

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Pd: \_\_\_\_\_

# Berry Full of DNA

## Strawberry DNA Extraction

Draw and label the contents of your test tube:

Label the following:

Strawberry extract

Ethanol

DNA



It is important that you understand the steps in the extraction procedure and why each step was necessary. Each step in the procedure aided in isolating the DNA from other cellular materials. Match the procedure with its function:

PROCEDURE	FUNCTION
A. Filter the strawberry extract through the funnel.	___ Clumps DNA together
B. Add detergent solution and mush the strawberries again.	___ Separate components of the cell
C. Initial smashing and grinding of strawberries.	___ Break open the cells
D. Addition of ethanol to filtered extract.	___ Dissolves cell membrane of the cells

1. What is the function of DNA? \_\_\_\_\_

2. Where is DNA located in the cell? \_\_\_\_\_

3. What did the extracted strawberry DNA look like? \_\_\_\_\_

4. A person cannot see a single strand of cotton thread from 30 meters away, but if thousands of threads are wound together into a rope, the rope can be seen at some distance. How is this statement an analogy to the DNA extraction you did?

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5. DNA dissolves in water but not in ethanol. Explain what happened when the ethanol came in contact with the strawberry extract during the DNA extraction.

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6. In order to study our genes, scientists must extract the DNA from human tissue. Would you expect the method of DNA extraction we used for the strawberry to be the same for human DNA?

\_\_\_\_\_ Explain? \_\_\_\_\_

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7. Is the DNA in any cell in the human body the same? \_\_\_\_\_ Explain your answer.

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8. Why might scientists want to study the DNA of strawberries?

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9. Draw a diagram of DNA containing **5 sets of nucleotide bases** and label the different parts.

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