

Name _____ Date _____ List #: _____

I. DIRECTIONS: Read the passage then answer the questions. (10 pts.)

Jake and Alice



Jake and Alice are siblings. Alice was born in 1988, and Jake was born in 1992. Although there is a four-year difference in age, they get along well. When Jake was in high school, Alice helped him choose classes she had enjoyed, with teachers that she liked and thought he would find interesting. Naturally, Jake and Alice don't share all the

same interests. Alice is fascinated with natural science and took all the advanced biology courses in high school, eventually selecting a major in plant biology in college. Jake likes science, but he's more interested in making things, like complicated recipes he finds in his collection of cookbooks, and painting over the mural in his bedroom. There must be at least 16 layers of mural on the largest wall of his room - he just can't seem to settle on a design.

When Alice's friends threw her a surprise 20th birthday party, Jake helped them coordinate with his and Alice's parents to make sure the party was kept a secret until the big day. Alice recommends new music to Jake, and he does the same for Alice. Both Alice and Jake's friends are impressed that they have such a broad knowledge of obscure bands in different musical genres. Jake is interested in becoming a chef someday - he often tries out new recipes for his family. Alice likes to cook, but doesn't get as excited about new food combinations as her brother.

Both siblings are medium height, with dark blonde hair and hazel eyes. Their mother, Rachel, has dark brown hair, and Pete, their father, when he had hair on his head, was blonde. The whole family is lightly freckled. While they all love music, none are particularly excellent singers, and only Jake knows how to read music and play an instrument: the trumpet. They all have small feet except Rachel, who wears size 10 women's sneakers when she jogs on the treadmill.

Jake and Alice each have a collection of traits that make them unique that distinguish them from their family and friends. Some of these traits are physical-dark blonde hair, light eyes, freckles-and some are behavioral-curious about the world around them, generous, heavy-sleepers.

Where do traits come from?

What would Alice and Jake be without their traits? Is there some essential "Alice-ness" or "Jake-ness" that would still exist without blonde hair, hazel eyes, a gentle demeanor and great taste in underground folk music?

When two organisms - in this case, those organisms would be Alice and Jake's parents: Pete and Rachel - create a third organism through reproduction, many variables come into play. It's a complex lottery in which an offspring of the first two organisms inherits a combination of their genetic material. The possible variations inherent in recombining the parents' DNA are very, very broad-larger than the pool of entries in the state lotto jackpot! And that's where we get so much variation even within the population of a particular sexually reproducing species.

Although Alice and Jake's unique collection of traits is originally the product of chance, there are systems to which every freckle, hair, and skin tag can be traced. Personality quirks are another story altogether.

When we think about how our personalities are formed, we can certainly think about genes we acquired from our parents-but we also have to think about other complexly intertwined factors like environment and upbringing. For now, we'll simplify things by just focusing on the physical aspect of inherited traits.

It would be very, very unlikely for two parents with identically coded chromosomes to sexually reproduce. Even in the case of intrafamilial (or consanguine) pairings, which are discouraged in our society, the chromosome pairings would never be perfectly identical - that's a good thing for us as a civilization! The worst thing for our survival is for like to be paired with like. It's in the best interest of our population that lots of different genes are mixed together in an evolutionary soup, so that many new variations on living organisms can be exposed to the environment; develop adaptations to changing conditions; and promote the survival of the species.

Another interesting variable that lets organism populations adapt to changing environments is mutation in genes. Sometimes, unpredictable changes in the genetic code will appear within a new generation, not traceable back to a parental source.

Our blonde-haired, tone-deaf siblings, Alice and Jake, almost definitely have some sort of mutation somewhere within their respective makeup. A mutation can be as tiny as a freckle, or as conspicuous as an extra finger. As long as a trait has never appeared in an organism's lineage before, it is a mutation. Jake, for example, has an oddly shaped toe in his left foot. It cleaves down the center. It doesn't hurt, and he's never had an infection or needed to buy special socks for the condition. It's just a benign mutation that exists because something in his DNA has instructed that mass of protein to cleave. If he has children someday, they may inherit this trait. But it didn't come from Pete, his father, and it didn't come from Rachel, his mother. It is a mutation.

Mutation is a fascinating concept, so it's not surprising that artists and writers have latched onto it as a metaphor. Creators of superheroes like the X-men and Teenage Mutant Ninja Turtles have used the idea of extreme mutation as a narrative device to provide commentary on racism. Mutations are where new adaptations to existing or dynamic conditions are field tested in competition with whatever has worked for a population in the past. If a mutation pops up that happens to be advantageous for a particular organism within a population, that organism is more likely to survive and therefore more likely to procreate.

Who knows? Maybe Jake's funny big toenail will come in handy someday.

- ___1. How are Jake and Alice related?
- A. They are coworkers. C. They are siblings.
B. They are friends. D. They are married.
- ___2. How does the author contrast Jake and Alice?
- A. Alice is interested in science, while Jake is more interested in making things.
B. Alice is interested in making things, while Jake is more interested in science.
C. Jake is much more athletic than Alice.
D. Jake is more like his parents than Alice.
- ___3. Sometimes, changes in genetic code will appear within a new generation that cannot be traced back to a parental source.
What evidence from the text supports this conclusion?
- A. Both Jake and Alice are medium height, with dark blonde hair and hazel eyes.
B. Jake has an oddly shaped toe that did not come from his father or mother.
C. Jake and Alice do not share all of the same interests.
D. Alice and Jake's unique collection of traits is largely the product of chance.
- ___4. Based on the information in the passage, what can be concluded about the traits that siblings have?
- A. Siblings share all of the same traits.
B. Siblings share none of the same traits.
C. Siblings share all of the same physical traits, but have different personality traits.
D. Siblings share some traits, but each has a unique combination of traits.
- ___5. What is this passage mostly about?
- A. How physical traits are passed down between generations.
B. How similar Jake and Alice are.
C. How siblings are genetically identical.
D. How siblings develop behavioral traits.
- ___6. Read the following sentence from the passage: **"When two organisms -in this case, those organisms would be Alice and Jake's parents: Pete and Rachel- create a third organism through reproduction, many variables come into play."**
As used in the passage, what does the word "organism" mean?
- A. A sibling. C. The parent of a child.
B. An individual life form. D. A mammal.

- ___7. Choose the answer that best completes the sentence below.
Jake's oddly shaped toe is a mutation, _____ he did not inherit it from either of his parents.
A. but B. although C. initially D. so

8. What does the word "mutation" mean as used in the passage?

9. According to the passage, why is it in the best interest of the human population that lots of different genes are mixed together?

10. Explain why it is unlikely for children to have an identical combination of traits to their parents. Use information from the passage to support your answer.

II. DIRECTIONS: Read each question then choose or write the correct response. (15 pts.)

The Good Samaritan

- ___11. What is the central conflict in this story?
- A. Mr. Sánchez and Rey's father work hard at competing companies.
 - B. Rey's father wants him to get a summer job to pay for his car, but Rey wants to play ball.
 - C. Mr. Sánchez asks Rey to do hard work, and he promises to reward Rey for his efforts.
 - D. Orlando, Rey, and Hernando want to play on an afterschool basketball team, but their fathers won't let them.
- ___12. From reading this story, the reader can infer that Mr. Sánchez invited some important people to his house because...
- A. he felt that Orlando should meet some community leaders who may give him a good summer job.
 - B. he wanted the town to build a community swimming pool so teens would not use his pool.
 - C. he wanted them to help him organize a drive to have the town hire a tow truck to help drivers in trouble.
 - D. he may need their support because he wants to become a member of the local school board.

13. Describe Mr. Sánchez?

____ 14. What was the author's purpose in writing this story?

- A. To emphasize the importance of completing any tasks that you begin.
- B. To show the value of being able to speak and understand two different languages.
- C. To illustrate that people should help others regardless of their age, race, or ethnicity.
- D. To caution readers to work hard inside and outside of school to graduate on time.

____ 15. Based on the story, what action will Rey most likely take when next asked to do some work by Mr. Sánchez?

- A. He will gladly agree to do the work.
- B. He will respectfully decline the offer.
- C. He will ask to be paid before he does the work.
- D. He will ask if Orlando and Hernando can help him.

16. In the opening scene, Rey is at the Sanchez house. Why does Rey go there?

____ 17. When Hernando is upset, what does he do?

- A. He tries to bend a basketball hoop.
- B. He tells Orlando that his father is a liar.
- C. He tells Rey's brother that Rey went swimming without permission.
- D. He tells Rey he never wants to see him again.

____ 18. Which most accurately describes the setting of this story?

- A. Modern times, summer, in the country.
- B. Modern times, summer and fall, in a town or city.
- C. Approximately 100 years ago, fall, in a town or city.
- D. Approximately 100 years ago, summer, in the country.

____ 19. What did Mr. Sanchez promise to Rey?

- A. If Rey helped Mr. Sanchez, he could use the pool as long as Mr. Sanchez or Orlando were home.
- B. Rey could use the pool when no one was home if he didn't tell anyone else.
- C. Rey would be paid \$100, enough to pay for school fees, if he cleaned the neighboring yard of tall grass.
- D. If Rey got good grades, he could hang out with his son Orlando.

____ 20. What does "dijo" mean?

A. said

B. ask

C. stay

D. stayed

____ 21. "His sock on one leg was bunched up at his ankle like a carnation," is a description of which character?

A. Rey

B. Hernando

C. Mr. Sanchez

D. Orlie

____ 22. Which is NOT a conflict in this story?

A. Rey does not want to pick up his little brother at school.

B. Rey thinks that Orlando is hiding when Rey is looking for him.

C. Rey is mad that his father won't let him swim with Orlando.

D. Rey does not want to help Mr. Sanchez with his car tire.

____ 23. Why does Rey stop to help Mr. Sanchez?

A. He stops to help Mr. Sanchez still hoping to be able to use the pool.

B. He respects Mr. Sanchez and wants to help.

C. Mr. Sanchez reminds him of his own father.

D. Mr. Sanchez will get angry if Rey does not help.

____ 24. When does the climax of the story occur?

A. Rey stops to help Mr. Sanchez change his tire.

B. Mr. Sanchez invites Rey to his house.

C. Hernando tries to bend the basketball rim.

D. Rey's mother asks him to pick up his brother.

____ 25. This story could be best used to teach which life lesson?

A. Give people a chance to change.

B. Forgive people who have let you down.

C. Do not expect people to help others in need.

D. Do the right thing whether someone deserves it or not.

III. DIRECTIONS: Write (T) if it is True or (F) if it is False. (4 pts.)

____ 26. Disrespect= A stop in motion or progress.

____ 27. Standstill = A lack of proper courtesy.

____ 28. Ritual = A set routine.

____ 29. Barrio = Spanish speaking neighborhood.

IV. DIRECTIONS: Write a paragraph to answer the following questions. (5 pts.)

30. Which physical traits did you inherit from your mom, from your dad and from your grandparents? Do you have a physical mutation? Which one is it? If you could have a mutation that was a super power, which super power would it be? Why?