

# This is JEOPARDY!!!!



7<sup>TH</sup> Grade Life Science



# Blind Me with Science

*Questions about the Nature of Science*



# They Might Be Giant Cells

*Questions about Cells, Molecules, and  
Atoms*

# Head, Shoulders, Knees and Toes

*Questions about the human body*

# Green Day






*Questions about Photosynthesis*

# Survival of the Fittest

*Questions about Natural Selection*

# Old Pair of Genes

*Questions about Genetics*

<b>Blind Me with Science</b>	<b><u>They Might Be Giant Cells</u></b>	<b>Head,  Shoulder, Knees and Toes</b>	<b>GREEN Day </b>	<b>Survival  of the fittest!</b>	<b> Old pair of GENES</b>
<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>
<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>
<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>
<u>500</u>	<u>500</u>	<u>500</u>		<u>500</u>	<u>500</u>





(100) Although there is no single “scientific method”, what must scientists do *first* when they want to learn something new?

- A. Ask a question.
- B. Plan an experiment.
- C. Formulate a testable hypothesis
- D. Gather equipment for an experiment



# A. Ask a question

## (100)



(200) Which of the following questions are *scientific* questions? (There may be more than one.)

## Questions About the Sun

- a. What materials are present in the sun?
- b. How much money can we save by using solar energy?
- c. What is the distance between the Earth and the sun?
- d. Will the sun ever run out of energy?



A, C and D

**DOUBLE UP!**

Why is B *not* a question  
that can be answered  
by science?

(200) + (200)



(300) Tamara uses sticks and balloons to show how bones and muscles move. She is using a

- A variable.
- B theory.
- C hypothesis.
- D model.



# D. Model

## (300)



(400) The purpose of repeated experimental trials is to

- A. share the work.
- B. provide practice.
- C. validate conclusions.
- D. supply data to record.



# C. Validate conclusions

(400)





(500) Sara is designing an experiment to determine how many times a cricket chirps within a given period of time. It is important for Sara to write the steps to her experiment clearly so...

- A. she does not introduce cultural bias.
- B. the hypothesis can be supported.
- C. the data can be carefully examined.
- D. other scientists can replicate the experiment.



D. Other scientists can replicate the experiment.

**DOUBLE UP!**

Explain the difference between *Repetition* and *Replication*

$(500) + (500)$



(100) What is the unit of structure and function in organisms?



- A. Nucleus
- B. Cell
- C. Tissue
- D. Organelle



# B. Cell

## (100)



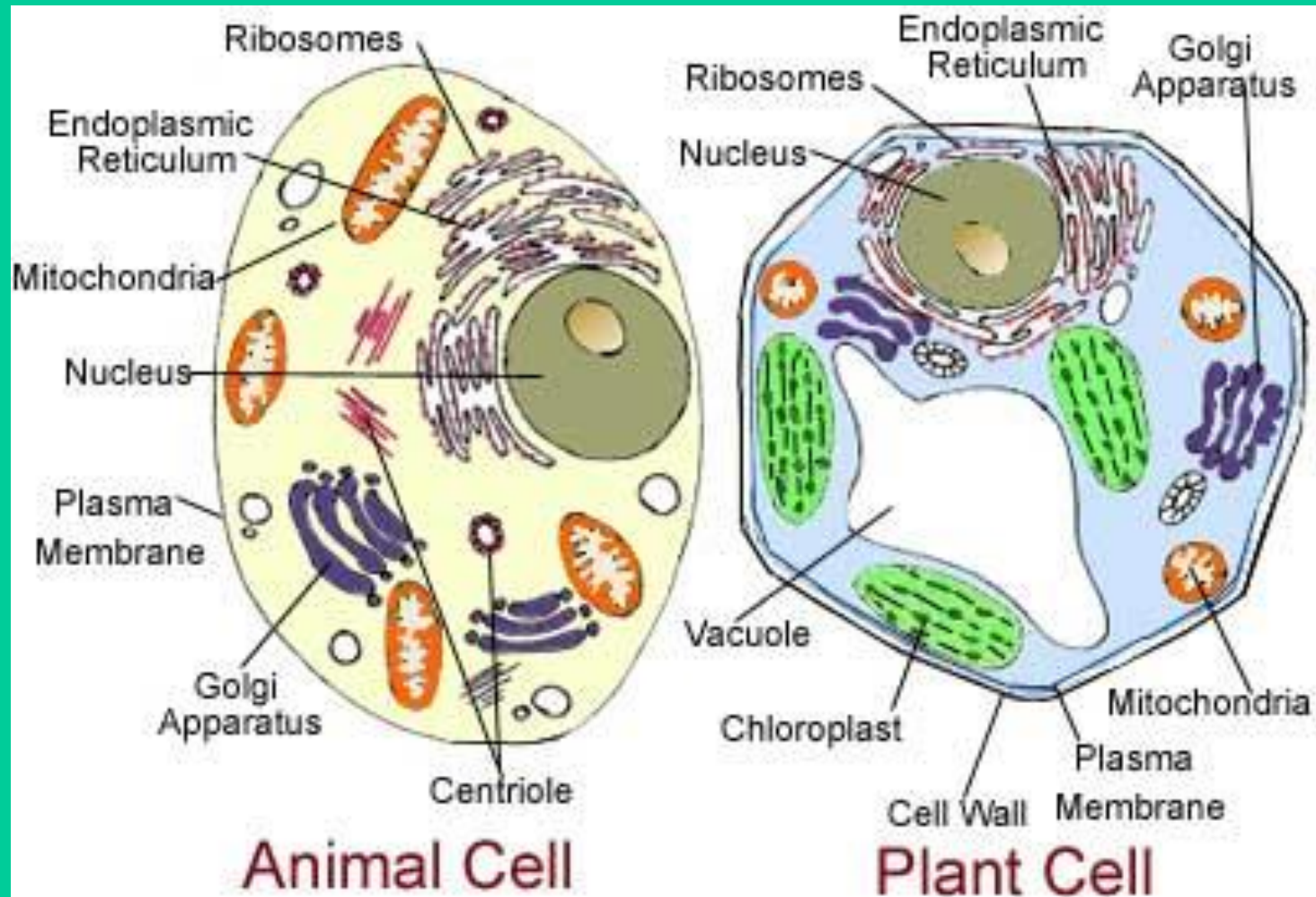
**(200) Which of these cells has a cell wall and chloroplasts?**

- A. Bacteria cells
- B. Animal cells
- C. Fungal cells
- D. Plant cells



# D. Plant Cells

## (200)

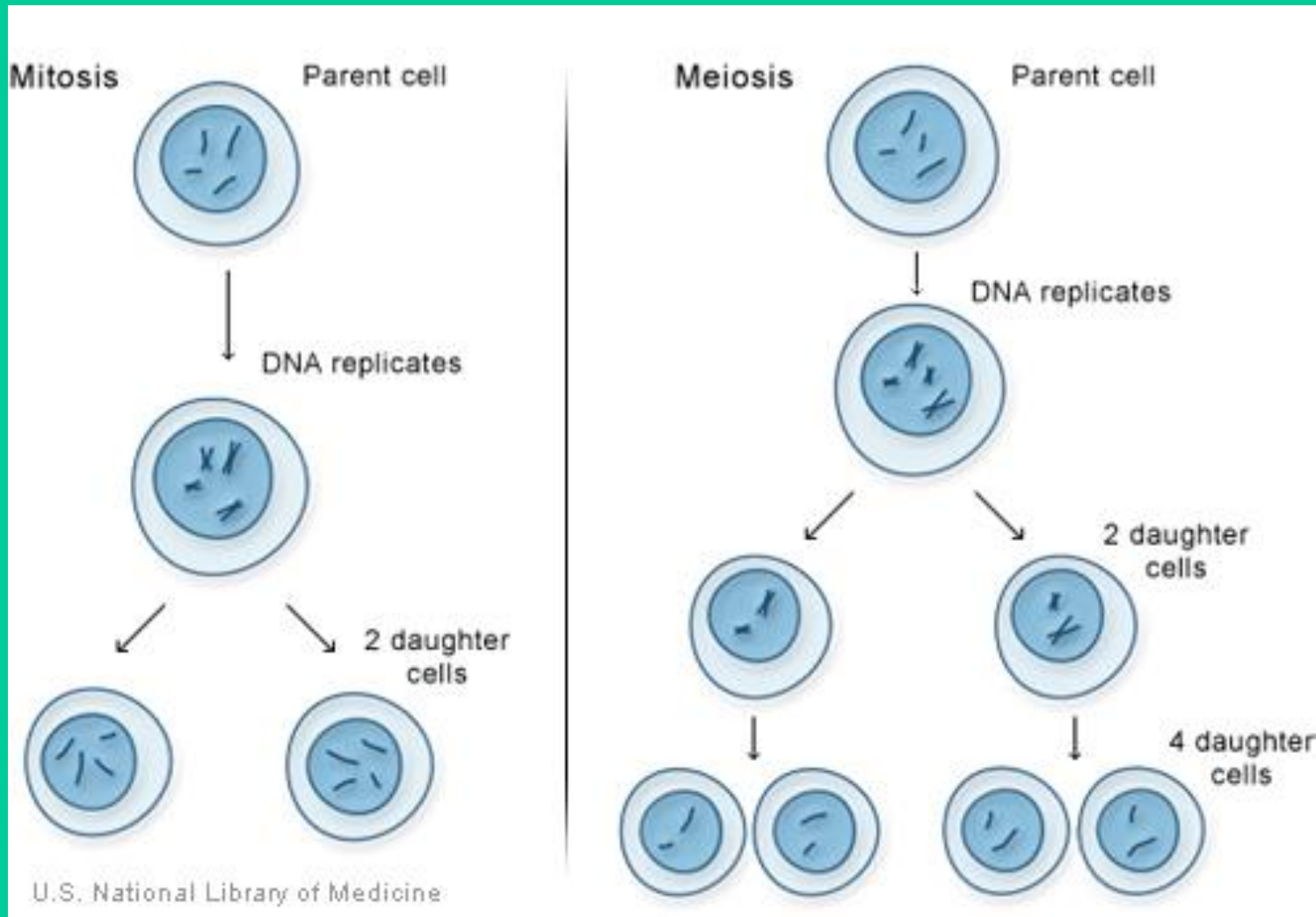


(300) What is the process that cells undergo to form two cells that are identical to the original cell?

- A. Meiosis
- B. Splitting
- C. Mitosis
- D. Reproduction



# C. Mitosis (300)





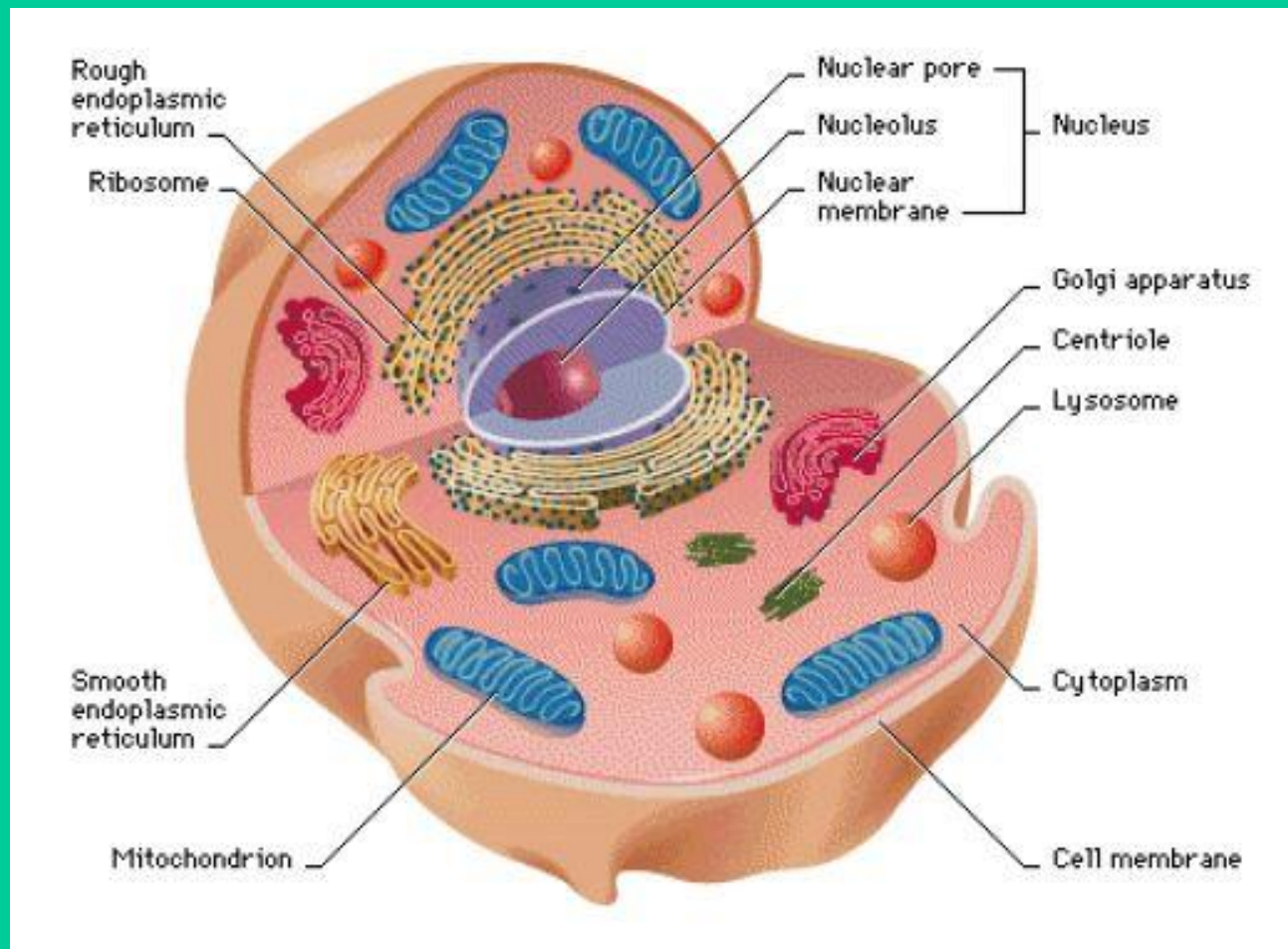
**(400) The cell organelle that is responsible for converting food molecules to ATP is the**

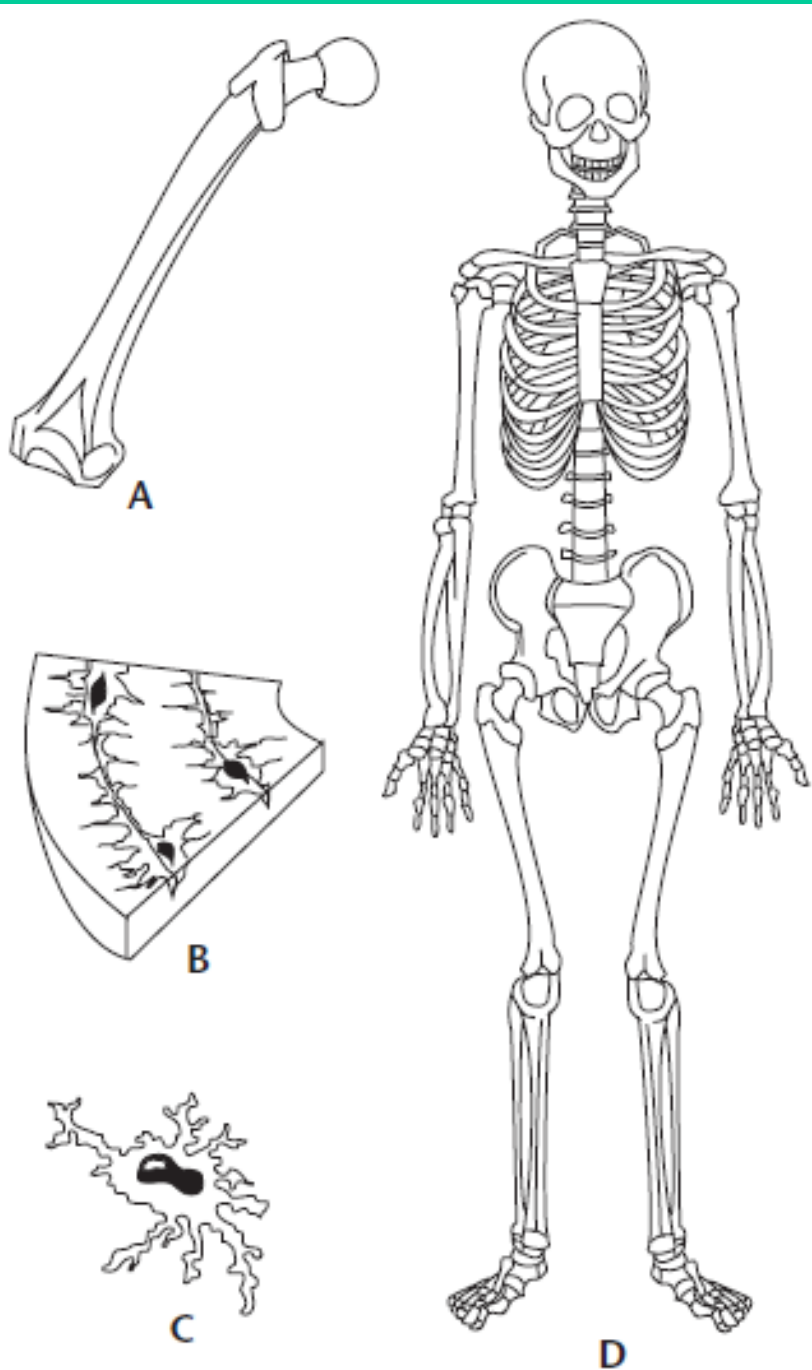
- A. Ribosome
- B. Lysosome
- C. Mitochondria
- D. Nucleus



# C. Mitochondria (400)

## *The Mighty Mitochondria!*





(500) Which level of organization is represented by the structure labeled D in the diagram to the left?

- A. cell
- B. tissue
- C. organ
- D. body/organ system



# D. Body/Organ System

## (500)



(100) The process by which your body breaks down food into small nutrient molecules is called



- A enzyme.
- B peristalsis.
- C digestion.
- D absorption.



# C. Digestion

## (100)



(200) Which body/organ systems help deliver oxygen to body cells?

- A. digestive and excretory systems
- B. circulatory and immune systems
- C. respiratory and circulatory systems
- D. endocrine and muscular systems

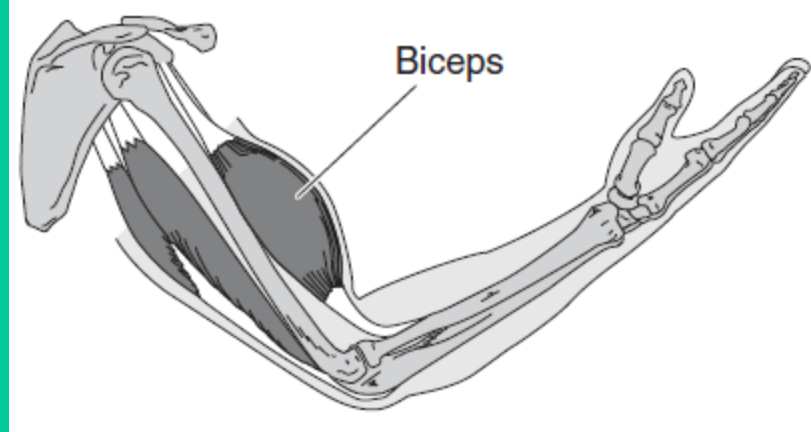


# C. Respiratory and Circulatory Systems

(200)







(300) How are the biceps and the bones of the arm related?

- A. They work together to lift the forearm.
- B. They work independently to react to stimuli.
- C. They work together to pump blood to the fingers.
- D. They work independently with specialized functions.



A. They work together to lift the forearm

(300)



(400) How does exercise help maintain healthy bones?

- A. by decreasing the need for calcium in the bones
- B. by making bones thinner and more brittle
- C. by making bones produce stronger outer membranes
- D. by making bones grow stronger and denser



D. By making bones grow stronger and denser

(400)



(500) In which kind of tissue would you find brain cells?

- A. connective
- B. epithelial
- C. muscle
- D. nervous



# D. Nervous Tissue

(500)



In which of the following ecosystems would you expect to find the greatest biodiversity?



- A. a temperate forest
- B. a desert preserve
- C. a coral reef
- D. a large city park



# C. Coral Reef

(100)





(200) All of the following factors affect an area's biodiversity **except**

A area.

B climate.

C research.

D diversity of niches.



# C. Research

(200)



(300) What role does carbon dioxide play in the process of photosynthesis?

- A. It mixes with chlorophyll to produce light.
- B. It mixes with glucose to produce oxygen.
- C. It reacts in chloroplasts to produce sugars.
- D. It reacts with oxygen to produce water.



C. It reacts in chloroplasts to produce sugars.

(300)



Which of these organisms plays a major role in **both** the carbon cycle and the water cycle?

- A. trees
- B. mushrooms
- C. animals
- D. bacteria



# A. Trees

(400)



(500) Which of the following takes place in the first stage of photosynthesis (when light hits the leaves)?

A. Hydrogen and carbon dioxide react chemically to produce sugars.

B. Water in the chloroplasts is split into hydrogen and oxygen.

C. Carbon dioxide is released into the atmosphere.

D. Oxygen is released into the atmosphere.



B. Water in the chloroplasts  
is split into hydrogen and  
oxygen.

(500)







(100) Which of the following might restrict the growth of a population?

A. mild winters

B. increased predation

C. increased numbers of prey

D. ample rainfall



# B. Increased predation

(100)



(200) Some scientists are concerned that the human population has outgrown the capacity of many of Earth's ecosystems. Which will **most** likely become a controlling factor in human populations?

- A. the food supply
- B. habitat destruction
- C. lack of formal education
- D. decreasing amount of oxygen



A. The food supply  
**DOUBLE UP!**

Why are the other three options  
*not* the best answer?

B. habitat destruction

C. lack of formal education

D. decreasing amount of oxygen  
(200)+(200)



(300) Based on fossil evidence, scientists infer that the first vertebrates on Earth were

- A. fish.
- B. birds.
- C. reptiles.
- D. amphibians.



# A. Fish

(300)



(400) The parts of a scientific name that uniquely identify an organism are the

- A. Order and species
- B. Domain and genus
- C. Genus and species
- D. Kingdom and family



C. *Genus* and *species*

**DOUBLE UP!**

What's your *Genus* and  
*species*?

(400)+(400)



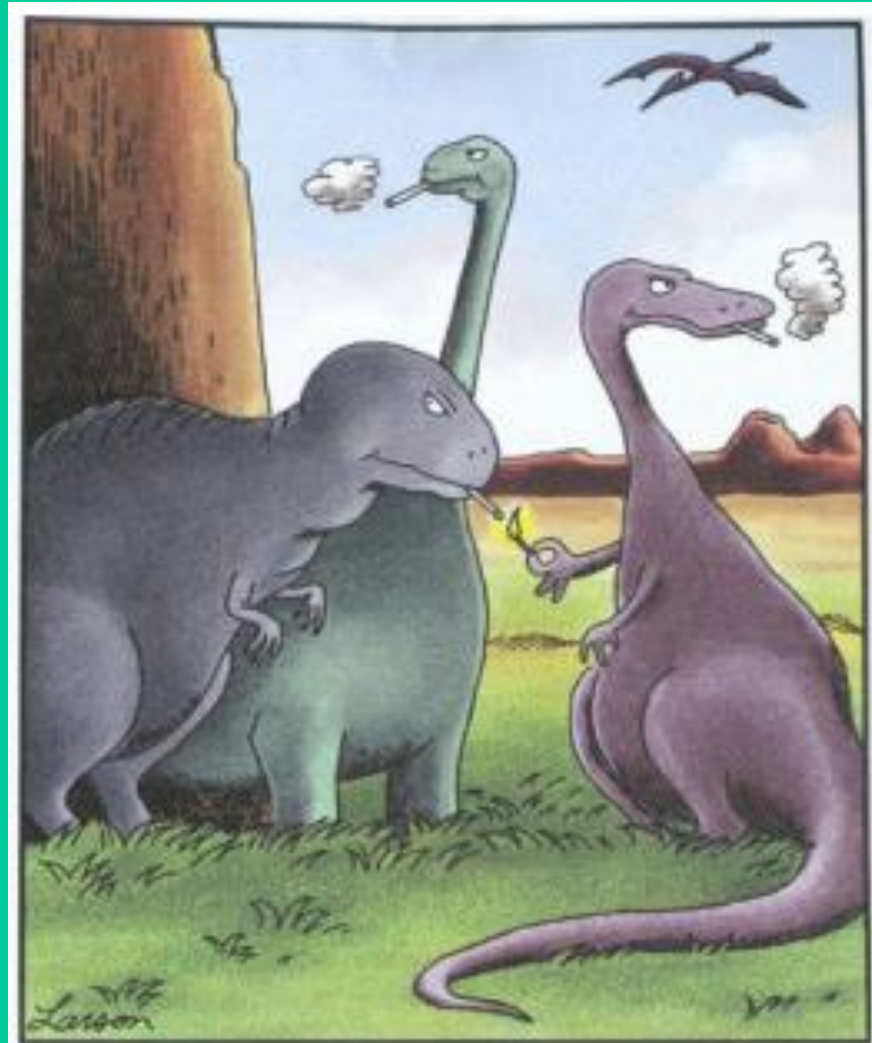


(500) According to the theory of evolution, what may have contributed to the extinction of the woolly mammoth?

- A. increased food supply
- B. increased resources
- C. failure to adapt to environmental changes
- D. failure to make a sufficient impact on the environment



# C. Failure to adapt to environmental changes



The real reason dinosaurs became extinct

*Or maybe...*





A blue-eyed mother ( $bb$ ) and a brown-eyed father ( $BB$ ) have four children. What will the phenotype of their children be?

A.  $Bb$

B.  $bb$

C. brown-eyed

D. blue-eyed



C. Brown-eyed  
**DOUBLE UP!**

What's the difference  
between *Phenotype* and  
*Genotype*?

$(100)+(100)$



(200) According to the chromosome theory of inheritance, genes are carried from parents to their offspring on

- A. traits.
- B. centromeres.
- C. chromosomes.
- D. nitrogen bases.





# C. Chromosomes

(200)



(300) If the allele for white flowers is dominant and the allele for purple flowers is recessive, what is the probability that the offspring in the F<sub>2</sub> generation will have purple flowers?

### Punnett Squares

		F <sub>1</sub> generation				F <sub>2</sub> generation	
		W	w			W	w
w	Ww	Ww	W	WW	Ww		
w	Ww	Ww	w	Ww	ww		

W = white flowers

w = purple flowers

- A. 100%
- B. 75%
- C. 50%
- D. 25%



D. 25%

(300)





**(400) A couple has three brown-eyed children. The parents are brown-eyed (Bb). The allele for brown eyes is dominant over the allele for blue eyes. They believe the fourth child they have will be blue-eyed. Which statement below explains what actually will happen?**

- A. The couple will have a blue-eyed fourth child.**
- B. The couple will have a brown-eyed fourth child.**
- C. The couple has a 75 % chance of having a blue-eyed child.**
- D. The couple has a 25 % chance of having a blue-eyed child.**



D. The couple has a 25% chance of having a blue-eyed child.

**DOUBLE UP!**

What alleles must each parent have for a 50% chance of a blue-eyed child?

(400)+(400)



(500) The word *gene* refers to a

- A. factor that controls a trait.
- B. replicated chromosome.
- C. recessive allele.
- D. rung of the DNA ladder.



A. Factor that controls a trait

(500)

