10 MC questions:

1. Cells are referred to as:

The building blocks of all living things

The building blocks of some living things

The building blocks of all living and nonliving things

The building plants of all living and some nonliving things

1. Where is DNA located?

The mitochondria of cells

The nucleus of cells

The cell wall of cells

Right around the outside border of cells

1. DNA contains

Structural information

Genetic information

Cell-specific information

Tissue-specific information

1. DNA is arranged into

Chromosomes

Centrioles

Envelopes

Membranes

1. An octoploid organism contains how many chromosomes?

2

4

8

16

1. Humans are

Uniploid

Diploid

Tetraploid

Octoploid

1. What is the purpose of the extraction solution?

Break down the cell walls & release DNA  
Break down the cell membranes & extract the nucleus

Dissolve the proteins to separate the DNA

Dissolve the DNA to separate it from the rest of the cell

1. Adding which of the following causes DNA to clump together?

Water

Alcohol

Oil

Extraction solution

1. What does the extracted DNA look like?

A white thread-like cloud floating on the top of the liquid

A white thread-like cloud sitting on the bottom of the beaker

Many white thread-like pieces floating throughout the liquid

Many white thread-like pieces sitting on the bottom of the beaker

1. Why did the scientist choose to use strawberries for the DNA extraction?

Because strawberries taste good

Because strawberry cell walls are soft & easier to break down

Because strawberry DNA is white & therefore easier to see

Because strawberries are octoploid & have a lot of DNA

4 open-ended questions:

What are the steps of DNA extraction?

What is the role of DNA within cells?

What are some possible reasons that DNA is located inside a nucleus rather than floating around in the cell?

Which other organism would you most like to perform a DNA extraction on? Why this organism in particular?

3 external resources: