	WHAT IS THE ROLE OF IMAGINATION?	WHAT ARE SOME OF THE CONSTRANTS?
Biochemistry		
Cosmology		
Paleontology		
Geometric proof		
Transfinite math		
Ancient history		
<b>Economic forecasting</b>		
Chosen CAS example		

## **Quotes:**

The game I play is a very interesting one. It's imagination, in a tight straitjacket, which is this: that it has to agree with the known laws of physics. I'm not going to assume that maybe the laws of physics have changed, so that I can design something or other. I operate as if everything that we know is true. If we're wrong, of course, we can redesign something with the new laws later. But the game is to try to figure things out, with what we know is possible. It requires imagination to think of what's possible, and then it requires and analysis back, checking to see whether it fits, whether it's allowed, according to what is known.

No Ordinary Genius: The Illustrated Richard Feynman. Edited by Christopher Sykes. Norton, New York.

Comme les bons poètes que la tyrannie de la rime force à trouver leurs plus grandes beauté The tyranny of rhyme forces the good poets to find their finest lines...

Marcel Proust, Du côté de chez Swann

## **Knowledge Questions for academic disciplines (and the student CAS examples)**

- What is the role of imagination in this academic discipline?
- What are some of the real world constraints in this academic discipline?
- How do the constraints you have noted help or hinder imaginative thinking in this academic discipline?

## **Knowledge Questions for whole class discussion**

- What is the role of imagination in creativity/out-of-the-box thinking?
- Do we need mastery in a discipline before we can improvise?
- To what extent is creativity problem solving to constraints?
- To what extent has your own experience in being educated in certain academic disciplines stifled or helped you retain your own sense of child-like curiosity and imagination?
- Is Memory a promoter or a constraint on Imagination as a Way of Knowing