Unit 4 NAME

Class Work 11/19/13

4.1 Bright Line Spectra

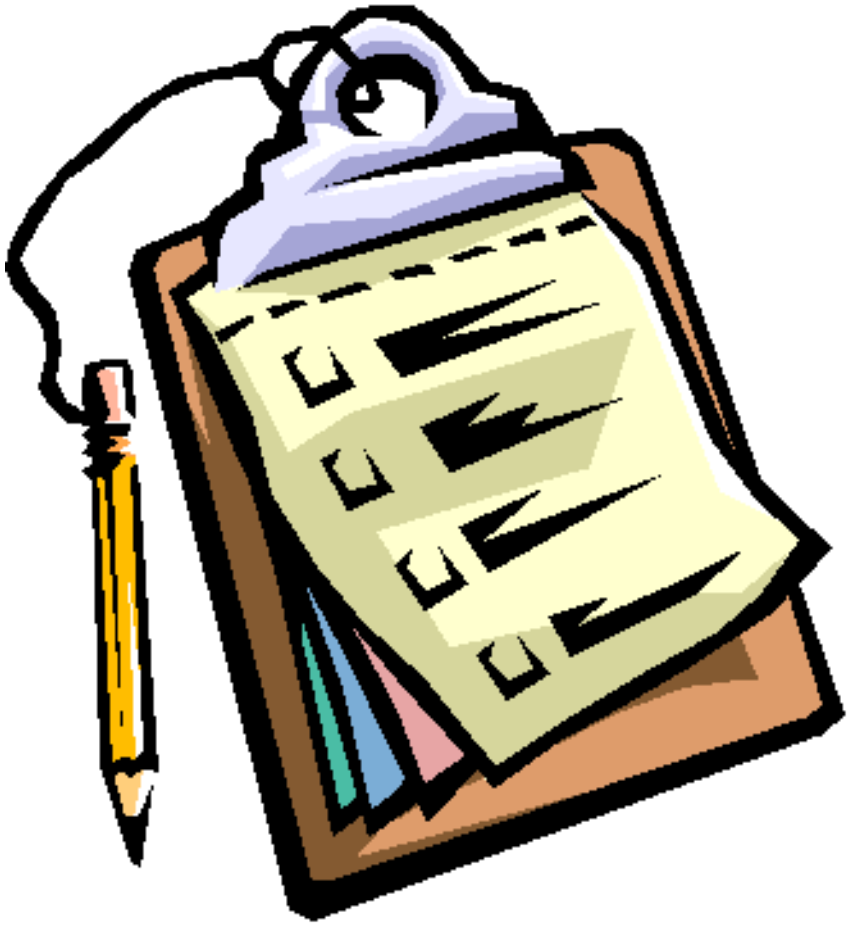
DO NOW: Complete Do Now on your guided notes sheet!

Objective

SWBAT determine how our understanding of the atom explains how the lights in Time Square work!

Agenda:

- Do Now
- **Thought Provoker**
- Demo
- Turn and Talk
- Mini-Lesson
- Practice Time!
- Exit Ticket Quiz




BOSS
SAMSUNG
SAMSUNG
SUNTORY WHISKY
TODAY SUNTORY TOASTS
Coca-Cola
COCA-COLA MEMORABILIA
FRASIER
Canon
AMERICA'S #1 BEAN COFFEE
Grease!
HOWARD JOHNSON'S
MARTINIQUE JEWELERS
SHOW BOAT
BEST MUSICAL REVIVAL
OLYMPUS
Real
Real
2,728,632,948
tkts tkts tkts
SUNSET BLVD
PHENOMENAL
PALACE
BEAUTY AND THE BEAST
McDonald
EMBASS
swatch
TRACY

Thought Provoker (1 min)

- Why do we have so many bright and beautiful lights and colors in Times Square?

Objective: SWBAT determine how our understanding of the atom explains how the lights in Time Square work!

Demo Questions

- What color does potassium look like?
- What color is strontium burning?
- Which of the elements burned green?

Objective: SWBAT determine how our understanding of the atom explains how the lights in Time Square work!

Turn and Talk (1 min)

- **Directions:** Turn and talk to your neighbor about…
  - Why did each element burn and give off different colors?

Objective: SWBAT determine how our understanding of the atom explains how the lights in Time Square work!

Neon Reading

- Silently read the article “How Neon Lights Works” and annotate using our annotation strategies. Then answer the questions below in full sentences using your own words. Be prepared to share your answers!

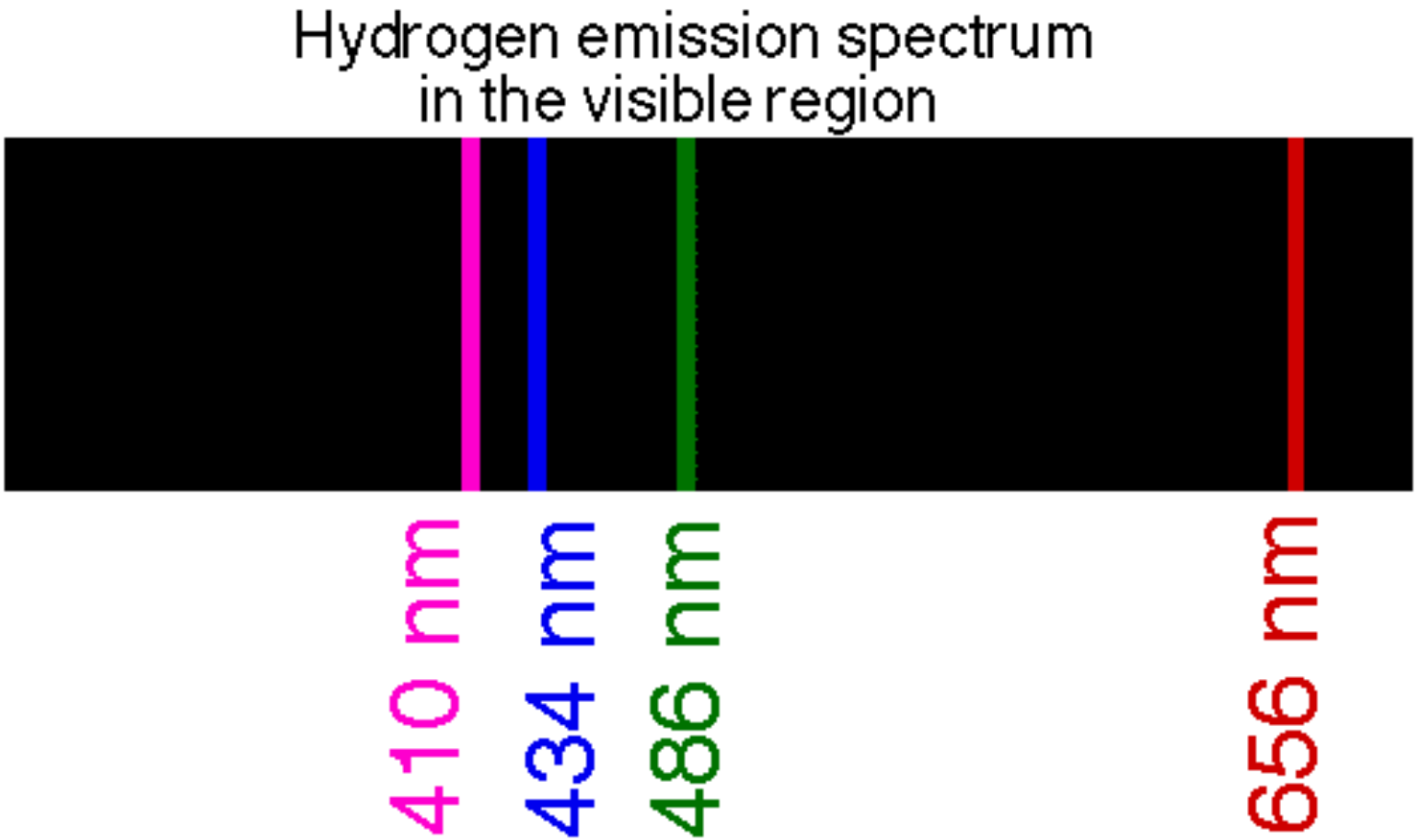
Objective: SWBAT determine how our understanding of the atom explains how the lights in Time Square work!

Bright Line Spectra

- **Every element burns a specific group of colors**
  - **It is like a fingerprint**
  - **Can be used to identify an unknown element**

Objective: SWBAT determine how our understanding of the atom explains how the lights in Time Square work!

An emission spectrum or bright line spectra of an element looks like this:



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Think, Pair, Write, Share (2 minutes)

How can we identify an unknown element from a bright light (atomic emission spectrum)?

Objective: SWBAT determine how our understanding of the atom explains how the lights in Time Square work!

How to Do Atomic Emission Problems

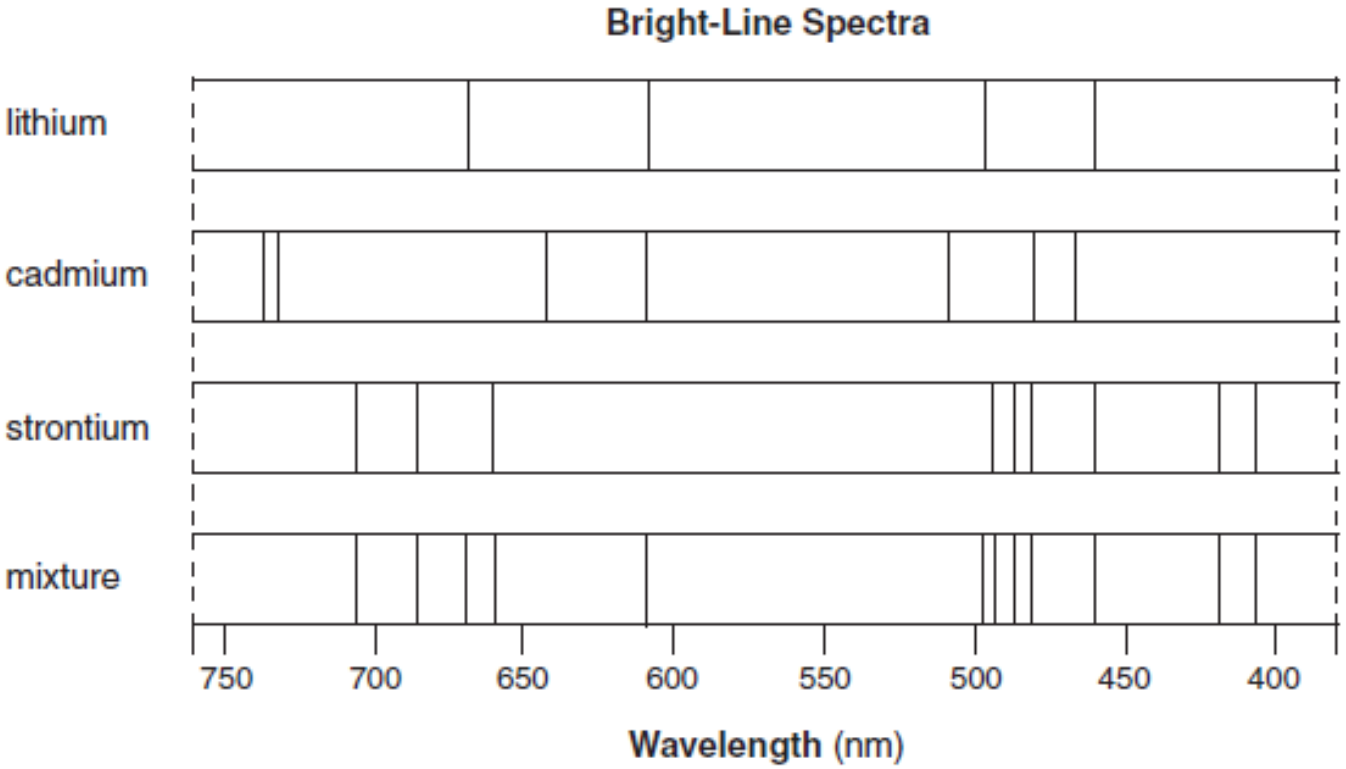
Remember: The different lines for each element represent a different color being given off

1. Look the lines in each unique element
2. Determine what question is asking for
3. Match mixture with the lines of known elements.

Objective: SWBAT determine how our understanding of the atom explains how the lights in Time Square work!

Regents Practice Problem

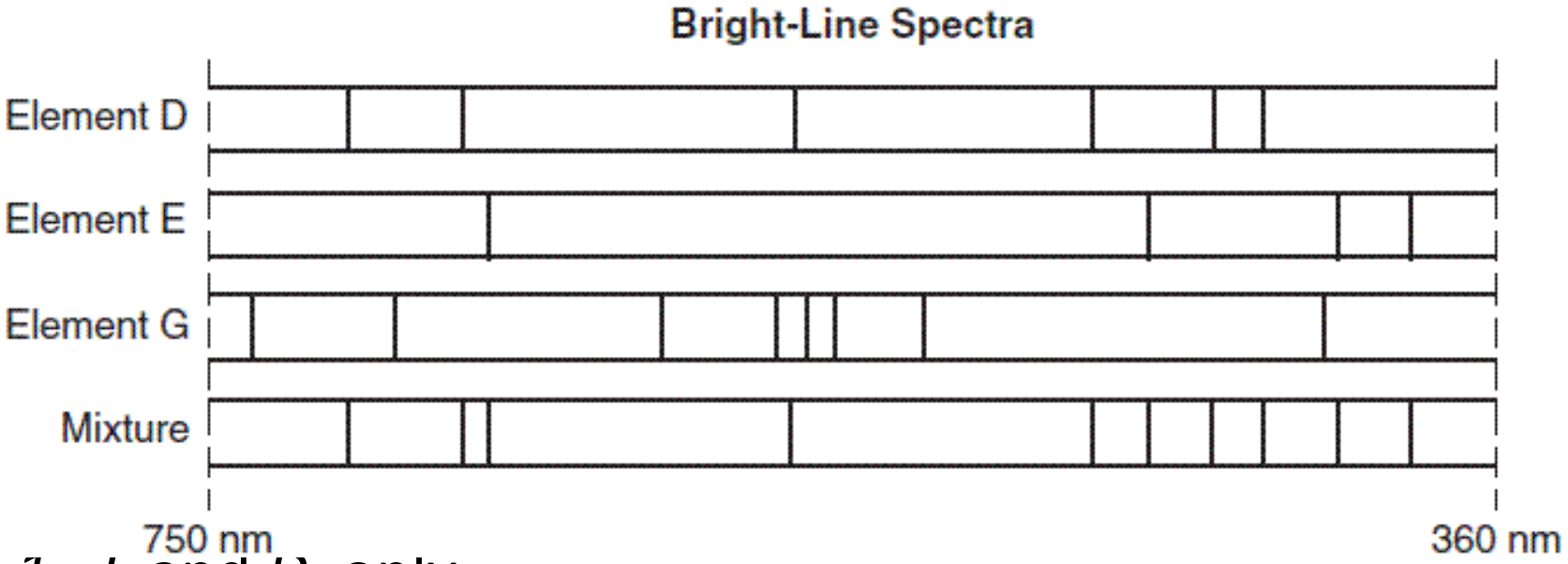
The bright-line spectra for three elements and a mixture of elements are shown below.



Identify all the elements in the mixture: _____

Objective: SWBAT determine how our understanding of the atom explains how the lights in Time Square work!

Check for Understanding (1 minute)



1. *E* and *D*, only
2. *E* and *G*, only
3. *D* and *G*, only
4. *D*, *E*, and *G*

Directions: Circle your answer and wait to put your fingers up to respond.

Objective: SWBAT determine how our understanding of the atom explains how the lights in Time Square work!

Classwork (10 minutes)

- Quietly work on this with your neighbors
- Move onto HW when done

Objective: SWBAT determine how our understanding of the atom explains how the lights in Time Square work!

Exit Ticket (3 mins)

- Silent and Independent
- Two times talking = zero

Objective: SWBAT determine how our understanding of the atom explains how the lights in Time Square work!

HOMEWORK

Complete 4.1 HW

Objective: SWBAT determine how our understanding of the atom explains how the lights in Time Square work!