidelines of the task. Demonstrates limited ability to 'have a go' limited willingness to make mistakes	Incorporates new directions or approaches to the task. Often demonstrates an ability to 'have a go' at new or unexpected tasks and is often willing to learn from mistakes.	Actively seeks out and follows through on untested directions or approaches to the task. Frequently demonstrates an ability to 'have a go' at new or unexpected tasks and is frequently willing to learn from mistakes.
<b>Perseverance/Discipline</b> Openness and courage to continue when faced with a challenge.	Imagine possibilities and connect ideas	Elaboration Flexibility	Usually stops exploring ideas when presented with a challenge.	Sometimes perseveres when presented with challenges but often needs a lot of encouragement to continue.	Usually perseveres when presented with challenges without relying too much upon a lot of encouragement to move forward.	Consistently perseveres when presented with a challenge. Is curious, flexible and open to ambiguity in exploring ideas. Responds to failure by reflecting and identifying what can be learned.
<b>Idea connection and transfer.</b> Connecting & transferring ideas from one subject area to another to develop new connections and construct new meaning.	Transfer knowledge into new contexts  Connecting Ideas	Elaboration Originality	Does not recognize connections among ideas, knowledge or solutions. Rarely applies or draw on knowledge from one subject area or context to another.	Limited recognition of connections. Applies and draws on knowledge from one subject area or context to another with support.	Connects ideas or solutions in novel ways. Frequently draws on knowledge and transfers it from one subject area or context.	Transforms ideas or solutions into entirely new forms. Extensively draws on and transfers knowledge from one subject area or context to another.

# IMAGES FOR CREATIVE THINKING



Idea generation



Idea connection  
& transfer



Taking risks/ Tolerating  
ambiguity



Perseverance &  
Discipline

# SHOWCASE

- Stage 3 - Science
- OC – Website
- Year 1 – Creative thinking showcase & Kids Meet
- K6 - Cultural studies
- Stage 2- Maths
- Stage 1 – HSIE & Ryan’s Thinkers Keys
- Early Stage 1 – Literacy & De Bono’s Thinking Hats

# CREATIVE THINKING SKILLS IN STAGE 3 SCIENCE



# CREATIVITY IN SCIENCE PBL

- **Business Project** – Creating their own products to sell at Mini-Fete:
- **Idea Generation**
  - Students are learning to elaborate on their ideas
  - Sharing ideas & learning from other students' imaginative approaches
- **Perseverance/Discipline**
  - Imagining possibilities
  - Students are becoming problem solvers – when resources/ideas failed, they needed to improvise/change
- **Idea Connection & Transfer**
  - Business Project incorporates skills/knowledge from several KLAs including Science, Maths, English, Creative Arts & Technology.

# CREATIVE THINKING SKILLS REFLECTIONS

- Some **benefits**:
  - Students are becoming more ‘creative’ with practice
  - Students are collaborating 😊
  - Students are communicating more, learning from each other & getting insight into how other students think & imagine
  - Students are becoming better at tolerating ambiguity and the lack of one correct answer (especially in Maths)
- Some **challenges**:
  - When students struggle to generate ideas > Scaffold: Provide selection of ideas for them to choose from, then ask them to make some adaptation of their own.
  - When students struggle to persevere > Break challenges into smaller, defined tasks. The ‘big picture’ is sometimes too daunting.
  - When students struggle to transfer knowledge into new contexts – do a ‘mini-lesson’ on the skill/knowledge needed and show how it connects to the task.

# YEAR 6 OC

- Aims:
  - For students in current OC to create a website for the incoming OC class that would inform them of what to expect.
  - To improve students' capacity to think creatively and apply skills across the curriculum. After collecting student data we focused on Idea Generation and Risk Taking.
  - To explore ways of assessing and measuring students' creative thinking skills.
- Students had to work collaboratively to create a number of different website pages that used a diverse range of technology (I-Movies/ Prezi-s/ Cartoons/ Animations)
- In addition to the task there were isolated activities that focused on “idea generation” and responsible “risk taking” The aim was to extend students beyond their comfort zones (either in the way they worked or the tools they used to devise the page)



Spaghetti Towers



Paper Bridges

**Assessment tools:**

Student Self Reflection diaries/ Student peer reflection/ Student peer observation

Teacher Observation

Teacher Conversations

Survey Monkey

## Survey Monkey & Reflective questions:

- I improved my willingness to “have a go” at trying new ideas - **66%**
- I improved in my ability to generate ideas for a specific purpose – **52%**
- You can measure creative thinking successfully through peer reflection – **60 %**
- I Value the process of learning as much as the product - **80%**
- Most surprising thing I've learnt:
- ***That I have the ability to do much more when doing a project than doing a work where it is just Q & A***
- ***Collaboration and idea generation is key to the success of the OC Website and the ideas have to be unique and interesting.***
- ***I take more risks than before and my creative thinking is much better.***

# BUILT ENVIRONMENTS: PBL SHOW CASE YR 1





# KIDSMEET YR 1



# CREATIVE THINKING IN CULTURAL STUDIES

- **Purpose of unit:**

To develop creative thinking skills in order to facilitate the construction of a persuasive text on an aspect of Spanish culture.

- **Tools:**

Ryan's Thinkers Keys



# Thinker's Keys

## The reverse:



Place words such as **cannot**, **never** and **not** in sentences which are commonly displayed in a listing format.

## The What if:



You can ask virtually any What If question. They can be either serious or frivolous. One excellent means of displaying ideas from this key is to draw up an Ideas Wheel. Great for introducing an area of study, and for tapping into the students' knowledge base. It also generates loads of innovative ideas

## The disadvantages:

List disadvantages and improvements for: Choose an object, eg an umbrella, or a practice, eg playground duty, and list a number of its disadvantages. Then list some ways of correcting, or eliminating these disadvantages.



## The combination



List the attributes of 2 dissimilar objects (one within your area of study, one outside), then combine the attributes of a single object.

## The BAR:

The following acronym, or ladder of words, can be used by different age groups (ranging from Yr 1 to adults) to reinvent or redesign everyday objects.

BIGGER  
ADD  
REPLACE



## The alphabet:

Choose an object or general category of objects which features in the area of study and compile a list of words from A to Z which have some relevance to the object/s. Then try to expand on some ideas which link with each of the words.

## The variations:

This key employs a special group of words. Start each question with "How many ways can you ..."



## The picture

The teacher draws a simple diagram which has no relevance to the area of study and the students then try to work out ways in which it could be linked with that area. As an interesting imaginative writing exercise, ask the students to compile a list of 10 things that the diagram could represent.



## The prediction:

Ask for a series of predictions in regard to a particular situation, product or set of circumstances.

## The different uses:



Put your imagination to work and list some widely different uses for a chosen object from your area of study.



## The ridiculous:

Make a ridiculous statement that would be **virtually** impossible to implement, and then attempt to actually substantiate it.

## The commonality:

Decide upon 2 objects which would generally have nothing in common, and try to outline some points of commonality between them.

## The question:



Start with the answer, and try to list 5 questions which could be linked with that answer

## The brainstorming:

State a problem which needs to be solved and brainstorm a list of solutions. Start the brainstorm statement with the words 'How to ....'



## The inventions:



Encourage students to develop inventions which are constructed in an unusual manner. The first step would be to outline the product on paper, which would then lead into possible construction.

## The brick wall:

Make a statement which could not generally be questioned or disputed, then try to break down the wall by outlining other ways of dealing with the situation.



## The construction:

Set up a wide variety of construction problem-solving tasks and use lots of readily available materials.

## Forced relationships:

Develop a solution to a problem by employing a number of dissimilar objects. For Years 1/2 - one object  
For Years 3/4 - two objects  
For Years 5/6/7 - three objects  
For Years 8-12 - four objects



## The alternative:



List ways in which to complete a task without using the normal tools or implements.

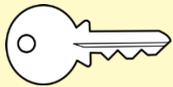
## The interpretation

Describe an unusual situation and then think of some different explanations for the existence of that situation

# LA TOMATINA



La Tomatina is a festival held every year in August, in the Spanish town of Bunol. People throw thousands of tomatoes at each other! It is the world's biggest food fight.



The Alternative Key

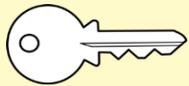
What if pineapples or lettuces were used instead of tomatoes?



# THE SAN FERMIN FESTIVAL



The San Fermin festival is held every year in July, in the Spanish town of Pamplona. It involves bulls chasing people through streets! They must try and run away from these animals.



The Different Uses Key

Think of 10 different uses for bulls.

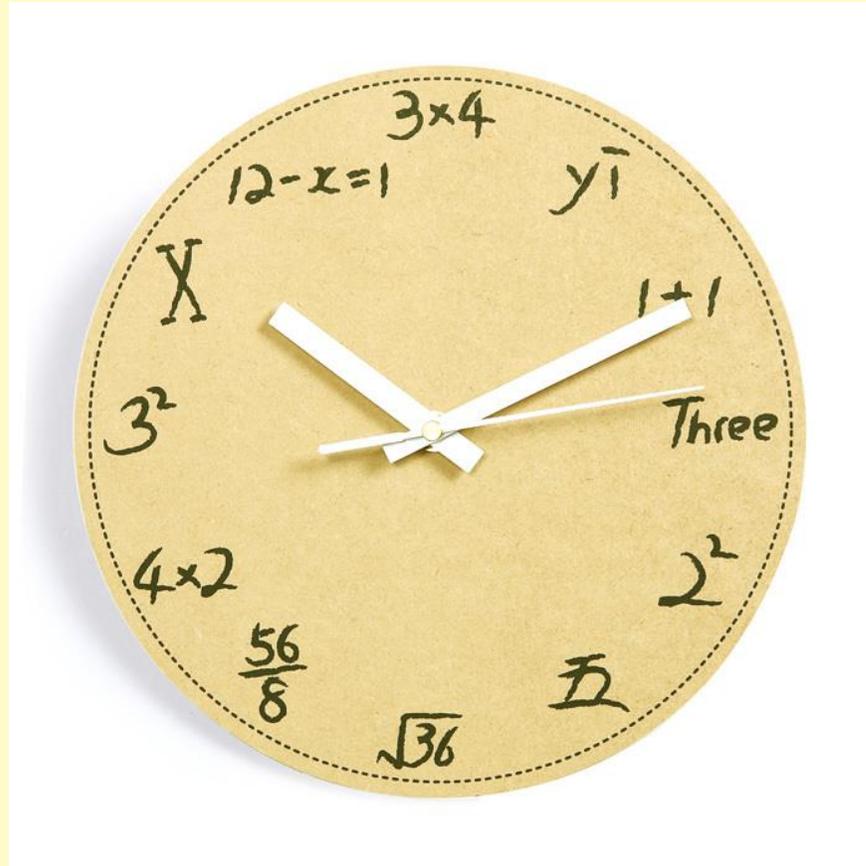


The Reverse Key

List 10 things you'll never see in a bullfighting ring



# CREATIVITY IN MATHS (D. PRATT)



# CELEBRATIONS USING RYAN'S THINKERS KEYS (R.DAVIES)

Thinker's Keys		HOLIDAYS			Celebrations		Hursville Public School Year 1 Term 4 2015
<b>The Reverse</b> Name 10 things you could never do at a birthday party.	<b>The What If?</b> What if the Easter Bunny brought fruit instead of chocolate eggs?	<b>The Disadvantages</b> What are some disadvantages of getting presents? How might they be overcome?	<b>The Combination</b> List the attributes of both then combine: Halloween and New Year's Eve.	<b>The Alphabet</b> <b>DO AN A TO Z OF CELEBRATIONS WORDS.</b>			
<b>The Bar</b> Use the BAR key to improve Santa's sleigh.	<b>The Variations</b> How many shapes can fireworks make?	<b>The Picture</b> 	<b>The Prediction</b> What would you do if you got \$100 for Eid/Chinese New Year/your birthday?	<b>The Different Uses</b> List 10 different uses for balloons.			
<b>The Ridiculous</b> What would happen if all celebrations were cancelled forever?	<b>The Commonality</b> What do cake and tinsel have in common?	<b>The Question</b> The answer is <b>Naidoc Week</b> . What are 5 questions that could have this answer?	<b>The Brainstorming</b> Brainstorm foods that you can find at celebrations.	<b>The Inventions</b> Invent a personal tradition for the last day of school.			
<b>The Interpretation</b> Give 3 reasons why people might cry at a celebration.	<b>The Brick Wall</b> Can we celebrate Anzac Day any other way?	<b>The Construction</b> How could you make a Christmas tree using a brick, chewing gum and a cricket bat?	<b>The Forced Relationship</b> What could a Diwali diya be used for at a wedding?	<b>The Alternative</b> Give 3 ways to blow up a balloon without using your mouth.			

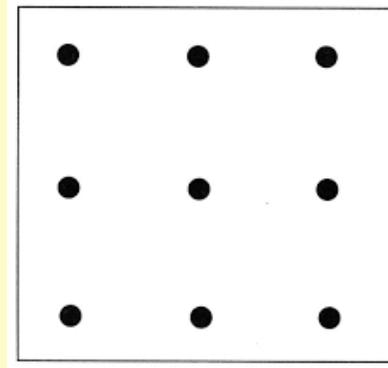
# KINDERGARTEN “THERE’S A SEA IN MY BEDROOM” (BOOK BY M.WILD) (D. CUSUMANO)

De Bono’s Thinking Hats used to explore the theme of the book before, during and after its reading.

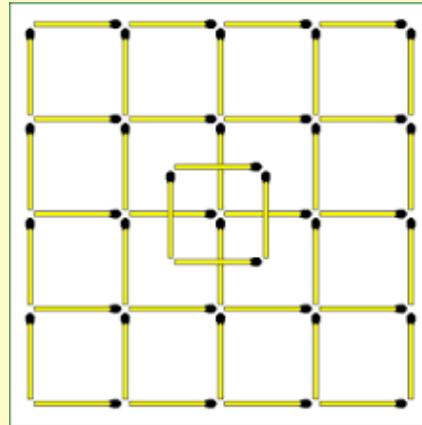


# EXERCISING YOUR CREATIVE THINKING MUSCLE

- Nine Dot Challenge



- Matchstick/Straw challenge



# REFLECTION/DISCUSSION

- What approach, strategies and/or resources do you employ at your school to foster creative thinking skills?
- What new knowledge or re-emphasised knowledge can you take from today's workshop to apply in your classroom?
- Sharing what we know, building learning communities and networks
- Twitter: @rsingh113
- Edmodo: Inspire Innovate Creative Thinking: zh9she