**Biology STAAR Review Stations**

**Day 12**

**Category # 5 Biological Processes and Systems (12.A, 12.B, 12.C, 12.D, 12.E, 12.F)**

12.A interpret relationships, including predation, parasitism, commensalism, mutualism, and competition among organisms

12.B compare variations and adaptations of organisms in different ecosystems

12.C analyze the flow of matter and energy through trophic levels using various models, including food chains, food webs, and ecological pyramids

12.D recognize that long-term survival of species is dependent on changing resource bases that are limited

12.E describe the flow of matter through the carbon and nitrogen cycles and explain the consequences of disrupting these cycles

12.F describe how environmental change can impact ecosystem stability

**12.A, 12.B, 12.C, 12.D, 12.E, 12.F Pre-Test Score\_\_\_\_\_\_\_\_\_\_**

**Focus TEKS\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **12.A** | **12.B** | **12.C** | **12.D** | **12.E** | **12.F** |
| **Interactive Quizzes** | **Organisms and Their Relationships**  [**http://www.proprofs.com/quiz-school/story.php?title=organisms-their-relationships**](http://www.proprofs.com/quiz-school/story.php?title=organisms-their-relationships) | **Animal Adaptations**  <http://www.proprofs.com/quiz-school/story.php?title=animal-adaptations_1> | **Ecological Communities**  <http://www.proprofs.com/quiz-school/story.php?title=53-quiz-ecological-communities> | | | **Principles of Ecology Quiz**  <http://glencoe.mcgraw-hill.com/sites/0078802849/student_view0/unit1/chapter2/standardized_test_practice-english.html> |
| **Virtual Labs** | **Modeling Ecosystems Virtual Lab**  <http://glencoe.mcgraw-hill.com/sites/dl/free/0078802849/383926/BL_02.html>  Follow the procedure described in the left column. Complete the journal questions. | | **Ecosystems, Organisms and Trophic Levels Virtual Lab**  <http://glencoe.mcgraw-hill.com/sites/dl/free/0078802849/383916/BL_03.html>  Check out the journal information and the diagrams.  Follow the procedure for the activity. | | **Nitrogen/Carbon Cycle Video Clip and Matching Exercise**  Watch the following video clip:  <http://www.youtube.com/watch?v=XhR1IEbEops>  Next match up the appropriate title, description and illustration of each of the cycles. | **Communities and Biomes**  <http://glencoe.mheducation.com/sites/dl/free/0078802849/383927/BL_24.html> |
| **Vocabulary** | **Symbiotic Relationships**  <http://quizlet.com/11750433/organism-relationships-flash-cards/> | **Animal adaptations**  <http://www.quia.com/jg/2373list.html> | **Trophic Levels**  <http://quizlet.com/11177356/trophic-levels-flash-cards/> | **Adaptation and Survival**  [**http://quizlet.com/18493686/adaptation-and-survival-flash-cards/**](http://quizlet.com/18493686/adaptation-and-survival-flash-cards/) | **Biogeochemical Cycles**  <http://quizlet.com/8970300/biogeochemical-cycle-vocab-flash-cards/> | **Ecosystem Stability**  [**http://quizlet.com/30241195/ecosystem-stabilityecological-succession-flash-cards/**](http://quizlet.com/30241195/ecosystem-stabilityecological-succession-flash-cards/) |
| **Video Clips** | **Symbiotic Relationships**  <http://education-portal.com/academy/lesson/symbiotic-relationships-mutualism-commensalism-amensalism.html> | **Top Ten Animal Adaptations**  <http://www.animalplanet.com/wild-animals/animal-adaptations.htm> | **How Ecosystems Work: Energy Flow**  <http://www.youtube.com/watch?v=o_RBHfjZsUQ> | | **Biogeochemical Cycles**  [**http://www.youtube.com/watch?v=09\_sWPxQymA**](http://www.youtube.com/watch?v=09_sWPxQymA) | **Ecological Succession**  [**http://www.youtube.com/watch?v=V49IovRSJDs**](http://www.youtube.com/watch?v=V49IovRSJDs) |

**12.A, 12.B, 12.C, 12.D, 12.E, 12.F Post Test Score\_\_\_\_\_\_\_\_\_\_**

**NOTES:**

**Critical Thinking Questions**

1. How is matter and energy transferred from one trophic level to the next?

2. How do living and non-living organisms interact in ecosystems?

3. What are the effects of environmental changes on populations, species, resources and ecosystems?

4. How does matter flow in the carbon and nitrogen cycle?

5. Compare variations and adaptations of organisms in different ecosystems.

**Day 12 Review Questions**

12.A

http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif  
\_\_\_\_\_1. Which of the following conditions would make an organism mutualistic with a tree and parasitic with fungi?

[**[http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif](http://glencoe.mheducation.com/sites/0078802849/student_view0/unit1/chapter2/standardized_test_practice-english.html#quest5)**](http://glencoe.mheducation.com/sites/0078802849/student_view0/unit1/chapter2/standardized_test_practice-english.html#quest5)

A)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifdestroys nutrients needed by tree and the fungi.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

B)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifneither helps nor harms tree, but benefits fungi.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

C)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifprotects tree bark from insects while depriving fungi of nutrients.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

D)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifgains exposure to sunlight, but has had no effect on the fungi.

12.A

|  |  |
| --- | --- |
|  | \_\_\_\_\_2. If a tick is connected to a dog what type of symbiotic relationship is this? |

|  |  |
| --- | --- |
| A. | parasitism |

|  |  |
| --- | --- |
| B. | commensalism |

|  |  |
| --- | --- |
| C. | symbiosis |

|  |  |
| --- | --- |
| D. | mutualism |

12.A

|  |  |
| --- | --- |
|  | \_\_\_\_\_3. A relationship between two or more organisms that live together and benefit from each other. |

|  |  |
| --- | --- |
| A. | Biotic |

|  |  |
| --- | --- |
| B. | mutualism |

|  |  |
| --- | --- |
| C. | symbiosis |

|  |  |
| --- | --- |
| D. | predator |

12.A

http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif  
\_\_\_\_\_4. What significant function can parasitism have in the ecosystem?

A)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifthe formation of lichenshttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

B)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifbenefiting the health of hostshttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

C)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifpopulation decrease of an overabundant specieshttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

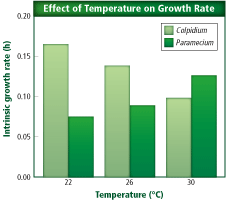
D)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifincreasing habitat size

12.B

\_\_\_\_\_5. Any variations that makes an organism better suited to its environment

1. Evolution
2. Variations
3. Species
4. Adaptations

12.B

http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif  
  


[**[http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif](http://glencoe.mheducation.com/sites/0078802849/student_view0/unit1/chapter2/section1/self-check_quizzes-english.html#quest4)**](http://glencoe.mheducation.com/sites/0078802849/student_view0/unit1/chapter2/section1/self-check_quizzes-english.html#quest4)

\_\_\_\_\_6. This graph shows that the growth of \_\_\_\_ is decreased by higher temperature.

A)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifparameciumhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

B)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifcolpidiumhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

C)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifcolpidium and parameciumhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

D)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifneither organism

12.C  
\_\_\_\_\_7. Each step in a food chain or food web is called a (an) \_\_\_\_.

[**[http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif](http://glencoe.mheducation.com/sites/0078802849/student_view0/unit1/chapter2/standardized_test_practice-english.html#quest7)**](http://glencoe.mheducation.com/sites/0078802849/student_view0/unit1/chapter2/standardized_test_practice-english.html#quest7)

A)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.giftrophic levelhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

B)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifautotrophhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

C)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifsymbiosishttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

D)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifbiogeochemical cycle

12.C

\_\_\_\_\_8. A \_\_\_\_ is a model representing energy flow and interconnected food chains in an ecosystem.

[**[http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif](http://glencoe.mheducation.com/sites/0078802849/student_view0/unit1/chapter2/standardized_test_practice-english.html#quest8)**](http://glencoe.mheducation.com/sites/0078802849/student_view0/unit1/chapter2/standardized_test_practice-english.html#quest8)

A)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifpopulation webhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

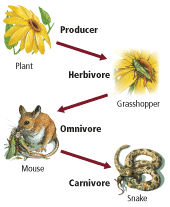
B)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.giftrophic levelhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

C)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifbiomass indicatorhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

D)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.giffood web

12.C

http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif  
\_\_\_\_\_9. What does this figure show?



A)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifenergy flow from heterotrophs to autotrophshttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

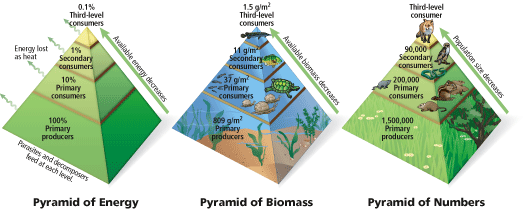
B)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifenergy flow from autotrophs to heterotrophshttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

C)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifa food chain involving only autotrophshttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

D)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifa food chain involving only heterotrophs

12.C

\_\_\_\_\_10. Which statement is true regarding energy, according to this ecological pyramid?

**[[http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif](http://glencoe.mheducation.com/sites/0078802849/student_view0/unit1/chapter2/standardized_test_practice-english.html#quest10)](http://glencoe.mheducation.com/sites/0078802849/student_view0/unit1/chapter2/standardized_test_practice-english.html" \l "quest10)**

A)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifNo heat energy is lost in an ecosystem.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

B)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifThere are fewer primary producers than secondary consumers.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

C)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifThere is more available energy in secondary consumers than primary consumers.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

D)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifNinety percent of the energy is transformed at each level.

12.D

\_\_\_\_\_11. Long term survival of a species is dependent upon which of the following:

1. its ability to absorb sunlight to stay warm
2. its ability to adapt to changing resources
3. its ability to photosynthesize
4. its ability to move

12.E

\_\_\_\_\_12. The exchange of matter through abiotic factors and organisms is called the \_\_\_\_.

[**[http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif](http://glencoe.mheducation.com/sites/0078802849/student_view0/unit1/chapter2/standardized_test_practice-english.html#quest12)**](http://glencoe.mheducation.com/sites/0078802849/student_view0/unit1/chapter2/standardized_test_practice-english.html#quest12)

A)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifcarbon cyclehttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

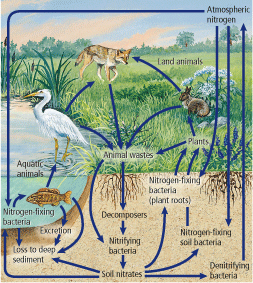
B)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifnutrient webhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

C)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifbiogeochemical cyclehttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

D)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifphosphorus cycle

12.E

http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif  
\_\_\_\_\_13. This picture represents the nitrogen cycle. What can be concluded based on this information?



A)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifNitrogen never enters plant roots.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

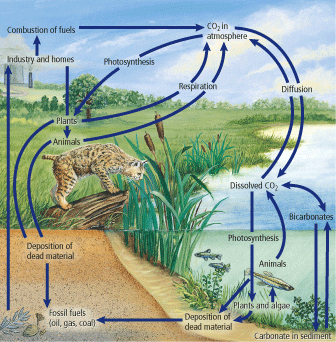
B)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifAnimals have no function in the cycle.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

C)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifThe cycle takes place primarily on land.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

D)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifBacteria is important in the cycle.

12.E

http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif  
\_\_\_\_\_14. Based on this depiction of the carbon cycle, which of the following statements is true?



A)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifDead material is of no use in an ecosystem.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

B)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifCarbon is a source of fossil fuels.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

C)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifCarbon dioxide (CO2) is never released from the atmosphere.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

D)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifAnimals are not incorporated in the cycle.

12.E  
\_\_\_\_\_15. What are two crucial functions of the carbon cycle?

A)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifkeeps carbon dioxide from escaping atmosphere and slows diffusion.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

B)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifprevents bicarbonates formation and slows photosynthesis.http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

C)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifprovides fossil fuels and recycles carbon dioxidehttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

D)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifprevents carbon dioxide from entering atmosphere and dissolves fossil fuels.

12.F  
\_\_\_\_\_16. One community replacing another as a result of changing abiotic and biotic factors is called \_\_\_\_.

A)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifecological succession

B)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.giftemperate changehttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

C)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.gifend pointhttp://glencoe.mheducation.com/olcweb/styles/shared/spacer.gif

D)http://glencoe.mheducation.com/olcweb/styles/shared/spacer.giftropical successi

**Day Twelve Review Questions (12.A, 12.B, 12.C, 12.D, 12.E, 12.F)**

**Answer Sheet**

**\_\_\_\_\_1.**

**\_\_\_\_\_2.**

**\_\_\_\_\_3.**

**\_\_\_\_\_4.**

**12.A Score\_\_\_\_\_\_\_\_\_/4**

**\_\_\_\_\_5.**

**\_\_\_\_\_6.**

**12.B Score\_\_\_\_\_\_\_\_\_/2**

**\_\_\_\_\_7.**

**\_\_\_\_\_8.**

**\_\_\_\_\_9.**

**\_\_\_\_\_10.**

**12.C Score\_\_\_\_\_\_\_\_\_/4**

**\_\_\_\_\_11.**

**12.D Score\_\_\_\_\_/1**

**\_\_\_\_\_12.**

**\_\_\_\_\_13.**

**\_\_\_\_\_14.**

**\_\_\_\_\_15.**

**12.E Score\_\_\_\_\_/4**

**\_\_\_\_\_16.**

**12.F Score\_\_\_\_\_/1**

**Day Twelve Review Questions (12.A, 12.B, 12.C, 12.D, 12.E, 12.F)**

**Key**

**\_\_A\_\_1.**

**\_\_A\_\_2.**

**\_\_B\_\_3.**

**\_\_C\_\_4.**

**\_\_D\_\_5.**

**\_\_B\_\_6.**

**\_\_A\_\_7.**

**\_\_D\_\_8.**

**\_\_B\_\_9.**

**\_\_D\_\_10.**

**\_\_B\_\_11.**

**\_\_C\_\_12.**

**\_\_D\_\_13.**

**\_\_B\_\_14.**

**\_\_C\_\_15.**

**\_\_A\_\_16.**