



## Revision Workshop 2014

PHYSICS

### PROGRAMME

0930 Registration  
 0945 Introduction  
 0955 **Session 1 – Mechanics**  
 1130 Short break  
 1140 **Session 2 – Electricity and Magnetism**  
 1300 LUNCH  
 1340 **Session 3 – Waves, Matter and Materials**  
 1455 Final comments  
 1500 END



### OPTICAL PHENOMENA

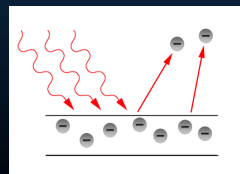
DBE 10% | IEB 8%

- Photoelectric Effect
- Line Spectra



### Photoelectric Effect

- When electromagnetic radiation shines on a **metal**, the incoming **photons** may cause electrons to be ejected as **photoelectrons**



- Evidence of the **particle nature** of light (EM radiation)



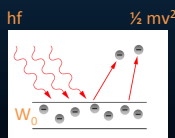
### Photoelectric Effect

- Using the equation:

MOVIES AND POPCORN!!!

$$hf = W_0 + \frac{1}{2}mv^2$$

YR MONEY →  $hf$       POPCORN ☺ →  $\frac{1}{2}mv^2$   
 TICKET PRICE →  $W_0$



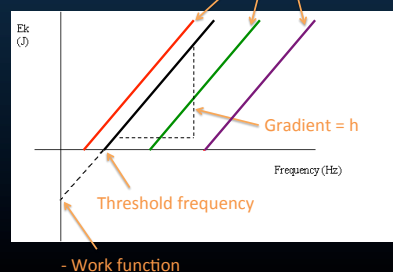
- See Phet...



### Photoelectric Effect

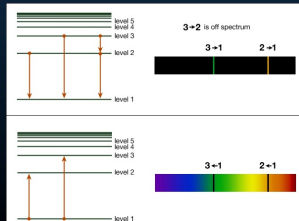
- Graph

Graph for different metals – e.g. Cs, Na, Zn



## Spectra

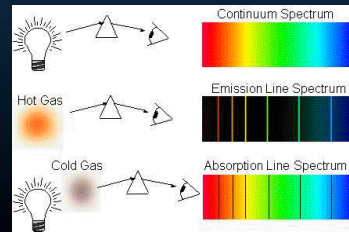
- Photons emitted or absorbed by atoms when electrons jump from one energy level to another



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## Spectra

- Emission and absorption spectra



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## OVERVIEW

- That's it!
- Now all you have to do is...

• **PRACTICE!**

• **PRACTICE!!**

• **PRACTICE!!!**



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