NAME: _____ Date: _____

Worksheet 4 Colour of Light: Additive Colour Theory (Nelson p.434-436)

1. Use the key terms below to match the explanation. (Some terms may be used twice)

primary colours of light **secondary colours of light** **additive colour theory**
complementary colours **white light**

a)	_____	The theory that combining three primary colours of light produces white light, and combining two primary colours of light produces secondary colours of light.
b)	_____	Colours that cannot be formed form other colours
c)	_____	Colours that combine to produce all other colours of light and white light.
d)	_____	Colours of light produced by combining two primary colours of light.
e)	_____	Any two colours of light that appear white when mixed together.
f)	_____	yellow, magenta, cyan
g)	_____	red, blue and green
h)	_____	colour produced by combining three primary colours of light (red, green, and blue)

2. The three primary colours of light are _____, _____ and _____

3. Can they be formed form other colours? _____

4. The three secondary colours of light are _____, _____ and _____

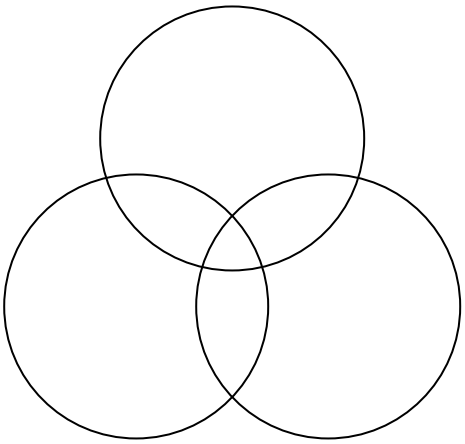
5. What combination of primary colours forms each secondary colour?

_____ is formed by combining _____ and _____

_____ is formed by combining _____ and _____

_____ is formed by combining _____ and _____

6. On the diagram below: Label and colour the primary and secondary of the additive colour theory.



7. **Predict** the **colour** you would get by **adding** the following combinations of primary colours.

a) red and blue _____ b) blue and green _____ c) green and red _____

8. a) When a **red light** and a **blue light** shine on the same spot on a **white screen**, what do you call the process?

_____

b) What **colour** will you see on screen? _____

9. What **colour** will you see on screen, when ……

a) a **green light** and a **red light** shine on the same spot on a **white screen** _____

b) a **blue light** and a **green light** shine on the same spot on a **white screen** _____

c) a **blue light** and a **red light** shine on the same spot on a **white screen** _____

10. What **colour** will you see, when ……

a) a **blue light** and a **yellow light** shine on the same spot _____

b) a **red light** and a **cyan light** shine on the same spot _____

c) a **green light** and a **magenta light** shine on the same spot _____

11. What **colour** would be **most visible** for fire hydrants, fire trucks, and safety vests for highway workers and cyclists? Why?