Bacterial Transformation Lab- pGLO
Answer Sheet

Lesson 1-Focus Questions

1.

2.

3.

4.

Consideration 2-How can I tell if cells have been genetically transformed?

    a.

    b. 1)
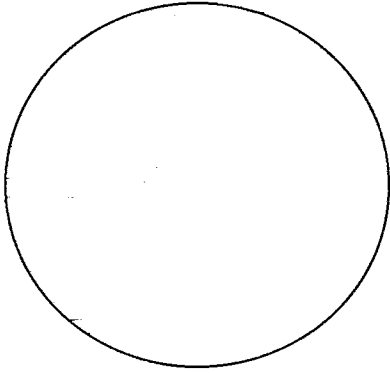   2)
         3)

    c.

    d.

    e.

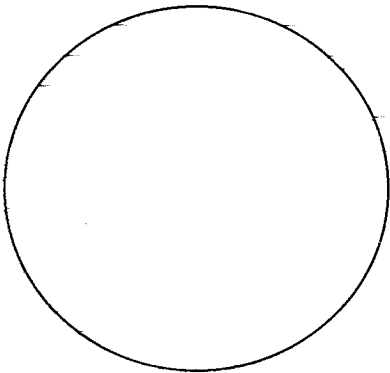   f.

1.

2.

Lesson 2-Review Questions

1.

2.

3.

4.

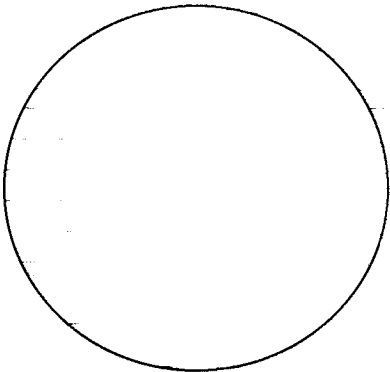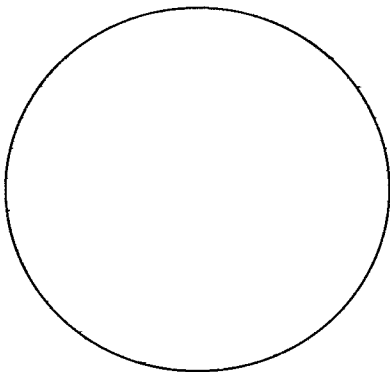**Transformation Plates**

+DNA
LB/amp

+DNA
LB/amp/ara

Control Plates

-DNA
LB/amp

-DNA
LB

B. Analysis Of The Results

The goal of data analysis for this investigation is to determine if the data indicate that genetic transformation has occurred.

1. Which of the traits that you originally observed for *E. coli* did not seem to become altered? In the space below list these non-transformed traits and how you arrived at this analysis for each trait listed.

Original trait   **Analysis of observations**

2. Of the *E. coli* traits you originally noted, which seem now to be significantly different after performing the transformation procedure? List those traits below and describe the changes that you observed.

New trait   **Observed change**

3. If the genetically transformed cells have acquired the ability to live in the presence of the antibiotic ampicillin, then what might be inferred about the other genes on the plasmid that you used in your transformation procedure?

4. From the results that you obtained, how could you prove that these changes that occurred were due to the procedure that you performed?

Lesson 3 Review Questions   Name _____

What's Glowing?

If a fluorescent green color is observed in the *E. coli* colonies then a new question might well be raised, "What are the two possible sources of fluorescence within the colonies when exposed to UV light?"

Explain:

1. Recall what you observed when you shined the UV-light source onto a sample of original plasmid DNA and describe your observations.

2. Which of the two possible sources of the fluorescence can now be eliminated?

3. What does this observation indicate about the source of the fluorescence?

4. Describe the evidence that indicates whether your attempt at performing a genetic transformation was successful or not successful.

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