## Name:

Date:

## AP Biology Prelab for Lab 6: Molecular Genetics

## Part 6A: Bacterial Transformation

- 1. Explain what happens during the process of bacterial transformation.
- 2. Explain the similarities and differences of the bacterial genome and plasmids.
- 3. What are the benefits of plasmids to prokaryotes? How can plasmids be transferred from one bacterium to another?
- 4. Draw a rough diagram of the recombinant pGLO plasmid. Include any genes and DNA sequences of note. Explain the origin and function of each.

5. How will the pGLO plasmid be introduced into the E. coli bacterium in this lab?

		if *		
· 20	6. If we were to put the pGLO	plasmid under a black light, woul	d the DNA glow? Why or why not?	Ñ
F			â	\$
	*		14	
*	SA		10902 S	
	<ol><li>What is the purpose of addi</li></ol>	ing arabinose sugar into the agar i	mixture?	
			87 P. C.	
				2
	8. How will we identify which b	pacterial colonies have taken up th	ne pGLO plasmid?	
			, v	
	*	1	% U	
	plasmid (-pGLO) and two pla plasmid (+pGLO). Make pre bacteria will glow. Explain e	plates are inoculated with bacteria ates are inoculated with bacteria t dictions of whether bacteria will g each prediction.	hat have been exposed to the row on the plate or not and if the	
	a, -pGLO bacteria on a	a plate with ampicillin and no arab	inose:	
, b	e .		*	
	, fi			
	bpGLO bacteria on a	a plate without ampicillin or arabin	ose:	
		20 000 2		
	¥		-	٤
	ž e			
	c. +pGLO bacteria on a	plate with ampicillin and no arabi	inose:	
	8	W W		
	d. +pGLO bacteria on a	plate with arabinose and ampicill	in:	
	, page basisia sina	plato minarabiliti di ampioni		
	2000			
			it.	
j		** **	an Z	
	N <sub>M</sub> N	34		