

# EST I - Literacy Test II

Date:	
Test Center:	
Room Number:	
Student's Name:	
National ID:	
EST ID:	

**Duration:** 65 minutes

52 Multiple Choice Questions

## **Instructions:**

- Place your answer on the answer sheet. Mark only one answer for each of the multiple choice questions.
- Avoid guessing. Your answers should reflect your overall understanding of the subject matter.

The following edited passage is an excerpt from The Legend of the Sleepy Hollow by Washington Irving, a fiction novel based in the New York Village of Sleepy Hollow.

When he entered the house, the conquest of his heart was complete. It was one of those spacious farmhouses, with highridged but lowly sloping roofs, built in 5 the style handed down from the first Dutch settlers; the low projecting eaves forming a piazza along the front, capable of being closed up in bad weather. Under this were hung flails, harness, various 10 utensils of husbandry, and nets for fishing in the neighboring river. Benches were built along the sides for summer use; and a great spinning-wheel at one end, and a churn at the other, showed the 15 various uses to which this important porch might be devoted. From this piazza the wondering Ichabod entered the hall, which formed the centre of the mansion, and the place of usual residence. Here 20 rows of resplendent pewter, ranged on a long dresser, dazzled his eyes. In one corner stood a huge bag of wool, ready to be spun; in another, a quantity of linseywoolsey just from the loom; ears of 25 Indian corn, and strings of dried apples and peaches, hung in jovial festoons along the walls, mingled with the gaud of red peppers; and a door left ajar gave him a peep into the best parlor, where the 30 claw-footed chairs and dark mahogany tables shone like mirrors; andirons, with their accompanying shovel and tongs, glistened from their covert of asparagus tops; mock-oranges and conch-shells 35 decorated the mantelpiece; strings of various-colored birds eggs suspended above it; a great ostrich egg was hung from the centre of the room, and a corner cupboard, knowingly left 40 open, displayed immense treasures of old silver and well-mended china.

From the moment Ichabod laid his eyes upon these regions of delight, the peace

of his mind was at an end, and his only 45 study was how to gain the affections of the peerless daughter of Van Tassel. In this enterprise, however, he had more real difficulties than generally fell to the lot of a knight-errant of yore, who 50 seldom had anything but giants, enchanters, fiery dragons, and such like easily conquered adversaries, to contend with and had to make his way merely through gates of iron and brass, and walls 55 of adamant to the castle keep, where the lady of his heart was confined; all which he achieved as easily as a man would carve his way to the centre of a pie; and then the lady gave him her hand as a 60 matter of course. Ichabod, on the contrary, had to win his way to the heart of a country coquette, beset with a labyrinth of whims and caprices, which were forever presenting new difficulties 65 and impediments; and he had to encounter a host of fearful adversaries of real flesh and blood, the numerous rustic admirers, who beset every portal to her heart, keeping a watchful and angry eye 70 upon each other, but ready to fly out in the common cause against any new competitor.

Among these, the most formidable was a burly, roaring, roistering blade, of the 75 name of Abraham, or, according to the Dutch abbreviation, Brom Van Brunt, the hero of the country round, which rang with his feats of strength and hardihood. He was broad-shouldered and double-80 jointed, with short curly black hair, and a bluff but not unpleasant countenance, having a mingled air of fun and arrogance. From his Herculean frame and great powers of limb he had received 85 the nickname of BROM BONES, by which he was universally known. He was famed for great knowledge and skill in horsemanship, being as dexterous on horseback as a Tartar.

- **1.** How does Ichabod feel upon entering the house?
  - **A.** He feels he has much to discover.
  - **B.** He feels like he has completed his purpose.
  - **C.** He feels overwhelmed with emotion.
  - **D.** He feels defeated after his suffering.
- **2.** Which choice best provides evidence for the answer to the previous question?
  - **A.** Lines 1-2 ("When ... complete.")
  - **B.** Lines 16-17 ("From ... hall,")
  - C. Lines 42-46 ("From ... Van Tassel.")
  - **D.** Lines 65-67 ("and ... blood,")
- **3.** According to the passage, benches at the farmhouse
  - **A.** were built a long time ago.
  - **B.** were made from imported material.
  - **C.** were placed near the fishing nets.
  - **D.** were to be used in the summer.
- **4.** In lines 30-31, what are chairs and tables being compared to?
  - **A.** a dark mahogany color
  - **B.** the parlor
  - **C.** the shine of a mirror
  - **D.** andirons
- **5.** According to the second paragraph, Ichabod's mission was
  - **A.** capture the daughter of Van Tassel.
  - **B.** win over the daughter of Van Tassel.
  - **C.** meet with giants, enchanters, and fiery dragons.
  - **D.** make his way through the iron and brass gates.

- **6.** Which choice best provides evidence for the answer to the previous question?
  - **A.** Lines 42-46 ("From ... Tassel.")
  - **B.** Lines 46-52 ("In ... adversaries,")
  - C. Lines 52-58 ("to ... pie;")
  - **D.** Lines 58-60 ("and ... course.")
- **7.** As used in line 52, "conquered" most nearly means
  - A. crushed.
  - **B.** restricted.
  - C. controlled.
  - D. defeated.
- **8.** As used in line 52, "adversaries" most nearly means
  - A. advisors.
  - **B.** opponents.
  - C. allies.
  - **D.** challenges.
- **9.** When the author mentions "who" in line 68, he is referring to
  - **A.** Dutch settlers.
  - **B.** Ichabod.
  - **C.** admirers.
  - **D.** Van Tassel.
- **10.** What is the purpose of lines 73-78?
  - **A.** to introduce one of the suitors
  - **B.** to explain the Dutch abbreviation of the name Abraham
  - **C.** to describe Abraham's physical characteristics
  - **D.** to clarify a competitor's criteria

The following edited passage is taken from A History of the Philippines by David P. Barrows, which discusses the people of the Philippines.

The Study of Ethnology.—The study of races and peoples forms a separate science from history, and is known as *ethnology*, or the science of races.

5 Ethnology informs us how and where the different races of mankind originated. It explains the relationships between the races as well as the differences of mind, of body, and of mode of living which different people exhibit.

All such knowledge is of great assistance to the statesman as he deals with the affairs of his own people and of other peoples, and it helps private individuals of different races to understand one another and to treat each other with due respect, kindness, and sympathy. Inasmuch, too, as the modern history which we are studying deals with many different peoples of different origin and race, and as much of our history turns upon these differences, we must look for a little at the ethnology of the Philippines.

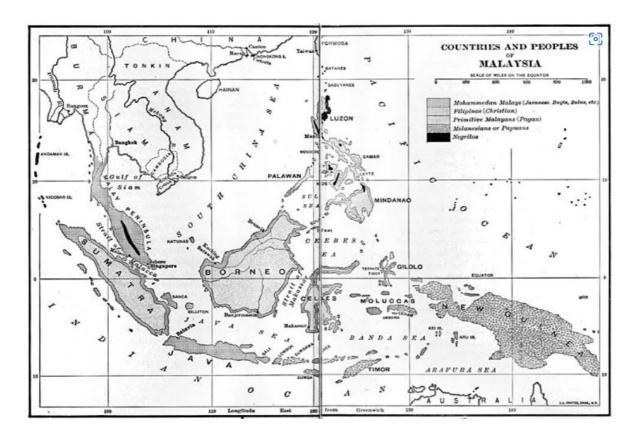
**Negritos.**—*Physical* 25 Characteristics.—The great majority of the natives of our islands belong to what is usually called the Malayan race, or the Oceanic Mongols. There is, however, one interesting little race scattered over the 30 Philippines, which certainly has no relationship at all with Malayans. These little people are called by the Tagálog, "Aeta" or "Ita." The Spaniards, when they arrived, called them "Negritos," or 35 "little negroes," the name by which they are best known. Since they were without question the first inhabitants of these islands of whom we have any knowledge, we shall speak of them at once.

40 They are among the very smallest peoples in the world, the average height of the men being about 145 centimeters, or the height of an American boy of twelve

years. The women are correspondingly smaller. They have such dark-brown skins that many people suppose them to be quite black. Additionally, their hair is very wooly or kinky, and forms thick mats upon their heads. In spite of these peculiarities, they are not unattractive in appearance. Their eyes are large and of a fine brown color, and their features are quite regular.

The appearance of these natives excited 55 the attention of the first Spaniards, and there are many early accounts of them. Padre Chirino, who went as a missionary in 1592 to Panay, begins the narrative of his labors in that island as follows: 60 "Among the Bisayas, there are also some Negroes. They are less dark than those of Guinea, and they are much smaller, but their hair and beard are just the same. They are much more wild than the 65 Bisayas and other Filipinos, for they have neither houses nor any fixed sites for dwelling. They neither plant nor reap, but wander with their wives and children through the mountains. They hunt the 70 deer and kill one they stop right there until all the flesh is consumed. Of property they have nothing except the bow and arrow."

Manners and Customs.—The Negritos 75 still have this wild, timid character, and few have ever been truly civilized in spite of the efforts of some of the Spanish missionaries. They still roam through the mountains, seldom building houses, but 80 making simply a little wall and roof of brush to keep off the wind and rain. They kill deer, monkeys, and birds, and in hunting they are very expert. However, their principal food is wild roots and 85 tubers, which they roast in ashes. Frequently in traveling through the mountains, although one may see nothing of these timid little folk, he will see many large, freshly dug holes from each of 90 which they have taken out a root.



- **11.** As used in line 6, "originated" most nearly means
  - A. opened.
  - **B.** invented.
  - C. began.
  - **D.** released.
- **12.** Which of the following best summarizes lines 11-23?
  - **A.** Ethnology is common knowledge that is widely known throughout the global population.
  - **B.** Ethnology helps us predict where a person is from based on their physical attributes.
  - C. The knowledge of ethnology aids individuals who are curious and want to learn about their past.
  - **D.** The knowledge of ethnology is needed in order to know more about people from the Philippines.

- **13.** It can be inferred from paragraph 4 that "Aeta" or "Ita" people
  - **A.** could sometimes be mistaken for people who are of black descent.
  - **B.** are part of the Malayan race.
  - **C.** were able to move quickly due to their small body size.
  - **D.** frequently traveled and ended up in the Philippines.
- **14.** Which choice best provides evidence for the answer to the previous question?
  - **A.** Lines 25-28 ("The ... Mongols.")
  - **B.** Lines 36-39 ("Since ... once.")
  - **C.** Lines 44-45 ("The ... smaller.")
  - **D.** Lines 45-47 ("They ... black.")

- **15.** Who is telling the firsthand account in lines 60-73?
  - **A.** the Bisayas
  - **B.** Padre Chirino
  - C. Guineans
  - **D.** Filipinos
- **16.** According to paragraph 5, what tools did the "Aeta" or "Ita" people use to hunt?
  - **A.** their bare hands
  - **B.** bows and arrows
  - C. stone weapons
  - **D.** traps and snares
- **17.** Which choice best provides evidence for the answer to the previous question?
  - **A.** Lines 64-67 ("They ... dwelling.")
  - **B.** Lines 67-69 ("They ... mountains.")
  - C. Lines 69-71 ("They ... consumed.")
  - **D.** Lines 71-73 ("Of ... arrow.")
- **18.** The author's claim in paragraph 6 is that
  - **A.** Negritos have evolved over
  - **B.** Negritos prefer wild roots to meat.
  - **C.** Negritos will always remain uncivilized.
  - **D.** Negritos and Spaniards got along well.

- **19.** Which statement in paragraph 6 best shows the wandering nature of the Negritos?
  - **A.** The Negritos still have this wild, timid character, and few have ever been truly civilized in spite of the efforts of some of the Spanish missionaries.
  - **B.** They still roam through the mountains, seldom building houses, but making simply a little wall and roof of brush to keep off the wind and rain.
  - **C.** They kill deer, monkeys, and birds, and in hunting they are very expert.
  - **D.** However, their principal food is wild roots and tubers, which they roast in ashes.
- **20.** As used in line 84, "principal" most nearly means
  - A. main.
  - **B.** basic.
  - C. value.
  - **D.** important.
- **21.** The graphic best supports which of the following paragraphs?
  - **A.** Paragraph 1
  - **B.** Paragraph 2
  - **C.** Paragraph 3
  - **D.** Paragraph 4

The first edited passage is taken from The Mountains of California by John Muir on his experience passing through the mountains in northern California. The second edited passage is from The Exploring Expedition to the Rocky Mountains, Oregon and California, by Brevet Col. J.C. Fremont on his day to day journey through the mountains.

#### Passage 1

Making your way through the mazes of the Coast Range to the summit of any of the inner peaks or passes opposite San Francisco, in the clear springtime, the 5 grandest and most telling of all California landscapes is outspread before you. At your feet lies the great Central Valley glowing golden in the sunshine, extending north and south farther than 10 the eye can reach, one smooth, flowery, lake-like bed of fertile soil. Along its eastern margin rises the mighty Sierra, miles in height, reposing like a smooth, cumulous cloud in the sunny sky, and so 15 gloriously colored, and so luminous, it seems to be not clothed with light, but wholly composed of it, like the wall of some celestial city. Along the top, and extending a good way down, you see a 20 pale, pearl-gray belt of snow; and below it a belt of blue and dark purple, marking the extension of the forests; and along the base of the range a broad belt of rosepurple and yellow, where lie the minor's gold-fields and the foot-hill gardens. All these colored belts blending smoothly make a wall of light ineffably fine, and as beautiful as a rainbow, yet firm as adamant.

When I first enjoyed this superb view, one glowing April day, from the summit of the Pacheco Pass, the Central Valley, but little trampled or plowed as yet, was one furred, rich sheet of golden
 compositae, and the luminous wall of the mountains shone in all its glory. Then it seemed to me the Sierra should be called

not the Nevada, or Snowy Range, but the Range of Light. And after ten years spent 40 in the heart of it, rejoicing and wondering, bathing in its glorious floods of light, seeing the sunbursts of morning among the icy peaks, the noonday radiance on the trees and rocks and snow, 45 the flush of the alpenglow, and a thousand dashing waterfalls with their marvelous abundance of irised spray, it still seems to me above all others the Range of Light, the most divinely 50 beautiful of all the mountain-chains I have ever seen.

#### Passage 2

Our journey the first day afforded nothing of any interest. We shot a buffalo towards sunset, and having obtained 55 some meat for our evening meal, encamped where a little timber afforded us the means of making a fire. Having disposed our meat on roasting-sticks, we proceeded to unpack our bales in search 60 of coffee and sugar, and flour for bread. With the exception of a little parched coffee, unground, we found nothing. Our cook had neglected to put it up, or it had been somehow forgotten. Tired and 65 hungry, with tough bull-meat without salt, (for we had not been able to kill a cow,) and a little bitter coffee, we sat down in silence to our miserable fare, a very disconsolate party; for yesterday's 70 feast was yet fresh in our memories, and this was our first brush with misfortune. Each man took his blanket, and laid himself down silently; for the worst part of these mishaps is, that they make 75 people ill-humored. To-day we had traveled about thirty-six miles.

6th.--Finding that our present excursion would be attended with considerable hardship, and unwilling to expose more persons than necessary, I determined to send Mr. Preuss back to the party. His horse, too, appeared in no condition to support the journey; and accordingly,

after breakfast, he took the road across the hills, attended by one of my most trusty men, Bernier. The ridge between the rivers is here about fifteen miles broad, and I expected he would probably strike the fork near their evening camp.

90 At all events he would not fail to find their trail, and rejoin them the next day.

We continued our journey, seven in number, including the three Cheyennes. Our general course was southwest, up the valley of the river, which was sandy, bordered on the northern side of the valley by a low ridge; and on the south, after seven or eight miles, the river hills

- **22.** As used in line 2, "summit" most nearly means
  - A. conference.
  - **B.** top.
  - C. meeting.
  - **D.** maximum.
- **23.** According to the passage, what does the Sierra look like?
  - A. a fluffy cloud
  - **B.** a beautiful flower
  - C. a belt of snow
  - **D.** a gray forest
- **24.** Which choice best provides evidence for the answer to the previous question?
  - **A.** Lines 9-11 ("extending ... soil.")
  - **B.** Lines 11-14 ("Along ... sky,")
  - C. Lines 15-18 ("it ... city.")
  - **D.** Lines 18-21 ("Along ... purple,")

- became higher. Six miles from our resting-place we crossed the bed of a considerable stream, now entirely dry--a bed of sand. In a grove of willows, near the mouth, were the remains of a considerable fort, constructed of trunks of large trees. It was apparently very old, and had probably been the scene of some hostile encounter among the roving tribes. Its solitude formed an impressive contrast to the picture which our
- 110 imaginations involuntarily drew of the busy scene which had been enacted here.
  - **25.** Based on lines 39-51, what does the author think about the Sierra?
    - **A.** It is the most beautiful mountain-chains they have ever come across.
    - **B.** It is a place to find peace and harmony in the warm summer days.
    - C. It has many names so people sometimes get confused about what they should refer to it as.
    - **D.** It has distinctive characteristics that only appear in the spring.
  - **26.** How does paragraph 2 of Passage 1 contribute to the text?
    - **A.** It describes the mountains in a positive way.
    - **B.** It compares the mountains of California to the ones in Oregon.
    - **C.** It tells the reader of a personal experience after setting the scene.
    - **D.** It concludes the reason for visiting the area.

- **27.** How many events took place on the first day of the journey in Passage 2?
  - A. one
  - **B.** two
  - C. three
  - **D.** four
- 28. Passage 2 mostly resembles
  - **A.** a letter.
  - **B.** a newspaper article.
  - **C.** a secondhand account.
  - **D.** a journal entry.
- **29.** What does the narrator in Passage 2 think of Mr. Preuss's horse?
  - **A.** He is able to travel alone.
  - **B.** He is able to carry many people at the same time.
  - **C.** He is unfit to travel long journeys.
  - **D.** He gets along when traveling on new roads.
- **30.** Which choice best provides evidence for the answer to the previous question?
  - **A.** Lines 77-81 ("Finding ... party.")
  - **B.** Lines 81-86 ("His ... Bernier.")
  - **C.** Lines 86-89 ("The ... camp.")
  - **D.** Lines 90-91 ("At ... day.")

- **31.** What is the relationship between Passage 1 and Passage 2?
  - **A.** Both talk about the authors' experiences in the mountains in California.
  - **B.** Passage 1 is told from a different perspective than Passage 2 at the same location.
  - **C.** Both were published in the same source.
  - **D.** Passage 2 is a recommendation to support the author of Passage 1.
- **32.** As used in line 108, "solitude" most nearly means
  - **A.** alliance.
  - **B.** fragileness.
  - C. seclusion.
  - D. pact.

The following edited passage is taken from Field, Forest, and Farm by Jean-Henri Fabre on the fertility of soil

Fertile or arable soil," resumed Uncle Paul, "constitutes only the surface layer of earth, that which is worked by the implements farmer's and yields 5 nutriment to the roots of plants and promotes their development. In one place you will see bare rocks and utter barrenness; in another you find fertile soil to a depth of an inch or two, scantily 10 carpeted with grass; and again, in a third, you come upon rich earth so deep as to maintain abundant vegetation. nowhere does this fertile layer have an indefinite thickness: at a depth never 15 very considerable a subsoil having the qualities of the neighboring mountains is sure to be found. How then has there come to be formed this layer of earth whence is derived all the nutriment 20 required by plants, animals, and men?

"Undermined all winter, and even the whole year round on high mountains, by the ice that forms in their slightest fissures, rocks of all kinds break into 25 small fragments, divide into grains of sand, fall into dust, and furnish the powdery mineral matter which the rain washes away and deposits in the valleys. This as a rule is the origin of broken 30 stones, sand, clay, and fertile soil. Ice by its expansive force has detached them from the tops of mountains and the waters have swept them away and carried them further. One can form an idea of the action of ice in crumbling rocks to make soil of them and enrich the valleys, by examining the surface of a hard road at the moment of thawing.

Firm underfoot before freezing, this 40 surface loses its firmness after a thaw and is pushed up here and there in little finely-powdered clods. At the moment of freezing, the humidity with which the soil was impregnated turned into ice

which, increasing in volume, reduced to fine particles the surface layer of the road. When the thaw comes, these particles which the ice no longer holds together form first mud, then dust. In exactly this manner arable land was formed by the disintegration of rocks of all kinds, which were reduced to particles by the action of frost.

But soil suitable for agriculture contains
55 not only powdery mineral matter, but
also a little mold from the decomposition
of vegetable matter. To give you an idea
of the causes which from the very earliest
times have little by little fertilized this
60 rock-dust with vegetable mold, let us
take the following example.

Geography has taught you what a volcano is. It is a mountain whose summit is hollowed out in an immense 65 funnel-shaped excavation called a crater. From time to time the ground trembles near a volcano and formidable noises similar to the rolling of thunder and the booming of cannon are heard from the 70 depths of the mountain. The crater throws up into the air a lofty column of smoke, dark by day, fiery red at night. All at once the mountain is rent and vomits up through the crevices a stream of fire, 75 a current of melted rock, or lava. Finally the volcano quiets down; the source of the terrible flood dries up. The streams of lava harden and cease running; and after a lapse of time which may be years they 80 become quite cold. Now what is to become of this enormous bed of black stone similar in character to the slag from a forge? What will this sheet of lava covering an area of several square miles 85 produce?

"This desolate, blasted expanse seems destined never to be clothed with verdure. But in any such assumption one would be mistaken. After centuries and 90 centuries a vigorous growth of oaks, beeches, and other large trees will have

- taken root there. In fact, you will see that air, rain, snow, and, above all, frost attack in turn the hard surface of the lava, 95 detach fine particles from it, and slowly produce a little dust at its expense. On this dust there will spring into being certain strange and hardy plants, those white or yellow patches, those vegetable incrustations, calculated to live on the surface of stone and known as lichens. These lichens fasten themselves to the lava, gnaw it still more, and in dying leave a little mold formed from their decaying remains.
  - 33. Uncle Paul says that fertile soil constitutes the surface layer of earth that "is worked by the farmer's implements" which helps bring nutriment to the roots of plants.

What can be inferred from this?

- **A.** A farmer's effort contributes to the fertility of the soil.
- **B.** Farmers should know how to fertilize the soil and own various tools.
- **C.** Fertile soil can only exist on the surface level of earth.
- **D.** Layers of soil become fertile after farmers manipulate them.
- **34.** As used in line 7, "bare" most nearly means
  - A. ornate.
  - **B.** elaborate.
  - C. flat.
  - **D.** plain.

On this precious mold, lodged in some cavity of the lava, there is now a growth of mosses which perish in their turn and increase the quantity of fertilizing 110 material. Next come ferns, which require a richer soil, and after that a few tufts of grass; then some brambles, some meager shrubs; and thus with each succeeding year the fertile soil is added to from the 115 new remnants of lava and mold left by the preceding generation of plants that have gone to decay. It is in this way that gradually a lava-bed finally becomes

covered with a forest.

- **35.** What is the correct order of the breakdown of rocks?
  - **A.** Rocks break down into sand then turn into dust.
  - **B.** Rocks break down into dust then turn into sand.
  - C. Rocks break down into stone then turn into soil.
  - **D.** Rocks break down into sand then turn into soil.
- **36.** According to the passage, what happens to the ice when it breaks off the top of a mountain?
  - **A.** It decomposes in its place.
  - **B.** It releases minerals.
  - **C.** It moves away from its current place.
  - **D.** It turns into a hard texture.
- **37.** Which choice best provides evidence for the answer to the previous question?
  - A. Lines 21-28 ("Undermined ... valleys.")
  - **B.** Lines 29-30 ("This ... soil.")
  - C. Lines 30-34 ("Ice ... further.")
  - **D.** Lines 34-38 ("One ... thawing.")

- **38.** Which of the following references shows reasoning the particles have an impact on the top layer of a road?
  - **A.** Lines 21-25 ("Undermined ... fragments.")
  - **B.** Lines 30-34 ("Ice ... further.")
  - C. Lines 42-47 ("At ... road.")
  - **D.** Lines 49-53 ("In ... frost.")
- **39.** As used in line 55, "matter" most nearly means
  - A. fabric.
  - **B.** solid.
  - **C.** nutrients.
  - **D.** substance.
- **40.** According to the passage, what sounds like the rolling of thunder and the booming of cannons?
  - A. smoky volcanoes
  - **B.** inactive volcanoes
  - **C.** trembling volcanoes
  - **D.** melting volcanoes
- **41.** Which choice best provides evidence for the answer to the previous question?
  - **A.** Lines 66-70 ("From ... mountain.")
  - **B.** Lines 70-72 ("The ... night.")
  - **C.** Lines 72-75 ("All ... lava.")
  - **D.** Lines 75-77 ("Finally ... up.")

- **42.** Why does the author include paragraph 5 in the text?
- **A.** The author wants to describe the process of the development of a volcano.
- **B.** The author wants to show the impact of soil fertility on nature.
- **C.** The author wants to provide an example of how soil can change.
- **D.** The author wants to compare different types of soil.

The following edited passage is taken from Whale Primer by Theodore J. Walker on the evolution of whales.

### **Breathing Adaptations**

have whales become Not only completely aquatic, but they have been able to eliminate nearly all the design features which were necessary for life on 5 land. Only the retention of air breathing remains, and this does not seem to be much of a hardship. There has been a great improvement in the conservation of oxygen so that really long dives are 10 possible. subtletv The accomplishment is only partially understood by scientists. Apparently, diving mammals are able to shut down those bodily activities which contribute 15 little to the diving mission. These activities can go on later when oxygen is available. It is also normal to incur an oxygen debt by borrowing from stockpiles present in the tissue fluids and 20 muscles. After a long dive a whale will idle at the surface in order to completely free the body of the excess carbon dioxide, and to pay back the oxygen debt. The greater the debt the longer the 25 surfacing, and the greater the number of breaths which must be taken.

When a whale surfaces to breathe, the act of exhaling is called "blowing." Whenever a whale has been submerged 30 for a normal dive, the air in the lungs becomes saturated with moisture from the blood. The exhalation of this spent air is accomplished very quickly by forcing the air out under pressure by the 35 diaphragm, and the sudden expansion of the expelled air produces sufficient cooling to condense the moisture. This cloud or fog is the most conspicuous feature of a surfaced whale, particularly 40 when the spout is 10 to 15 feet in height. Within a minute's time the fog is usually and heated enough scattered disappear. The duration of the spout

depends principally on the temperature
45 of the surrounding air, the amount of
moisture condensed from the breath and
the local surface wind. At the higher
latitudes air temperatures are low
enough that the spout may persist for
50 several minutes. It is possible to
recognize some of the whale species by
the form and size of the spout.

Inhalation is accomplished very quickly. The breathing act is generally both 55 visible and audible. The release of air produces a very loud "whoosh" which can be heard for quite a distance on a quiet day. The nostrils are called blowholes. In order to facilitate 60 breathing, they have been moved from the tip of the snout to the top of the head (with the exception of the sperm whale), to prevent waves from flooding the lungs. During diving, the pressure of the 65 water operates on the nostril in such a way as to close the nostril from the outside so that regardless of depth there can be no leak. The natural buoyancy of the animal exposes enough of the head 70 to keep the nostrils clear of the waves.

The nostrils communicate directly to the lungs rather than share a portion of the throat as is customary in other airbreathing vertebrates. This means that 75 the whale's mouth and throat can be full of water without danger of flooding the lungs, and that it is unnecessary to empty such a spacious cavern prior to breathing. Furthermore, it is unlikely 80 that a whale could keep his mouth closed enough to prevent flooding through the baleen because there is no upper lip over this device.

Although a whale can be sighted by the 85 telltale spout, a frightened whale may elude detection by exhaling just before surfacing, so that nothing more than a foamy patch is produced. Under these situations the whale does not expose the 90 usual amount of buoyant head, but only

the nostrils. A disturbed whale can dive, and then surface a mile or two away, or it may not move at all, preferring to hide on the bottom or among rocky reefs or in

- 95 the kelp. The California gray whale was judged by whalers to be the most wary and elusive of them all.
- **43.** The author indicates which of the following regarding the effort whales take to breathe?
  - **A.** Whales have lost nearly all their land dwelling features except their ability to breathe.
  - **B.** Whales can only hold their breath for a short period of time.
  - **C.** Whales do not find difficulty retaining air.
  - **D.** Whales should be directly under the surface to breathe.
- **44.** Which choice best provides evidence for the answer to the previous question?
  - **A.** Lines 1-5 ("Not ... land.")
  - **B.** Lines 5-7 ("Only ... hardship.")
  - C. Lines 7-10 ("There ... possible.")
  - **D.** Lines 20-24 ("After ... debt.")
- **45.** As used in line 15, "mission" most nearly means
  - A. assignment.
  - **B.** journey.
  - C. task.
  - **D.** duty.
- **46.** What is exhaling referred to when whales float right under the surface?
  - A. fogging
  - **B.** spouting
  - **C.** whooshing
  - **D.** blowing

- **47.** As used in line 38, "conspicuous" most nearly means
  - **A.** obvious.
  - **B.** predicable.
  - C. familiar.
  - **D.** horrific.
- **48.** What is the purpose of paragraph 3?
  - **A.** to explain the breathing mechanism and the functionality of a whale's nostrils
  - **B.** to explain when and why the whale's nostrils close from the outside
  - **C.** to highlight the importance of the form and size of a snout and its impact on breathing
  - **D.** to distinguish how the sperm whale differs from other kinds of whales
- **49.** According to the passage, what created a change in a whale's ability to breathe?
  - **A.** the fog produced by a surfaced whale
  - **B.** the length of a whale's dive
  - C. the snout's location
  - **D.** the duration of a spout on the water surface
- **50.** Which choice best provides evidence for the answer to the previous question?
  - **A.** Lines 24-26 ("The ... taken.")
  - **B.** Line 37-40 ("This ... height.")
  - C. Lines 43-47 ("The ... wind.")
  - **D.** Lines 59-64 ("In ... lungs.")

- **51.** What statement best supports the author's claim that a whale might be difficult to spot?
  - **A.** Lines 68-70 ("The ... waves.")
  - **B.** Lines 79-83 ("Furthermore ... device.")
  - C. Lines 84-88 ("Although ... produced.")
  - **D.** Lines 88-91 ("Under ... nostrils.")
- **52.** This passage resembles
  - **A.** an autobiography.
  - **B.** an informative text.
  - **C.** an argumentative text.
  - **D.** a narrative text.