

2019-2020

Name: _____

NTI DAY #10
(weather-closed school day)

PACKET
TEN

(Science) 86
Hanahan

General Directions:

Due to weather, Harrison County Schools are closed. In an effort to utilize this day on the school calendar, your child is assigned and should work on this “packet” of school work today. It will count as a grade for this subject. The work attached is specific to the subject listed above. Please contact your child’s teacher of this subject at 234-7123 in the event you/your student have questions on this packet. Staff and teachers reported to HCMS today and are available should you have questions.

While this is DUE two (2) weeks after our return to school, we **strongly encourage** students to turn it in to their teacher **as soon as it’s complete** (soon after the NTI day) to avoid it being lost, eaten by the family pet, burned to keep warm, etc ☺

Harrison County Schools
Non-Traditional Instruction
Snow Plan 2019-2020

Due to the large number of weather related days of school closures, the Kentucky Department of Education has granted permission to school districts across the state to implement "Non-Traditional Instruction" (NTI) days. The Harrison County Board of Education approved all Harrison County Schools the opportunity during the 2019-2020 school year.

WHAT IS NON-TRADITIONAL INSTRUCTION? (NTI)

Non-Traditional Instruction allows for learning at home when students miss regular instruction due to weather/extraordinary circumstances. Students will have the chance for skill review, remediation, and enrichment through technology or paper packets. The work that is assigned on a NTI day will be that of review or enrichment. Examples of work will be informational reading, math fact fluency, project based learning, college and career readiness, etc.

WHEN WILL A NTI DAY BE CALLED?

A NTI day will be used if it is determined that a large majority of the roads are safe to travel, but an extra day or two is needed for some of our 'hard to melt' roads. When a NTI day is called, students will work from home on their assigned lessons found in their NTI packet or online. Harrison County Schools may use up to 10 NTI days. The number of days missed due to weather will help determine how many NTI days are enacted.

HOW WILL I KNOW HARRISON COUNTY SCHOOLS ARE HAVING A NTI DAY?

A School Messenger one call will be made to all parents and staff announcing a NTI day. Lexington television stations, WCYN radio and the Cynthiana Democrat will also be alerted. Harrison County Schools will place this information on its website, as well as on Facebook and Twitter. You can always call your child's school or the Harrison County Board Office to ask if the day missed is a regular snow day or a NTI day.

WHAT IS THE ACCOUNTABILITY OF MY STUDENT ON A NTI DAY?

Students will be required to complete all tasks assigned during a NTI day. Each day's NTI assignments will be due TWO WEEKS from the day we return to school (**for example**, a NTI day is called for Feb. 4th, we return to school on Feb. 5th, that day's NTI assignment would be due Feb. 19).
** Advanced Placement Courses/Dual Credit courses are exempted from this schedule, as their deadlines are determined by instructor, on a course by course basis.*

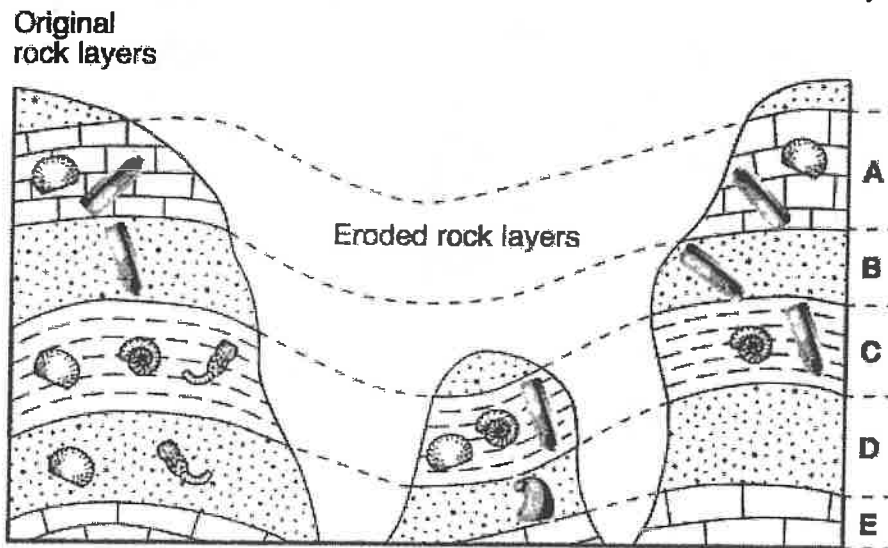
The completion of the NTI assignments counts for the student's attendance that day. The completion of the NTI work means one less summer makeup day for students will have to be enacted.

WHEN WILL MY CHILD'S TEACHER BE AVAILABLE ON A NTI DAY?

Staff will be available from 9:00 a.m. until 11:30 a.m. and from 12:30 p.m. until 3:00 p.m. Teachers will be available via e-mail or students can call their school and leave a message for their teacher to call them back. Other forms of communication may be used at the discretion of the teacher.

Index Fossils

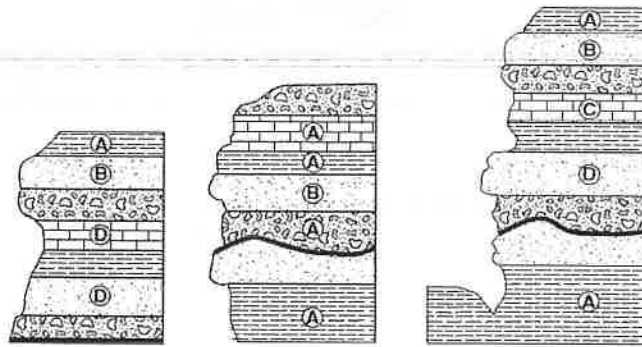
1. Which characteristics of a fossil would make it useful as an index fossil in determining the relative age of widely separated rock layers?
 - a. a wide time range and a narrow geographic range
 - b. a wide time range and a wide geographic range
 - c. a narrow time range and a wide geographic range
 - d. a narrow time range and a narrow geographic range
2. Index fossils help scientists estimate the age of a rock because index fossil species only existed for a relatively short time. What happened to the species that are now used as index fossils?
 - a. They became extinct.
 - b. They changed their diets.
 - c. They hid in marine sediments.
 - d. They migrated to new environments.
3. The diagram below represents three bedrock outcrops. The layers have not been overturned. Letters A through E identify different rock layers. Fossils found in the rock layers are shown.



Which fossil could be classified as an index fossil?

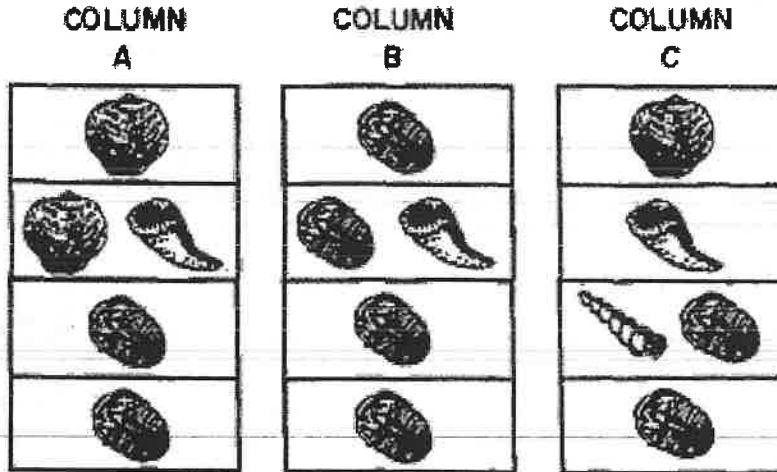


4. The cross sections below represents three widely separated outcrops of exposed bedrock. Letters A, B, C, and D represent fossils found in the rock layers.

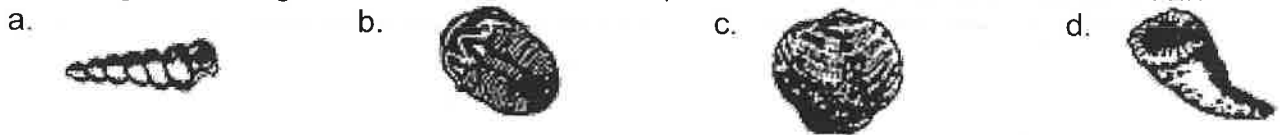


Which fossil appears to have been the best characteristics of an index fossil?
 (1) A (2) B (3) C (4) D

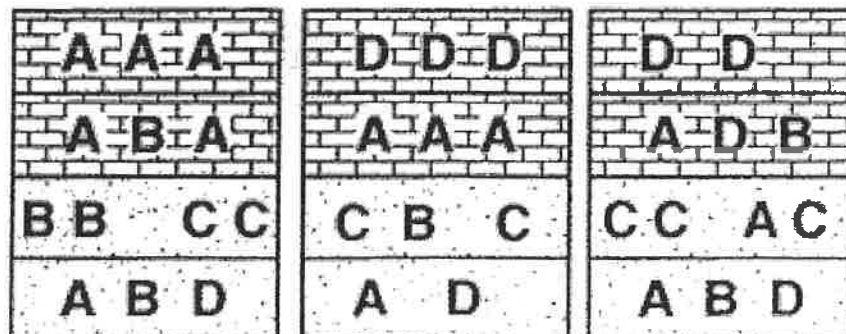
5. The geologic columns A, B, and C in the diagrams below represent widely spaced outcrops of sedimentary rocks. Symbols are used to indicate fossils found within each rock layer. Each rock layer represents the fossil record of a different geologic time period.



According to the diagrams for all three columns, which would be the best index fossil?



6. The three cross sections of sedimentary bedrock shown below represent widely separated surface exposures of layers that contain fossils. Letters A, B, C, and D represent four different marine fossils found in these rock layers.



Which letter best represents an index fossil?

a. A

b. B

c. C

d. D

7. Some marine organisms swim or float in the ocean, and others live on or in the sediment of the ocean floor. A group of floating organisms called graptolites were common in some ancient seas that covered New York State and are found in some New York State bedrock.



Floating graptolites

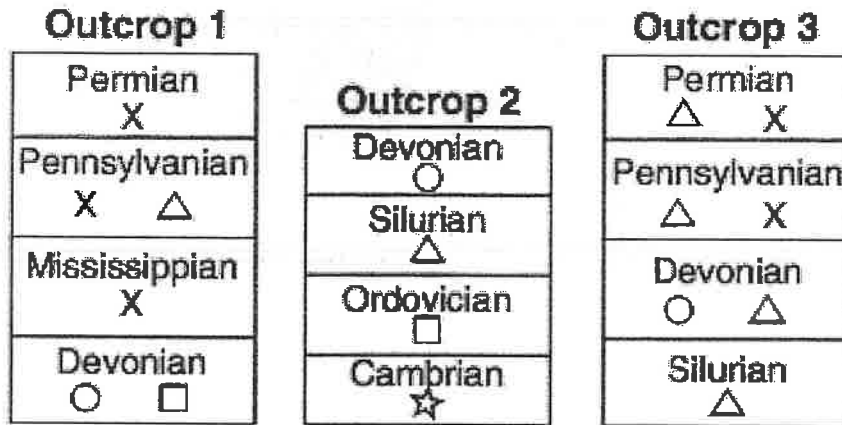
State one reason why certain species of graptolites are used as an index fossil.

Base your answers to questions 8 and 9 on the paragraph below, which provides background information regarding recent fossil discoveries in Canada.

Scientific evidence indicates that the earliest mammals may have evolved approximately 225 million years ago from an ancient reptile group called the therapsids. For millions of years afterward, early mammals and therapsids coexisted until the therapsids apparently became extinct 165 million years ago. However, geologists have recently found a fossil they believe to be a therapsid that is only 60 million years old. They found the fossil, which they have named *Chronoperates paradoxus* (paradoxical time-wanderer), near Calgary in Canada. This find suggests that for 105 million years after the apparent extinction of the therapsids, a few of the reptiles continued to live in a narrow geographic range in Canada.

8. Explain briefly why *Chronoperates paradoxus* would not be a good index fossil.
9. According to fossil evidence, during which geologic period did the earliest mammals appear on Earth?

Base your answers to questions 10 through 13 on the cross sections below and on your knowledge of Earth science. The cross sections represent three bedrock outcrops, 1, 2, and 3, found several kilometers apart. The geologic time period when each sedimentary rock layer formed is shown. The symbols (☆, ○, X, □, and △) represent fossils of different types of organisms present in the rock layers.



10. Draw the fossil symbol that represents the best index fossil. Describe one piece of evidence shown in the outcrops that indicates that this fossil has characteristics of a good index fossil.
11. Write the outcrop number of the cross section that could be found in New York State. Describe the evidence that supports your answer.
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12. Explain why the geologic age of these rock layers could not be accurately dated using carbon-14.
13. Explain why the index fossil *Coelophysis* is not preserved in any of the rock outcrops.

QUIZZ

Water Cycle

20 Questions

NAME : _____

CLASS : _____

DATE : _____

1. Plants take in carbon dioxide & release oxygen

a) Carbon/Oxygen Cycle

b) Nitrogen Cycle

c) Water Cycle

2. Plants & animals recycle nitrogen through air & soil

a) Water Cycle

b) Carbon/oxygen Cycle

c) Nitrogen Cycle

3. Liquid vapor rises during the evaporation process

a) Nitrogen Cycle

b) Carbon/Oxygen Cycle

c) Water Cycle

4. Animals take in oxygen & release carbon dioxide

a) Nitrogen Cycle

b) Carbon/Oxygen Cycle

c) Water Cycle

5. Clouds are formed during condensation process

a) Carbon/Oxygen Cycle

b) Nitrogen Cycle

c) Water Cycle

6. Bacteria break down the complex compounds in dead organism & animal waste

a) Carbon/Oxygen Cycle

b) Nitrogen Cycle

c) Water Cycle

7. _____ is the process when water changes from a liquid to a gas, caused by heat

a) Nitrogen Cycle

b) Water Cycle

8. How much of the air is nitrogen in the atmosphere?

a) 70%

b) 78%

c) 73%

9. When carbon is released into the air by animals it is called_____

- a) Carbon Trioxide b) Carbon Oxide
 c) Carbon Dioxide

10. _____ is the cooling of water in the atmosphere, changing of gas to a liquid.

- a) Precipitation b) Condensation
 c) Evaporation

11. Which one is correct

- a) In order for plants & animals to use nitrogen it must be fixed. b) In order for plants & animals to use nitrogen it must be fast.

12. Oxygen is produced by photosynthesis by plants.

- a) True b) False

13. Cars are associated with

- a) Water b) Carbon

14. Hail is associated with

- a) Nitrogen b) Water

15. Sun is associated with

- a) Carbon b) Oxygen

16. fixation is associated with

- a) Water b) Nitrogen

17. Cloud is associated with

- a) Oxygen b) Water

18. Photosynthesis is associated with

- a) Water b) Oxygen

19. Limestone is associated with

- a) Nitrogen b) Carbon

20. Animal waste is associated with

- a) Carbon b) Nitrogen