

Bell Ringer #16:

**Socratic Room Name:
LEVEL70WARRIOR**

**Why do atoms emit photons
in a flame?**

<http://drmoad.weebly.com/>

Agenda

Bell Ringer

Flame Test Demo

Finish Flame Test Lab (30 min!)

Discuss Lab Conclusion

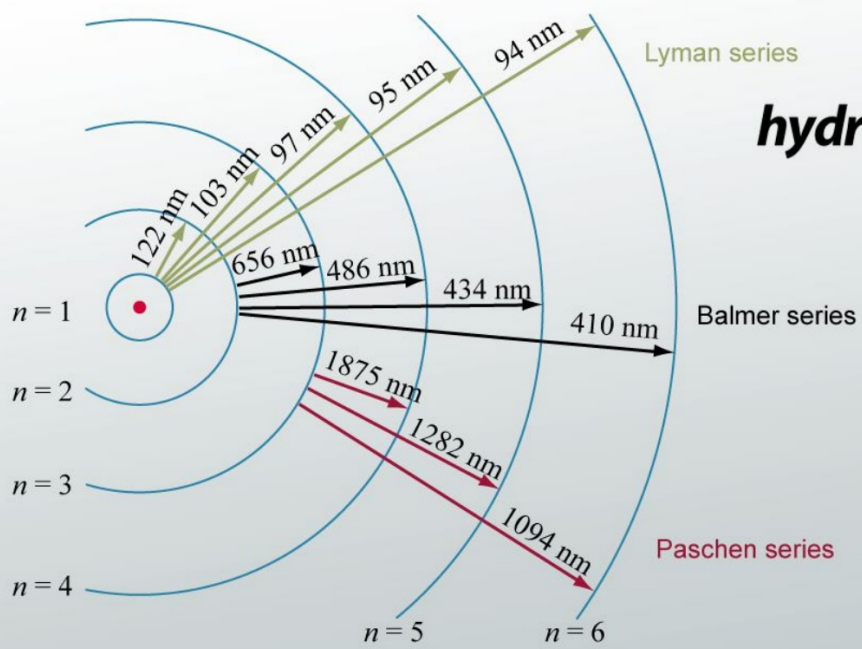
Compare Results of Flame Tests

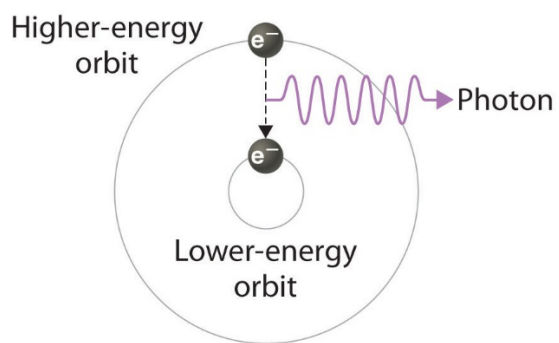
Electron Configuration Shorthand

Electron Configuration Homework Revisited

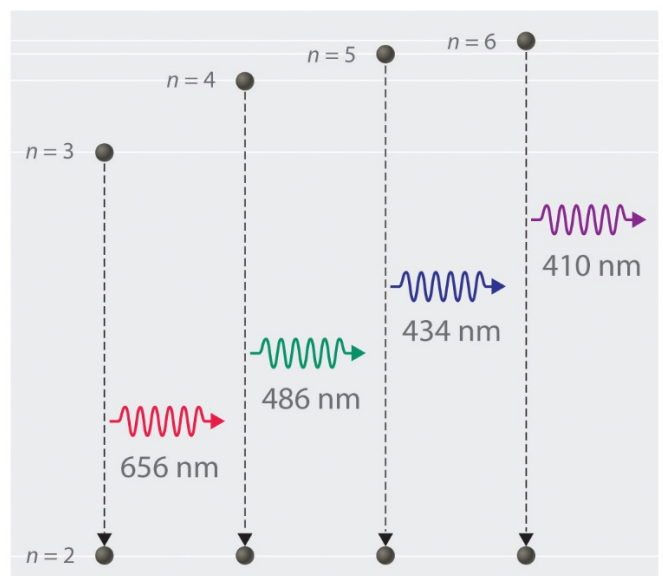
Exit Ticket

HYDROGEN ATOMS





(a) Electronic emission transition



(b) Balmer series transitions

Flame Test Demo Observations

K

Cu

Na

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Flame Test Lab

Identity of Unknowns

Evidence

A

KCl

orange
peachy
pink
reddish









B

~~BaCl₂~~
NaCl
NaNO₃

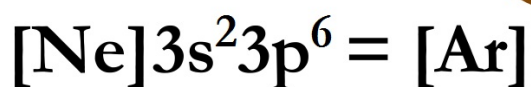
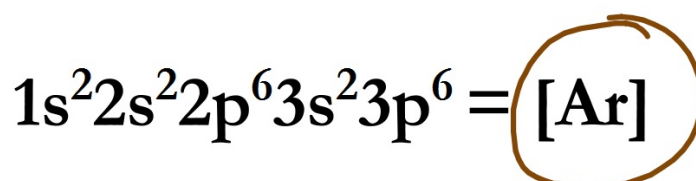
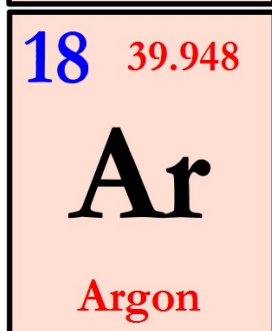
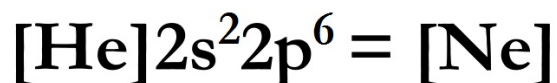
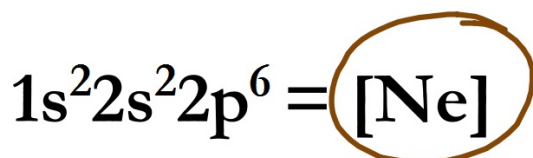
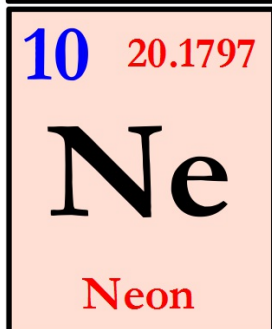
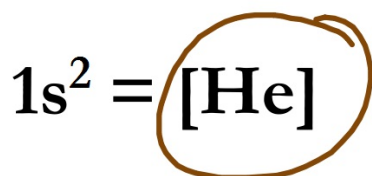
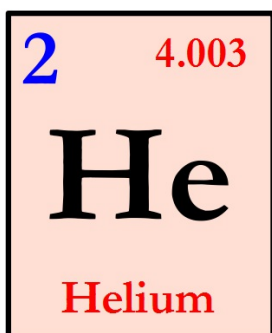
yellow
orange

Check Your Results:

A picture is worth a thousand words!

						
Ba light green	Ca orange/red	Cu blue & green 	Li fuchsia	K lilac	Na bright yellow	Sr crimson

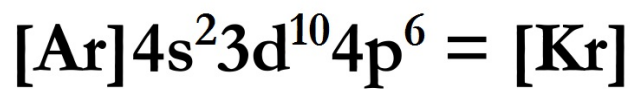
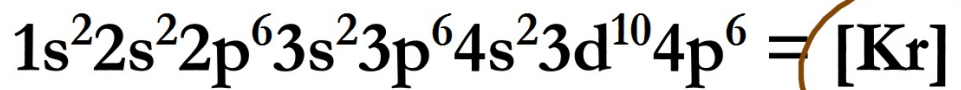
**Shorthand
Electron
Configuration**



36 83.80

Kr

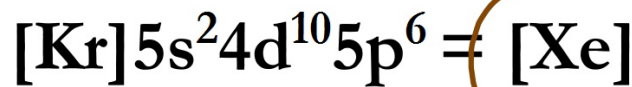
Krypton



54 131.29

Xe

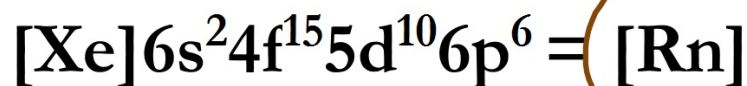
Xenon



86 (222)

Rn

Radon



Some Examples:

Write the shorthand electron configurations for:

Oxygen $[\text{He}] 2s^2 2p^4$

Chlorine $[\text{Ne}] 3s^2 3p^5$

Phosphorus $[\text{Ne}] 3s^2 3p^3$

Cesium $[\text{Xe}] 6s^1$

Electron Configuration Homework Revisited

<http://drmoad.weebly.com/>

- Do the homework assignment using shorthand notation



Exit Ticket #16:

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Electron Configuration