



Name _____ Class _____ Date _____

- 1 The invention of the **compound light microscope** enabled scientists to observe cells, helping them to
- A determine the number of atoms in a molecule
 - B study the behavior of chordates
 - C discover a basic similarity among organisms
 - D develop techniques for growing plants in a laboratory



- 3 The diagram below represents one-half of a dissected bean seed.
- Which **solution** should be used to determine if **structure A** contains **starch**?
- A Benedict's solution
 - B salt solution



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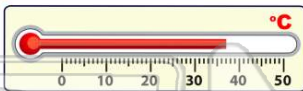
PREVIEW

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temperature in the incubator be **increased** to reach this temperature?

- A 3
- B 6
- C 9
- D 12



- 9 A wet mount of **unstained elodea** (a green aquatic plant) is observed using high power (400x) of a compound light microscope. **Which structures would most likely be observed?**
- A cytoplasm, endoplasmic reticulum, & nucleolus
 - B ribosome, Golgi complex, & vacuole
 - C nucleus, chloroplast, & cell wall
 - D centrosome, lysosome, & plasma membrane

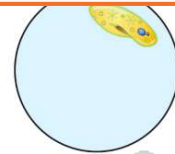


- 2 A student placed groups of 25 seeds in a variety of temperatures ranging from 0 to 55°C. A difference in the **rate of germination** observed in the groups at different temperatures was most likely due to the **effect of temperature** on
- A ammonia
 - B bases
 - C acids
 - D enzymes



- 4 Which sentence represents a **hypothesis**?
- A Environmental conditions affect germination.
 - B Boil 100 milliliters of water, let it cool, and then add 10 seeds to the water.
 - C Is water depth in a lake related to available light in the water?

- A to the right and up
- B to the right and down
- C to the left and up
- D to the left and down



- 10 A compound light microscope has a **10x** eyepiece, **10x** objective, **40x** objective, and lowpower field diameter of 1,600 micrometers. **What is the diameter of the field of view when the high-power objective lens is used?**
- A 10 μm
 - B 40 μm
 - C 400 μm
 - D 1,600 μm



ANSWER KEY

The invention of the **compound light microscope** enabled scientists to observe cells, helping them to

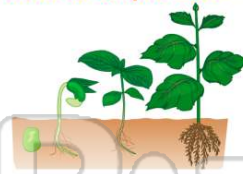
- A** determine the number of atoms in a molecule
- B** study the behavior of chordates
- C** discover a basic similarity among organisms
- D** develop techniques for growing plants in a laboratory



(C)

A student placed groups of 25 seeds in a variety of temperatures ranging from 0 to 55°C. A difference in the **rate of germination** observed in the groups at different temperatures was most likely due to the **effect of temperature** on

- A** ammonia
- B** bases
- C** acids
- D** enzymes



(d)

The diagram below represents one-half of a dissected bean seed.

Which **solution** should be used to determine if **structure A** contains **starch**?

- A** Benedict's solution
- B** salt solution
- C** Lugol's iodine solution
- D** ...



(C)

Which sentence represents a **hypothesis**?

- A** Environmental conditions affect germination.
- B** Boil 100 milliliters of water, let it cool, and then add 10 seeds to the water.
- C** Is water depth in a lake related to available light in the water?
- D** A lamp, two beakers, and elodea plants are selected for the investigation.

(a)

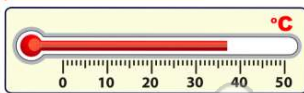


PREVIEW

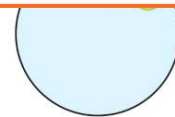
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to reach this temperature?

- A** 3 **C** 9
- B** 6 **D** 12



- B** to the right and down
- C** to the left and up
- D** to the left and down



A wet mount of **unstained elodea** (a green aquatic plant) is observed using high power (400x) of a compound light microscope. **Which structures would most likely be observed?**

- A** cytoplasm, endoplasmic reticulum, & nucleolus
- B** ribosome, Golgi complex, & vacuole
- C** nucleus, chloroplast, & cell wall
- D** centrosome, lysosome, & plasma membrane



(C)

A compound light microscope has a **10x** eyepiece, **10x** objective, **40x** objective, and lowpower field diameter of 1,600 micrometers. **What is the diameter of the field of view when the high-power objective lens is used?**

- A** 10 μm
- B** 40 μm
- C** 400 μm
- D** 1,600 μm

(C)