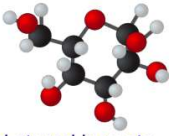




Name _____ Class _____ Date _____

1 **Glucose molecules** that are produced by **green plants** can be




A converted into starch by dehydration synthesis and stored in roots
B converted into cellulose by hydrolysis and stored in leaves
C used as catalysts for metabolic activity
D used as a raw material for photosynthesis


2 One way **human skeletal muscles** and some **bacteria** are **similar** is that they both

A reproduce asexually, using binary fission and regeneration
B lack a nuclear membrane surrounding the chromosomes
C carry out autotrophic nutrition when food becomes scarce in the environment
D produce lactic acid when oxygen is not available for respiration

3 The diagram below represents part of the process of **cellular respiration**. Energy is **released** and made available for metabolic activities at



4 In the material cycle shown below, which **processes** are represented by **numbers 1 & 2?**





PREVIEW

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known as grana

C enzymes necessary for carbon-fixation reactions
D components known as mitochondria



Which **raw material**, represented by letter **X**, is needed for the stage 1 reaction to occur?

A chlorophyll **C** PGAL
B nitrogen **D** C₆H₁₂O₆

9

Stage 1
 $X + 2 \text{ ATP} \rightarrow 2 \text{ pyruvic acid} + 4 \text{ ATP}$

Stage 2
 $2 \text{ pyruvic acid} + \text{ oxygen} \rightarrow \text{ carbon dioxide} + \text{ water} + 34 \text{ ATP}$

What is the **net gain in ATP** from the two stages of this metabolic process?

A 40 **C** 34
B 36 **D** 30

10

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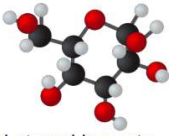
Which substance plays a major role in most of the **chemical reactions** that occur in a living cell?

A water **C** glycerol
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(D)

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(B)

4 In the material cycle shown below, which **processes** are represented by **numbers 1 & 2?**



(D)



(B)


PREVIEW

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