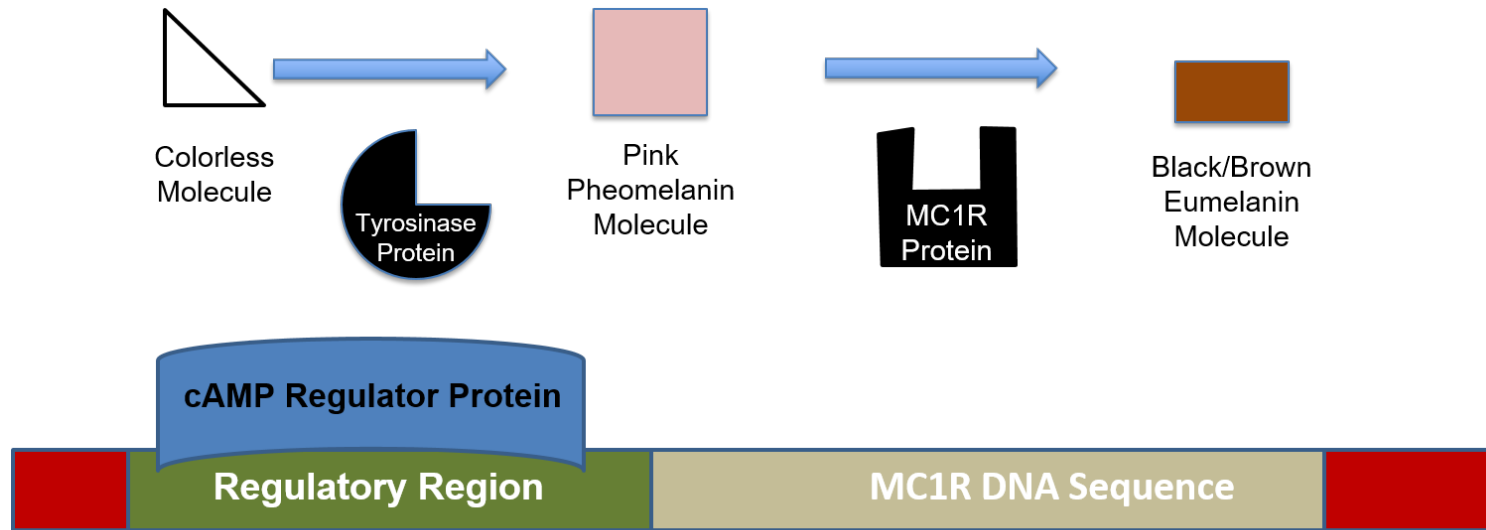




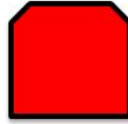
## 1.9 Genes Work Together and Are Regulated Exit Ticket



Name \_\_\_\_\_ **KEY** \_\_\_\_\_ Hr: \_\_\_\_\_

In the table below describe how the TYR and MC1R genes work together and are regulated to produce the broad range of skin colors available in humans.

ns. How do those genes impact the proteins and how do those proteins impact the trait?



DNA	Protein	Trait in Humans
Non-functional TYR gene or alleles Either Non-functional or functional MC1R gene/alleles	 non functional Tyrosinase Protein Either Non-functional or functional MC1R	Albino
Functional TYR gene/Alleles Functional MC1R gene/alleles but not expressed due to the cAMP regulator protein or Non-Functional MC1R gene/alleles	  or no MC1R protein at all Functional tyrosinase and non functional MC1R protein or a functional MC1R protein that isn't expressed due to less cAMP regulator protein.	Light Skin Tone

<p>Functional TYR gene/Alleles</p> <p>Functional MC1R gene/alleles with some expression due to some cAMP regulator protein</p>	 <p>Functional tyrosinase and functional MC1R protein that with some expression due to some cAMP regulator protein.</p>	<p>Medium Skin Tone</p>
<p>Functional TYR gene/Alleles</p> <p>Functional MC1R gene/alleles with a lot of expression due to a lot of cAMP regulator protein</p>	 <p>Functional tyrosinase and functional MC1R protein that with some expression due to some cAMP regulator protein.</p>	<p>Dark Skin Tone</p>

*What questions do you still have?*

Varies - they may be curious about what causes the amount of cAMP regulator protein to change.