**Week 7: Clone v2 Promoter**

Learning Objectives for Promoter Discovery

*Skills*

* Explain how Golden Gate Assembly works
* Describe how to clone a new promoter into plasmid J119137 (pClone Red)
[http://parts.igem.org/Part:BBa\_J119137](http://parts.igem.org/Part%3ABBa_J119137)

*Cognitive*

* Revise previous flow chart showing all the major steps required to conduct a GGA experiment.

**Pre-Lab**

1) Watch 3 videos from list for week 7 lab (repeating week 2 steps)

2) Answer each of these four questions in two sentences or less.

A) How does the RNA polymerase know which way to transcribe?

B) How does your promoter v2 know which way to ligate?

C) What happens to your promoter v1 when doing GGA this time?

D) What 3 colony colors can you expect to see on the plates?

Challenge to be discussed in lab groups: Using the information in the 4 questions above, look for gaps and errors in your GGA method PPT file. What corrections or improvements do you need to make? What details did you miss the first time? ([http://parts.igem.org/Part:BBa\_J119137](http://parts.igem.org/Part%3ABBa_J119137))

**Information: Quantify Phenotype and Start Genotyping**

In Lab

1) First, you should revise your GGA PPT slides to add details that you missed the first time or got wrong. You can use the notes space below the slides to add details in writing that you don’t want to clutter your visual slides.

2) Extend your PPT to add the new information for your promoter v2. Use the research proposal to add in your predictions for your promoter v2.

3) Complete CATME.