



Newsletter of Science Society

December, 2013

二零一三年十二月號

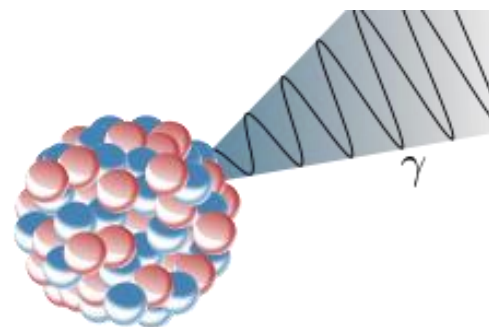
~RADIATION BREEDING~

Christmas is coming. Other than Christmas trees, we can see that a lot of poinsettia (the Christmas flowers) is used as the Christmas decorations owing to its bright red colour. If you have noticed, the poinsettia is not just red anymore. It can be creamy pink, white and yellow. However, do you know that they are not natural? The different colours of poinsettia are made by radiation breeding (輻射誘變).



What is radiation breeding?

Radiation breeding is the process of exposing the plants to ionizing radiation (Gamma-rays [γ -ray] 伽馬射線) in order to produce variations in shape and colour of the plants. A radioactive element Cobalt-60 releases high-energy gamma-rays. Gamma-rays are the strongest form of radiation with a very short wavelength. This high energy form of radiation can cause mutations (變異) of plants. Take poinsettia as an example, variations of the somatic cells (體細胞) occur in the region of cell division after the exposure of gamma-ray to poinsettia. As a result, the poinsettia can have different colours after radiation breeding.



Why is radiation breeding used?

After World War II, there was a concerted effort to find peaceful uses for atomic energy. One of the ideas was to bombard plants with radiation and produce lots of mutations which were disease or cold-resistant or just had unusual colors.

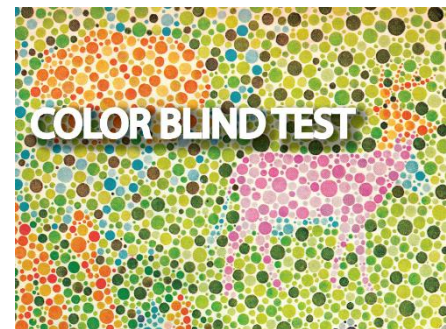


~眼見盡是灰階 色盲人生是黑白?~

五光十色、多采多姿的世界，常常為我們的人生添加許多樂趣；那你知道，有色盲 (Colour blindness) 的人，眼睛所看到的是什麼樣的世界嗎？他們的人生，是不是只有充滿黑與白的灰階世界呢？

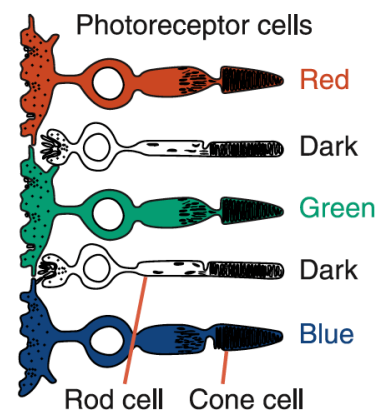
眼見盡是灰階 色盲人生是黑白？

過去我們都以為，有色盲的人，眼睛看到的，只是一片充滿灰階的世界。但其實這樣的概念並不正確。文化大學資傳系孫慶文博士說：「其實所謂的色盲，他們並不是看不見顏色。所以說『色盲』，並不是一個很精確的名詞，就是這個緣故，他們是某些我們正常人，很容易看得出來的色彩，他們可能完完全全分辨不出來。」



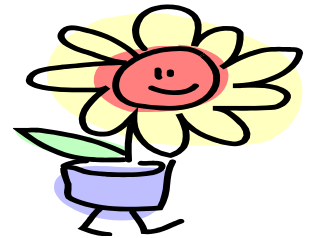
色彩視覺障礙 都可稱色盲或色弱

會這樣子，主要是因為，他們的視錐細胞 (Cone cells) 「異於常人」。這是一個正常人的視網膜，上頭各有三種不同顏色 (紅藍綠) 的視錐細胞。而色盲的人，就是其中一種顏色出了問題。



紅.綠色盲 紅花綠葉分不清

透過色彩科學的實驗研究，我們可以發現，藍色盲的人，無法分辨光譜中，藍色到綠色的光；紅色盲的人，對光譜中的紅光沒有感覺；綠色盲的人，辨認不出綠色。所以，對紅綠色盲的人來講，最沒有辦法辨識的顏色，就是紅花綠葉了。文化大學資傳系孫慶文博士說：「在我們生活週遭，非常容易看到的，也就是我們俗語當中，稱為紅綠色盲的人，那這些人，在人口當中的比率，根據北美地區的統計資料，在男性人口當中，佔了將近百分之八。」



色盲會遺傳？ 科學家：傳男多

沒有辦法辨認紅花綠葉，那對於紅綠燈呢？科學家表示，紅綠色盲，大多是因為，遺傳基因變異所致，雖然目前在醫療上，並沒有治療的方法。但是色盲和色弱的問題，在生活可能帶來的困擾，仍然不容忽視。

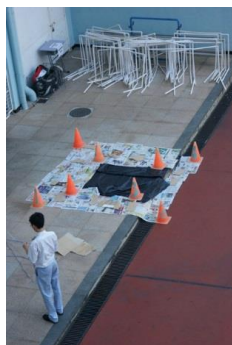


FUN SCIENCE COMPETITION 2014 (PART 1)

EGG SNIPER

Result:

Champion:	李雅雯 3D	馮子晴 3D	金樂然 3D	黃淑怡 3D
1st Runner up:	黃文婷 3B	黎嘉怡 3B		
2nd Runner up:	凌俐 1C	潘芷晴 1C	何嘉兒 1C	



~~ TIME TO RELAX ~~

Learning about Science

& Having Fun with

Sound of Science~!!!



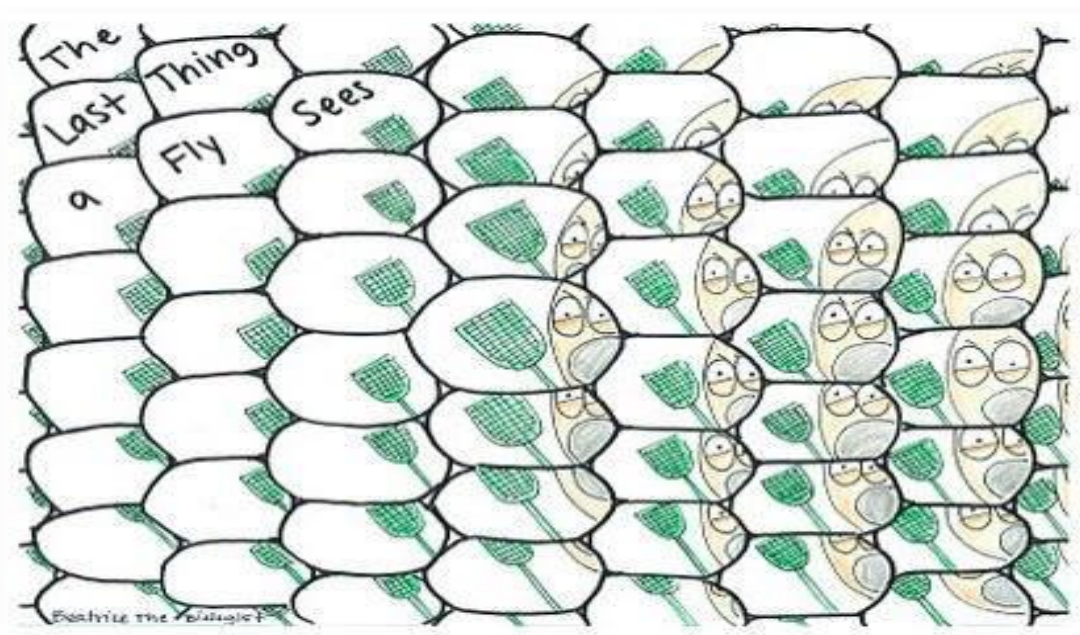
Sudoku:

				8				
4		8				1		7
	1	5		7		2	8	
1			8		4			6
	3						2	
5			9		3			1
	9	1		4		8	5	
2		7				9		4
				9				

Previous Sudoku Answer:

3	1	5	8	2	6	9	7	4
6	2	7	9	1	4	8	3	5
4	9	8	5	7	3	2	6	1
9	8	1	7	4	5	6	2	3
7	6	4	2	3	1	5	8	9
2	5	3	6	9	8	1	4	7
8	4	9	1	6	7	3	5	2
1	7	6	3	5	2	4	9	8
5	3	2	4	8	9	7	1	6

COMIC CORNER: The Last Thing a Fly Sees



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