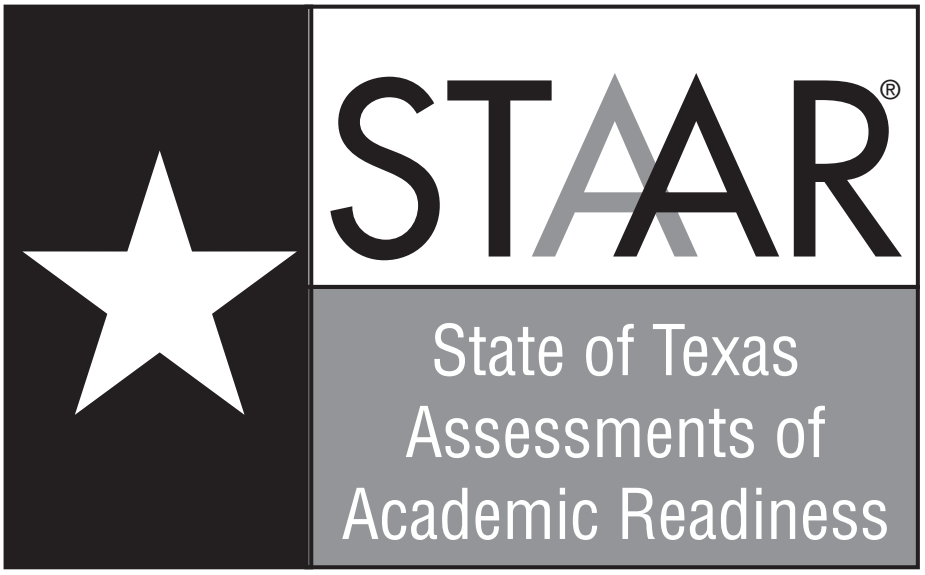

English II

Administered April 2022

RELEASED

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REVISING

Read the selection and choose the best answer to each question. Then fill in the answer on your answer document.

Larry wrote this essay for a history assignment. Read Larry's essay and look for any revisions he needs to make. When you finish reading, answer the questions that follow.

How Military Rations Changed the Way We Eat

(1) Walk down the aisles of a grocery store and you will find various cans, boxes, bags, and pouches of food available. (2) Specialized packaging allows food to be purchased and kept for long periods of time. (3) Packaged food is a convenient staple in many households and allows for easy transportation and storage. (4) The origin of food storage and preservation is the result of many military advancements in providing provisions for troops far away from home.

(5) Food spoils if it cannot be preserved. (6) The mixing of moisture, bacteria, and air makes food deteriorate quickly. (7) This rotting of food proves to be a huge challenge for troops who are many miles away from villages, towns, and cities. (8) Early attempts to provide provisions to troops left them weakened. (9) Troops were also left malnourished and susceptible to disease, which could be fatal. (10) It was obvious that something needed to be done.

(11) The process of canning helped provide quality food for troops. (12) Canning owes its discovery to Napoleon's need to provide adequate nutrition to French troops. (13) To solve the problem, the French government offered a reward for the development of a way to preserve food. (14) The solution was to preserve food in glass jars. (15) Before food was placed into the glass jars, it was heated to kill any existing bacteria. (16) Then, the contents of the jars were secured with a lid. (17) When the food inside the jar cooled, the lid would be vacuumed sealed, keeping air or new bacteria from entering. (18) This invention provided troops with edible food that could be transported over long distances and consumed without worry. (19) However, there was one problem with this method: glass jars break, leading to the military-based invention of utilizing metal cans. (20) Now canned food is common in almost any grocery-store aisle.

(21) Other innovations relied on the basic idea of canning: removing moisture from food. (22) One such method is dehydrating food. (23) Beyond meat, fruit, and vegetables, dehydration was used for dairy, especially cheese. (24) Dehydrated cheese is found in almost anything cheese flavored, from chips to pasta. (25) Freeze drying was another dehydration method employed. (26) In preserving coffee and making it "instant," freeze drying is frequently used. (27) It is also used in other "add water" food such as instant breakfasts and soups, providing the bits of fruits and vegetables that are present. (28) As military innovators continued to experiment, they realized that the addition of salt and sugar could prevent the water molecules in food from interacting with other ingredients, thus extending the freshness, or shelf life, of food.

(29) Using heat to remove moisture helps to preserve foods, but military researchers also wanted to address the problem of bacteria. (30) They developed a method of using pressure to eliminate bacteria. (31) The force used to generate the pressure is so great that it destroys any bacteria, thereby sterilizing the food. (32) The sterilization creates food that can be consumed safely without the need for preservatives. (33) Salsas, guacamole, and deli meats all benefit from this process.

(34) The need for quick, easy, convenient, long-lasting food that can be transported and stored and consumed days, months, or years later is due to military innovations. (35) These military innovations have made their way into grocery stores and ultimately the pantries and kitchens of all. (36) Without a doubt, military rations have dramatically changed the way people eat.

1 The word ***mixing*** is not the most effective word to use in sentence 6. Which word best replaces ***mixing*** in the sentence?

A merger

B mingling

C connection

D combination

---

2 What is the most effective way to combine sentences 8 and 9?

F Early attempts to provide provisions to troops left them weakened and troops were also left malnourished and susceptible to disease, which could be fatal.

G Early attempts to provide provisions to troops left them weakened, malnourished, and susceptible to disease, which could be fatal.

H Early attempts to provide provisions to troops left them weakened; troops were also left malnourished and susceptible to disease, which could be fatal.

J Early attempts to provide provisions to troops left them weakened, and were also malnourished and susceptible to disease, which could be fatal.

3 Larry wants to add this sentence to the third paragraph (sentences 11–20).

> *Meat, fruits, and vegetables could now be safely stored for weeks or months.*

Where should he insert this sentence?

A After sentence 14

B After sentence 15

C After sentence 16

D After sentence 17

---

4 What is the correct way to write sentence 26?

F Freeze drying is frequently used in preserving coffee and making it "instant."

G Making it "instant," freeze drying is frequently used in preserving coffee.

H Frequently used in preserving coffee is freeze drying and it makes it "instant."

J Preserving coffee and making it "instant," freeze drying is frequently used.

Read the selection and choose the best answer to each question. Then fill in the answer on your answer document.

April wrote this essay about the history of a hobby she enjoys. Read April's essay and look for revisions she needs to make. Then answer the questions that follow.

The History of Skateboarding

(1) In 2020 at the 32nd Olympic Summer Games in Tokyo, Japan, skateboarding will appear. (2) An activity once seen as fringe and rebellious will be legitimized as a global sport. (3) Skateboarding began as a hobby. (4) It was an alternative way for surfers to continue what they enjoyed when the ocean was not producing rideable waves. (5) Despite this humble beginning, skateboarding has transformed through the years from a pastime to an influential, cultural mainstay.

(6) Skateboarding began with the idea of taking roller skate wheels and affixing those wheels to a strip of wood. (7) It was initially referred to as "sidewalk surfing." (8) While these crude "skateboards" allowed surfers to ride when the waves were down, the boards lacked maneuverability and rattled and vibrated on the concrete sidewalks and asphalt streets. (9) Although the early boards were homemade, commercial manufacturers began producing skateboards. (10) While the commercial manufacturers promoted skateboarding through sanctioned competitions, they did little to improve upon the original design, and by the mid-'60s, safety concerns stymied the rise of skateboarding.

(11) While the sport failed to grab the general public's attention, there were still those who continued skateboarding despite the safety concerns. (12) They saw opportunities to improve the original design and create safer and more maneuverable boards. (13) One of those people was inventor Richard Stevenson. (14) He also replaced the common steel wheels with clay ones. (15) Stevenson, however, did not stop there. (16) He also transformed skateboarding with his addition of the kicktail. (17) A kicktail is the curved section on the back of the board, which allows skateboards to fly. (18) With these improvements, they now had more control and could perform aerial stunts.

(19) Not satisfied with Stevenson's use of clay wheels, Frank Nasworthy stumbled upon the idea to use urethane wheels. (20) Urethane is commonly found in the midsoles of athletic

shoes. (21) Nasworthy's wheels allowed the skateboards to better grip surfaces and provided the additional benefit of more control. (22) Both Stevenson's and Nasworthy's contributions in the '70s revolutionized skateboarding. (23) Their contributions saved it from the brink of extinction and placed it in the mainstream as municipalities became dotted with skate parks. (24) Skateboarding's popularity, however, would fall again due to safety concerns as many skate parks could not afford the insurance premiums needed to protect themselves and the skaters who used their parks.

(25) Despite this setback, skateboarding did not disappear; it just went underground. (26) Skateboarding soon became a subculture of the youth, gaining popularity as documentary-style, straight-to-video films launched the careers of many who are now household names. (27) These videos paved the way for the emergence of large competitions. (28) ESPN, as a sports network, saw a way to introduce the world to the relatively new phenomena of action sports. (29) In 1995, ESPN would create the X-Games, which showcased nine sports with 27 events over a week.

(30) The X-Games placed the subculture of skateboarding on the main stage. (31) Utilizing the formula that made ESPN connect with a younger audience, the Olympics' governing body decided to include skateboarding in the 2020 Games. (32) They are hoping that skateboarding will rejuvenate the Olympics while at the same time showcasing the Olympic spirit of sportsmanship. (33) Skateboarders have always embodied the Olympic values. (34) Skateboarding has always been more about appreciation of others' abilities and talents than strictly about the competition.

Third party trademark ESPN® was used in these testing materials.

5 April wants to add a supporting sentence to the third paragraph (sentences 11–18). Which sentence should be added after sentence 13?

A Stevenson saw a way to improve skateboards.

B Stevenson, however, was not the only inventor who significantly improved the design of skateboards.

C Stevenson used his knowledge of shaping surfboards and applied it to shaping skateboards.

D Stevenson witnessed surfers riding skateboards.

---

6 The pronoun in sentence 18 is unclear. Which word should replace ***they*** to create a more effective sentence?

F skateboarders

G kicktails

H inventors

J surfboards

---

7 Which sentence is extraneous and should be deleted from the fourth paragraph (sentences 19–24)?

A Sentence 19

B Sentence 20

C Sentence 21

D Sentence 22

8 April does not think ***a way*** is the best phrase to use in sentence 28. Which phrase is the best replacement for ***a way*** in the sentence?

F an opening

G a break

H an opportunity

J a room

---

9 April would like to add the following detail to the sixth paragraph (sentences 30–34).

It provided skateboarding with unprecedented coverage and led to the general public's viewing of skateboarders as professional athletes.

Where should this sentence be placed?

A Before sentence 30

B After sentence 30

C After sentence 31

D After sentence 32

GO ON

EDITING

GO ON

Read the selection and choose the best answer to each question. Then fill in the answer on your answer document.

Mordecai has written this essay to explain an invention that will benefit areas of the world that lack clean drinking water. Read Mordecai's essay and look for any corrections that he needs to make. When you finish reading, answer the questions that follow.

Using Solar Power to Clean Drinking Water

(1) What happens when you combine three universities, a worldwide need, and an ancient technology? (2) The result is an innovative and modern machine based on an old idea. (3) Engineers from the University at Buffalo, Fudan University in China, and the University of Wisconsin-Madison have come together with funding from the National Science Foundation to produce an efficient and cost-effective device that filters drinking water using the world's most abundant power source—the sun.

(4) The need for clean drinking water has been present since humans have been on Earth. (5) More than 2,300 years ago, the philosopher Aristotle described the water cycle in his writing titled *Meteorology*. (6) He explained that water is heated by the sun, evaporates up into the air, condenses into drops, and then fell back to the ground, pure and free of contaminants. (7) The evaporative stage is what purifies the water. (8) Devices known as solar stills replicate this natural water purification process. (9) The earliest solar stills were used by sailors to convert seawater to fresh water.

(10) Despite this knowledge about how to generate clean water using evaporation, pure drinking water is not available everywhere. (11) It is estimated that over one billion people worldwide lack clean drinking water. (12) University at Buffalo Professor Qiaoqiang Gan and the other engineers funded by the National Science Foundation recognized this need. (13) In response, they created a method of purifying water that builds upon Aristotle's ancient observations.

(14) Gan's team invented a solar water purifier that is a modern version of an evaporative solar still. (15) This device resembles the roof of a tent, with a strip of carbon-coated paper draped over the top so that the paper strip hangs down on the sides in a slight slope. (16) The ends of the paper strip dip into a water container at the bottom. (17) Gradually, the water in the container

is absorbed by the paper. (18) When the black carbon coating on the paper is heated by the sun, the wet paper begins to dry. (19) During evaporation, salt, dirt, bacteria, and other contaminants are trapped in the paper. (20) As the temperature cools, water droplets begin to condense on the surface of the paper. (21) The purified water is collected in a clean container and is ready to drink.

(22) There are a few key advantages of the solar water purifier. (23) First, the device is quick and efficient. (24) The solar still can generate up to 5 gallons of clean water daily, which is enough to provide sufficient drinking water for a family. (25) Furthermore, this solar water purifier is cheaper than other water-purification devices because they are made with inexpensive and widely available materials. (26) However, there are also disadvantages of using the solar water purifier. (27) The diversity of environments' on Earth presents design challenges that have put Gan and the other engineers to the test. (28) One challenge is tweaking the device to accommodate different water types. (29) The solar water purifier can filter salt water to make it drinkable, however, the salt left behind quickly builds up and hinders the process. (30) Humid environments also create a challenge, since little water can evaporate into moist air. (31) Gan and his team, who are funded by a special grant, continue to adjust their device to correct these issues.

(32) Currently, the engineers are working to make their purifier available worldwide. (33) Soon, drinkable water will be purified and assessible where it is needed. (34) The future of solar water purification looks bright.

10 What change is needed in sentence 6?

F Change ***explained*** to **has explained**

G Change ***then*** to **than**

H Change ***fell*** to **falls**

J Delete the comma after ***ground***

---

11 What change should be made in sentence 25?

A Delete the comma after ***Furthermore***

B Change ***than*** to **then**

C Change ***they are*** to **it is**

D Change ***widely*** to **wildly**

---

12 What change should be made in sentence 27?

F Change ***diversity*** to **divercity**

G Delete the apostrophe after ***environments***

H Change ***presents*** to **presenting**

J Change ***have*** to **has**

13 What change is needed in sentence 29?

A Change ***can*** to **could**

B Change the comma after ***drinkable*** to a semicolon

C Change ***quickly*** to **quick**

D Change ***process*** to **prosess**

---

14 What change needs to be made in sentence 33?

F Delete the comma after ***Soon***

G Change ***will be*** to **will have been**

H Change ***purified*** to **purifying**

J Change ***assessible*** to **accessible**

Read the selection and choose the best answer to each question. Then fill in the answer on your answer document.

Lucia has written this essay for her history class. Read Lucia's essay and look for any corrections that she needs to make. When you finish reading, answer the questions that follow.

Teens and Politics

(1) News and social media expose people to current issues every day, and this information can influence the decisions adults make when they enter the voting booth. (2) Teenagers are exposed to the same news information; some may feel that their voices are stifled because they are not yet old enough to vote. (3) However, there are other ways for young people to express their views and to become involved in politics.

(4) Most students are introduced to politics through student government or student-council programs at school. (5) Students can run for class president, vice president, treasurer, and other positions. (6) Teens elected to office can have an impact regarding issues that affect their schools. (7) But teens don't need to stop at school elections. (8) In some states, teens can actually run for political office, and in Kansas and Vermont, teenagers are doing just that.

(9) Ethan Sonneborn, a 14-year-old student at Mt. Abraham Union middle school in Bristol, Vermont, became interested in politics when he was in elementary school. (10) He was at a yard sale when an encyclopedia with a photo of Senator Robert Kennedy caught his eye. (11) After reading the entry about the former senator and presidential candidate, Ethan continued to research Kennedy and developed a strong admiration for the man's political prowess. (12) Eventually, that political interest led Ethan to run for governor. (13) That's right—a 14-year-old student decided to run for governor of Vermont! (14) As if that weren't surprising enough Ethan is not the only teenage gubernatorial candidate this year.

(15) Tyler Ruzich is a junior at Shawnee Mission High School in Overland Park, Kansas. (16) He is a candidate for governor of Kansas. (17) Tyler is the captain of his school's debate team and keeps a poster-size version of the U.S. Constitution plastered on his bedroom wall. (18) To show her support, his 11-year-old sister wears a pale blue T-shirt with the slogan "Ruzich for Governor." (19) When it is time to attend political events or interviews, Tyler,

who bags groceries at the local grocery store, asks coworkers to cover his shifts. (20) Since this job allows those to interact with people of all ages and from all walks of life, Tyler feels that working there actually has helped his political aspirations.

(21) Tyler is running against 16-year-old Jack Bergeson, an honor student and defensive end on his high school's football team. (22) Jack convinced Tyler to get into politics because Jack believes running for office can help teens impact their home states. (23) Along with Tyler and Jack, there are four other teenagers running for the governor's office in Kansas. (24) Kansas also does not have an age requirement for candidates wishing to hold the state's highest office. (25) That could change in the future because there is a proposed law that would limit elections to candidates over 18. (26) But for now, the teenagers hold debates, conduct interviews, and encourage other teens to get involved in local and state politics.

(27) Of course, not every teen wants to run for political office. (28) Some may find it overwhelming when they're not old enough to vote, and it's a lot of work. (29) But, as Tyler says, "If the opportunity is there, and you're our age, then you've got to do it. (30) It's the only way we're going to be able to help address this crisis of political apathy among the members of our generation." (31) Teens are the next generation of leaders, and those who learn about important issues and become commited might make a difference in the future.

15 What change, if any, is needed in sentence 9?

A Delete the comma after ***Sonneborn***

B Change ***middle school*** to **Middle School**

C Change ***he was*** to **they were**

D No change is needed.

---

16 What change should be made in sentence 14?

F Change ***that*** to **these**

G Change ***surprising*** to **surprises**

H Insert a comma after ***enough***

J Delete ***not***

---

17 What change needs to be made in sentence 20?

A Change ***those*** to **him**

B Insert a comma after ***ages***

C Change ***there*** to **their**

D Change ***aspirations*** to **asperations**

18 What change needs to be made in sentence 31?

F Delete the comma after ***leaders***

G Change ***those*** to **these**

H Insert a comma after ***issues***

J Change ***commited*** to **committed**

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS ON THE ANSWER DOCUMENT.

WRITTEN COMPOSITION: Persuasive

19 Read the following information.

> In today's world, many people are choosing to communicate through texting rather than conversing with others in person or by phone. Texting is quick and convenient, but it may lack the emotional elements of more personal communication styles.

Can text messages be misinterpreted or misunderstood because they are typed? Carefully consider this question.

Write an essay stating your position on whether texting is an effective method of communication.

Be sure to —

- state your position clearly
- use appropriate organization
- provide specific support for your argument
- choose your words carefully
- edit your writing for grammar, mechanics, and spelling

USE THIS PREWRITING PAGE TO
PLAN YOUR COMPOSITION.

MAKE SURE THAT YOU WRITE YOUR COMPOSITION ON
THE LINED PAGE IN THE ANSWER DOCUMENT.

GO ON

USE THIS PREWRITING PAGE TO
PLAN YOUR COMPOSITION.

MAKE SURE THAT YOU WRITE YOUR COMPOSITION ON
THE LINED PAGE IN THE ANSWER DOCUMENT.

GO ON

READING

GO ON

Read the next two selections and answer the questions that follow.

from
Millennials. . . So Happy Together

by Neil Howe
Forbes
August 31, 2017

1 WeWork, an upstart that leases shared workspaces, is now worth more than $20 billion after a multibillion-dollar investment from SoftBank. In recent years, the co-working movement—along with its newer cousin, co-living—has turned into a frenzy. What's behind this trend? Generational change is the primary driver. These community-oriented, structured, and shared concepts appeal to Millennials[1]—and will likely be around for the long haul.

2 Over the past decade, co-working spaces have gone from Silicon Valley "hacker mansions" to full-fledged business enterprises. There were more than 11,000 co-working spaces worldwide in 2016—up from just 14 in 2007. WeWork itself opened nearly 10,000 desks across eight countries in December 2016 alone. Co-living has also surged: Companies like Common, Ollie, and Outsite explicitly organize housing options around the idea of group living. Last year, WeWork even launched its own dedicated co-living arm, WeLive.

3 Both co-working and co-living represent a profound shift from the traditional work and home setup. Co-working startups lease office buildings and sublet the space to teleworking professionals, independent contractors, and small companies. These individuals or groups rent or pay a membership fee (monthly or daily) to work in a shared space with others. These spaces are explicitly designed for interaction. (WeWork co-founder Adam Neumann calls it "the physical social network.") Whether it's networking events or monthly pancake breakfasts, co-working companies ensure that no one remains anonymous in the workplace.

4 Co-living is an extension of this trend. Co-living startups lease apartment buildings and rent out bedrooms to

[1]Millennials have birth years starting from the early 1980s and ending in the mid-1990s to early 2000s.

GO ON

individuals—often at a much lower cost than a one-bedroom apartment. What's the catch? Residents must share bathrooms, kitchens, and common areas. (Think "dorms for adults.") Like their co-working counterparts, co-living companies offer a wide range of conveniences, including laundry services, housecleaning, and scheduled events.

5 What is fueling the rise of these arrangements? The answer is simple: These spaces tap into the Millennial mindset.

6 Most importantly, the co-working/co-living movement reflects Millennials' desire for community. Unlike young Boomers, whose life goal was to be master of one's own home and solo alpha professional in the corner office, Millennials would rather do most of their living and working with others. Before co-working spaces, work-at-home contractors would have to formally meet in order to collaborate and start-up employees would only have each other to talk to. Today's co-working spaces give everyone the daily opportunity to socialize and collaborate.

7 Co-living spaces have a similar mission. These arrangements are crafted to cure the isolation often felt in big cities. Ajay Yadav, founder and CEO of Roomi, says that "more residents are opting to co-live to not only save money but to have a shared city living experience with a roommate." And loneliness is a huge problem for Millennials, many of whom are putting off the relationships that would normally fill their need for companionship. (This tension explains the expansive online literature on lonely young people—as well as the proliferation of apps like MeetUp and Ameego designed to stave off loneliness.)

8 Millennials like the structure and safety these offerings provide. In many ways, co-living and co-working environments operate *in loco parentis*.[2] Co-working startups are responsible for making sure the printer works and the office stays tidy while workers concentrate on the task at hand. For Gen Xers[3] and Boomers,[4] the thrill of startup life was tied to the risk of going it alone. Millennials, however, want a safety net to catch them if all goes wrong. Plus, these apartments have a hierarchy of authority figures who operate as residential advisors—intervening when conflict arises.

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[2]*In loco parentis* is acting in the capacity of a parent.

[3]Generation Xers have birth years starting in the early-to-mid 1960s and ending in the early 1980s.

[4]Baby Boomers have birth years starting from the early-to-mid 1940s and ending in the early 1960s.

9 Millennials don't mind sharing space with or being dependent on others. Why own a car when there's Uber? Or buy a dress for a work gala when there's Rent the Runway? The same mentality applies here. Why pay for my own kitchen when it's less expensive to share? And Millennials are willing to trust these setups. Millennials have been the recipients of special care since birth—and trust others to look out for their best interests. This runs completely against Gen-X instinct: These grownup latchkey kids didn't have anyone looking out for them and have always defined adulthood in terms of personal ownership and look-out-for-yourself independence.

10 Millennials also have a more blended definition of work-life balance. Millennials want to prove themselves in the office, which often means going above and beyond the call of duty—even outside the 9-to-5 workday. This is particularly true for those in the startup world, where sparks of inspiration may hit at 3 AM. Co-living and co-working spaces promise that someone will always be around to help brainstorm for new ideas. It also means that when every coffee shop is closed, there will be complimentary caffeine within walking distance.

11 To be sure, there can be such a thing as too much co-everything—even for Millennials. There are times both at work and at home when privacy is needed. Although co-working startup Alley offers private phone booths, open offices have been known to raise generational tensions. Additionally, these environments require strict rules to keep the peace. For rule-abiding Millennials, "community policing" often is seen as being for the best of the group. For older generations who don't want to be told what to do, that might not fly over so well.

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Philip Desmond, a writer from Canada, is visiting Ireland with his wife and children. After weeks of travelling, he is planning to start work on a novel.

from
The Leper's Squint

by Jack Hodgins

1 Mrs. O'Sullivan is in the next room, Desmond knows, in her own room listening. If he coughs she will hear. If he sings. She will know exactly the moment he sets down his next word on that top sheet of paper. Mrs. O'Sullivan is the owner of this house, which Desmond rented from home through the Borde Failte people before he discovered that she would live in it with them, in the centre of the house, in her two rooms, and silently listen to the life of his family going on around her. She is a tall dry-skinned old woman with grey finger-waves caged in blue hair net, whose thick fingers dig into the sides of her face in an agony of desire to sympathize with everything that is said to her. "Oh I know I know I know," she groans. Last night when Desmond's wife mentioned how tired she was after the long drive down from Dublin, her fingers plucked at her face, her dull eyes rolled up to search for help along the ceiling: "Oh I know I know I know." There is no end to her sympathy, there is nothing she doesn't already know. But she will be quiet as a mouse, she promised, they won't know she is here.

2 "Maybe she's a writer," Desmond's wife whispered to him, later in bed. "Maybe she's making notes on us. Maybe she's writing a book called *North Americans I Have Eaves-Dropped On*."

3 "I can't live with someone listening to me breathe," Desmond said. "And I can't write with someone sitting waiting."

4 "Adjust," his wife said, and flicked at his nose. She who could adjust to anything, or absorb it.

5 On this first day of his novel Desmond has been abandoned by his wife, Carrie, who early this morning drove the car in to Cork. There are still, apparently, a few Seamus Murphy Statues she hasn't seen, or touched. "Keep half an eye on the kids," she said before she left. Then she came back and kissed him and whispered, "Though if you get busy it won't matter. I'm sure Mrs. O'Sullivan won't miss anything." To be fair, to be really fair,

he knows that his annoyance is unjustified. He didn't tell her he intended to work today, the first day in this house. She probably thinks that after travelling for six weeks through the country he'll rest a few more days before beginning; she may even believe that he is glad to be rid of her for the day, after all those weeks of unavoidable closeness. She certainly knows that with Mrs. O'Sullivan in the house no emergency will be overlooked, no crisis ignored.

6 Desmond now that his hands have warmed a little lifts one of the pens to write, though silently as possible, as if what he is about to do is a secret perversion from which the ears of Mrs. O'Sullivan must be protected. But he cannot, now, put down any new words. Because if the novel, which has been roaring around his head all summer and much longer looking for a chance to get out, should not recognize in the opening words the crack through which it is to spring forth, transformed into a string of words like a whirring fish line, then he will be left with all that paper to stare at, and an unmoving pen, and he is not ready to face that. Of course he knows the story, has seen it all in his mind a hundred times as if someone else had gone to the trouble of writing it and producing it as a movie just for him. But he has never been one for plunging into things, oceans or stories, and prefers to work his way in gently. That opening paragraph, though, is only a paragraph after all and has no magic, only a few black lifeless lines at the top of the paper. So he writes it out again, beneath the first time, and again under that, and again, hoping that the pen will go on by itself to write the next words and surprise him. But it does not happen, not now.

"The Leper's Squint" first published in the collection *Damage Done by the Storm*. McClelland & Stewart Ltd, Toronto, Canada, 2004.

20 Use "Millennials. . . So Happy Together" to answer the following question.

What is the author's primary purpose for writing the excerpt from the article "Millennials. . . So Happy Together"?

F To discuss how the actions of young people impact older generations

G To inform how a new business model is influenced by the behavior of one generation

H To explain how individuals can participate in co-working and co-living situations

J To explore how the socializing behaviors of people are different between generations

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21 Use "Millennials. . . So Happy Together" to answer the following question.

Which sentence from the excerpt from the article "Millennials. . . So Happy Together" best supports the idea that co-working spaces result in positive interactions?

A *In recent years, the co-working movement—along with its newer cousin, co-living—has turned into a frenzy.* (paragraph 1)

B *These individuals or groups rent or pay a membership fee (monthly or daily) to work in a shared space with others.* (paragraph 3)

C *Today's co-working spaces give everyone the daily opportunity to socialize and collaborate.* (paragraph 6)

D *In many ways, co-living and co-working environments operate* in loco parentis*.* (paragraph 8)

22 Use "Millennials. . . So Happy Together" to answer the following question.

Why does the author of the excerpt from the article "Millennials. . . So Happy Together" include a question and an answer in paragraph 5?

F To demonstrate that he will solve a difficult problem throughout the rest of the selection

G To prove that co-working and co-living arrangements only attract members of the Millennial generation

H To reveal how various types of businesses can capitalize on a single generation to increase profits

J To introduce a discussion of Millennial traits and why they contribute to the rise of co-working and co-living arrangements

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23 Use "Millennials. . . So Happy Together" to answer the following question.

How does the author organize the excerpt from the article "Millennials. . . So Happy Together"?

A The author describes a current business phenomenon and then explains how it hinges on Millennial traits.

B The author explains why co-working and co-living spaces only appeal to Millennials and then describes how companies are involved.

C The author outlines characteristics of the Millennial generation and then demonstrates how Millennials apply them to their work lives.

D The author offers statistics about some of the most successful startups marketed at Millennials and then explains how they succeed.

24 Use "Millennials. . . So Happy Together" to answer the following question.

Based on the selection from the article "Millennials. . . So Happy Together," with which statement would the author most likely agree?

F The movement toward co-living spaces began with generations prior to the Millennials.

G Millennials want numerous opportunities to socialize in their work and everyday lives.

H The most successful companies focus primarily on meeting Millennials' needs.

J Millennials seek out community but are mostly living and working in isolated situations.

---

25 Use "Millennials. . . So Happy Together" to answer the following question.

In paragraph 9 of the excerpt from the article "Millennials. . . So Happy Together," why does the author point out the difference in how Gen-X and Millennial children were parented?

A To explain why Millennials want the convenience of working any time of day or night

B To examine why Millennials seek more dependent and supervised work and living spaces

C To question why Millennials do not mind community policing in either work or living spaces

D To understand why Millennials prefer a safety net in case they cannot achieve their goals

26 Use "The Leper's Squint" to answer the following question.

Which quotation foreshadows the end of the excerpt from "The Leper's Squint"?

F *She will know exactly the moment he sets down his next word on that top sheet of paper.* (paragraph 1)

G *"Maybe she's a writer," Desmond's wife whispered to him. . . .* (paragraph 2)

H *"And I can't write with someone sitting waiting."* (paragraph 3)

J *"Adjust," his wife said, and flicked at his nose.* (paragraph 4)

---

27 Use "The Leper's Squint" to answer the following question.

Read this dictionary entry.

> **pluck** \ˈplək\ *v*
>
> **1.** to remove something **2.** to separate forcibly or abruptly **3.** to pick, pull, or grasp at **4.** to play by sounding strings

Which definition best matches the use of the word *plucked* in paragraph 1 of the excerpt from "The Leper's Squint"?

A Definition 1

B Definition 2

C Definition 3

D Definition 4

28 Use "The Leper's Squint" to answer the following question.

Which quotation from the excerpt from "The Leper's Squint" best supports the idea that Desmond's wife is more easygoing than he is?

F *"Maybe she's making notes on us. Maybe she's writing a book. . . ."* (paragraph 2)

G *"I can't live with someone listening to me breathe," Desmond said.* (paragraph 3)

H *She who could adjust to anything, or absorb it.* (paragraph 4)

J *she may even believe that he is glad to be rid of her for the day, after all those weeks of unavoidable closeness.* (paragraph 5)

---

29 Use "The Leper's Squint" to answer the following question.

In the excerpt from "The Leper's Squint," which archetype does Desmond most resemble?

A Creator

B Hero

C Rebel

D Caregiver

30 Use "The Leper's Squint" to answer the following question.

In paragraph 1 of the excerpt from "The Leper's Squint," what can the reader infer based on the description of Mrs. O'Sullivan?

F Mrs. O'Sullivan reminds Desmond of a relative he doesn't like.

G Desmond feels overwhelmed by Mrs. O'Sullivan's presence.

H Desmond is quick to judge people by their appearances.

J Desmond is prejudiced against elderly people.

---

31 Use "The Leper's Squint" to answer the following question.

Which phrase from paragraph 6 of the excerpt from "The Leper's Squint" best supports the idea that Desmond is struggling with his writing?

A *has seen it all in his mind a hundred times*

B *he has never been one for plunging into things*

C *prefers to work his way in gently*

D *hoping that the pen will go on by itself to write the next words*

32 Use "The Leper's Squint" to answer the following question.

What is a major theme of the excerpt from "The Leper's Squint"?

F Acceptance of others leads to understanding.

G Real life can turn out just like a story does.

H Creative thoughts must be discussed to find expression.

J External factors can hinder one's creativity.

---

33 Use "The Leper's Squint" to answer the following question.

In the excerpt from "The Leper's Squint," how does the tone of the wife's dialogue influence the way the character of Desmond is perceived?

A Her focus on the factual creates a strong contrast to Desmond's artistic sense.

B Her light-hearted attitude only emphasizes Desmond's internal struggle.

C Her repeated criticism makes the reader sympathetic towards Desmond.

D Her ease at coping makes Desmond appear lazy in comparison.

34 Use "Millennials. . . So Happy Together" and "The Leper's Squint" to answer the following question.

What is one **difference** between the two excerpts?

F "Millennials. . . So Happy Together" explains why Millennials prefer to live and work in shared spaces, while "The Leper's Squint" describes a man who prefers to work alone.

G "Millennials. . . So Happy Together" argues that Millennials find it easier to share living and work situations, while "The Leper's Squint" proves that writers must work alone.

H "Millennials. . . So Happy Together" reveals why Millennials trust all new situations and people, while "The Leper's Squint" presents the views of a skeptical character.

J "Millennials. . . So Happy Together" describes the places where Millennials prefer to work, while "The Leper's Squint" explains why a man has left his country to work.

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35 Use "Millennials. . . So Happy Together" and "The Leper's Squint" to answer the following question.

In **both** of the excerpts from the article "Millennials. . . So Happy Together" and "The Leper's Squint," how is privacy described?

A As a precious commodity to people of any generation

B As the source of problems in most relationships

C As something everyone needs at certain times

D As a concept younger generations fail to experience

36 Use "Millennials. . . So Happy Together" and "The Leper's Squint" to answer the following question.

In the excerpt from "The Leper's Squint," how is Desmond's opinion about his current situation **different** from how Millennials feel about co-living in the excerpt from the article "Millennials. . . So Happy Together"?

F Desmond is irritated that his family is sharing his workspace.

G Desmond is bothered by sharing a home with a stranger.

H Desmond is curious to experience co-living in another country.

J Desmond is relieved to be co-living in a home for a short time.

---

37 Use "Millennials. . . So Happy Together" and "The Leper's Squint" to answer the following question.

With which statement would **both** the author of the excerpt from the article "Millennials. . . So Happy Together" and the author of the excerpt from "The Leper's Squint" most likely agree?

A People can save a great deal of money through co-living and co-working.

B People can still feel isolated when co-living or co-working in shared spaces.

C Co-living and co-working is an idea from the past on to which new groups have latched.

D Co-living and co-working can be stressful in the wrong circumstances.

38 Use "Millennials. . . So Happy Together" and "The Leper's Squint" to answer the following question.

What is one **similarity** between the excerpt from "Millennials. . . So Happy Together" and the excerpt from "The Leper's Squint"?

F Both excerpts include different generations questioning the idea of co-living.

G Both excerpts discuss how much money can be saved by sharing living and working spaces.

H Both excerpts indicate that co-living situations require the ability to adapt to the environment.

J Both excerpts declare shared living and working spaces as beneficial to all.

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Read the selection and choose the best answer to each question. Then fill in the answer on your answer document.

from Prodigy

by Mary Hall Surface

Wolfgang Amadeus Mozart (1756–1791) was considered a musical genius. He played multiple instruments and was an extremely talented performer and composer. He began performing publicly at the age of six and continued to perform for the rest of his childhood and adolescence. Mozart's father eventually quit his job so that he could oversee his son's and daughter's musical careers. The play Prodigy, written in 1988, examines some of the family dynamics that provided a backdrop for Mozart's rise to fame.

1 **WOLFGANG:** Poppa!

2 **LEOPOLD:** Not now, Wolfgang. I need to finalize everything for your concert. There are so many details—

3 **ANNA MARIA:** But shouldn't you rest, dear? You were running about town all morning, receiving guests all afternoon. It's not so important.

4 **LEOPOLD:** Are you so unaware of how crucial this concert is to us? We stand to earn more money in a single evening than all the evenings spent bowing before the aristocracy combined.

5 **ANNA MARIA:** But we have done very well in London, Leopold. Why is this one night keeping you in such a fuss?

6 **WOLFGANG:** Poppa—

7 **LEOPOLD:** Because every noble in London is clamoring for tickets. Wolfgang is the biggest attraction of London's social season. They are coming to *us* now. And we must astound them. And take them for every pence they are worth.

8 **ANNA MARIA:** Honestly, Leopold. I should think you would be more concerned over all the dreadful rumors about Wolferl's abilities. What about his feelings? To think that some people believe that he is only a puppet.

9 **WOLFGANG:** [*Bursting in.*] Poppa! I have written a symphony.

10 **LEOPOLD:** What?

11 **WOLFGANG:** A symphony. Have I pleased you?

12 **LEOPOLD:** Son. A complete symphony—

13 [*A visitor arrives.* Leopold *puts aside the music that* Wolfgang *has handed him.*]

14 **BARRINGTON:** Herr Mozart.

15 **LEOPOLD:** Your servant, sir.

16 **BARRINGTON:** I realize that the visitations to the child prodigy are scheduled to conclude at two but I imagine you might spare a few moments for me.

17 **ANNA MARIA:** [*Clicking into role.*] It is our pleasure to welcome all into our home who desire to see our talented son.

18 **BARRINGTON:** So this is the wonder boy.

19 **WOLFGANG:** [*Returning to his manuscript.*] Hello.

20 **BARRINGTON:** It is an honor, young man.

21 **LEOPOLD:** Indeed, I think it is our honor, is it not, sir? Are you not Daines Barrington?

22 **BARRINGTON:** I am.

23 **LEOPOLD:** Your scholarly writings on music are most impressive, sir.

24 **BARRINGTON:** And influential, which is why I am here.

25 **LEOPOLD:** Sir?

26 **BARRINGTON:** My colleagues at the Royal Academy of Music enjoy a bit of sport. So they have challenged me to administer a test to your son.

27 **ANNA MARIA:** A test?

28 **BARRINGTON:** To determine scientifically the exact level of his musical skill.

29 **LEOPOLD:** For what purpose, sir?

30 **BARRINGTON:** The musical establishment requires verifiable proof regarding the child's abilities. How else can we respond to the rumors about town? Some say he is your mechanical toy. Others say that he will write an opera before he is twelve. [*He picks up the music* Wolfgang *has been working on.*] Did you write this, little man?

31 [Wolfgang *nods.*]

32 **LEOPOLD:** And how would the results of the test be made known?

33 **BARRINGTON:** I plan to address the Royal Society of Musicians. With my reputation as a musical scholar, my word can hardly be refuted.

34 **LEOPOLD:** How perfect.

35 **ANNA MARIA:** Mr. Barrington, how would such a test be given?

36 **BARRINGTON:** [*Looking at the music, he is astounded.*] I had no idea . . . Your son would be confined to a room for a full afternoon of performance exercises.

37 **LEOPOLD:** Why not extend the examination, sir, to test his skills of composition as well?

38 **BARRINGTON:** That would be a rigorous examination, Herr Mozart, lasting three days I should think.

39 **ANNA MARIA:** Three days? He is only a child, sir.

40 **LEOPOLD:** But three days well spent, proving once and for all that Wolfgang is indeed a child *and* a musical genius.

41 **BARRINGTON:** I welcome the challenge, sir.

42 **LEOPOLD:** I will make sure that my son is fully prepared to excel in your examination.

43 **ANNA MARIA:** Why are you doing this?

44 **BARRINGTON:** Because, Madam, I believe your son may have a brilliant future. Possibly more brilliant than any of us can imagine. Unfounded rumors will only stand in his way. Herr Mozart, I will contact you tomorrow to arrange the details.

45 **LEOPOLD:** I shall eagerly await them, sir.

46 **BARRINGTON:** [*Exiting.*] Farewell.

47 **LEOPOLD:** What a perfect opportunity! The final blow to all who are set against the success of my Gala concert. This test will silence them, won't it, son?

48 **ANNA MARIA:** Leopold! Are you mad? Why must Wolfgang be subjected to such a test?

49 **LEOPOLD:** You just heard why. Don't you understand, or must I explain it to you?

50 **ANNA MARIA:** I understand. I understand that Wolfgang no longer matters to you.

51 **LEOPOLD:** What?

52 **ANNA MARIA:** He *has* become a puppet to you.

53 **LEOPOLD:** Don't be absurd.

54 **ANNA MARIA:** No. You are the one who is absurd. And wrong! "A test to see if Wolfgang is a child?" You have never let him be a child—always pushing him to live up to your dreams.

55 **LEOPOLD:** Of course they are my dreams, just as they are his. Wolfgang's only desire is to be a great musician.

56 **ANNA MARIA:** It is your desire! Admit to that at least.

57 **LEOPOLD:** I have always made decisions in his best interest—

58 **ANNA MARIA:** *Your* interest! To win a place in a society where we don't belong.

59 **LEOPOLD:** What's this? You are the one who was always so impressed by the glitter of the court.

60 **ANNA MARIA:** Of course I was. But I was content to dream of dressing like an Empress someday. You are using our child to prove something—something to a group of people whom you despise.

61 **LEOPOLD:** I haven't used him. I gave Wolfgang choices all along the way.

62 **ANNA MARIA:** Choices? Wolfgang doesn't know what the word means, do you?

63 [Wolfgang *remains silent.*]

64 **ANNA MARIA:** You have made every decision of his life for him. A child? He'll probably remain a child all his life because of the way you have treated him. He's helpless.

65 **LEOPOLD:** He will always be in my care!

66 **ANNA MARIA:** I am sure he will. Playing out your ambitions at his expense. Do you ever consider if Wolfgang is happy?

67 **LEOPOLD:** Happy? He is brilliant!

68 **ANNA MARIA:** And that is all that matters?

69 **LEOPOLD:** His music is what matters! Wolfgang is his music!

70 **ANNA MARIA:** Oh Leopold, no. He is so much more. You don't see it anymore. I've watched it happen. Every day he slips further away from you. He needs you . . . just to be his Poppa.

71 **LEOPOLD:** He is undisciplined, impulsive. His music will be lost if I am not in control of him.

72 **ANNA MARIA:** So you would rather lose your son?

73 **LEOPOLD:** He is devoted to me!

74 **ANNA MARIA:** What choice does he have?

75 **LEOPOLD:** I must choose for him. He's not like other children.

76 **ANNA MARIA:** Of course he is.

77 **LEOPOLD:** He is a genius.

78 **ANNA MARIA:** He is your *son*!

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39 What do lines 9 through 11 reveal about Wolfgang?

A He desires his father's approval.

B He is frightened by his father's attitude.

C He is arrogant from his father's praise.

D He worries about his father's abilities.

---

40 Which quotation from the play best reveals Anna Maria's reason for becoming angry with Leopold?

F **ANNA MARIA:** But we have done very well in London, Leopold. Why is this one night keeping you in such a fuss? (line 5)

G **ANNA MARIA:** Honestly, Leopold. I should think you would be more concerned over all the dreadful rumors about Wolferl's abilities. (line 8)

H **ANNA MARIA:** Mr. Barrington, how would such a test be given? (line 35)

J **ANNA MARIA:** You have never let him be a child—always pushing him to live up to your dreams. (line 54)

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41 What is the meaning of *refuted* as it is used in line 33?

A Proven false

B Agreed on

C Judged unfairly

D Thought predictable

42 Which line from the play exhibits the archetype of the hero having a special quality?

F **BARRINGTON:** I realize that the visitations to the child prodigy are scheduled to conclude at two but I imagine you might spare a few moments for me. (line 16)

G **BARRINGTON:** Because, Madam, I believe your son may have a brilliant future. Possibly more brilliant than any of us can imagine. (line 44)

H **ANNA MARIA:** I understand. I understand that Wolfgang no longer matters to you. (line 50)

J **LEOPOLD:** What's this? You are the one who was always so impressed by the glitter of the court. (line 59)

---

43 Read line 60.

> **ANNA MARIA:** You are using our child to prove something—something to a group of people whom you despise.

What does Anna Maria's reaction in line 60 of the play suggest about how she feels concerning Leopold's insistence?

A Leopold is discouraged.

B Leopold is ambitious.

C Leopold is protective.

D Leopold is confused.

44 Read the following dictionary entry.

> **exercise** \ˈek-sər-ˌsīz\ n
>
> **1.** an act of employing or putting into play; use **2.** the discharge of a duty, function, or office **3.** activity that requires physical exertion, especially when performed to develop or maintain fitness **4.** a task, problem, or other effort performed to increase skill

Which definition best matches the use of the word *exercises* in line 36?

F Definition 1

G Definition 2

H Definition 3

J Definition 4

---

45 Read line 17.

> **ANNA MARIA:** [*Clicking into role.*] It is our pleasure to welcome all into our home who desire to see our talented son.

What does the line suggest about Anna Maria?

A She is solely responsible for exploiting Wolfgang's musical talent.

B She is untrusting of those who come to visit Wolfgang.

C She is cordial in order to promote Wolfgang's success.

D She is hopeful Wolfgang will help the family win a place in society.

46 In the play, how does the motif of the concert contribute to the plot?

F It introduces the characters.

G It suggests the resolution.

H It propels the action.

J It establishes the conflict.

Read the selection and choose the best answer to each question. Then fill in the answer on your answer document.

Teen Studies Better Cleaning through Chemistry

by Bethany Brookshire
Science News for Students
November 11, 2016

1 Inspiration for science projects can be found almost anywhere, even in the most common of tasks. Nathan Deng, 14, found his doing the dishes. The teen wondered why hot water worked better than cold water when washing, and what made soap a good cleaner. The simple experiments he devised to investigate these matters earned him the Lemelson Award for Invention here at the Broadcom MASTERS.

2 MASTERS stands for Math, Applied Science, Technology and Engineering for Rising Stars. Every year, this event brings together 30 middle-school students from around the country to share their award-winning science fair projects. The competition was created by Society for Science & the Public—which publishes *Science News for Students*. It's sponsored by the Broadcom Foundation.

3 Nathan—now a freshman at San Marino High School in California—doesn't like his household chores any more than anybody else. But he said doing them made him curious about why we use hot water and soap to clean. The teen was further inspired by something he read about the Deepwater Horizon oil spill in the Gulf of Mexico in 2010. To clean up the mess, planes sprayed the water with a chemical mix called Corexit. It was supposed to help disperse the oil, preventing it from clumping on the surface and coating the wildlife, though it didn't work well.

4 "I decided that I wanted to find a method for cleaning that is both efficient and environmentally friendly," he says.

5 But this is a big goal, so the teen started small. He decided to look at surface tension—an effect that occurs when molecules bond to each other on the surface of a liquid. Surface tension is why, when you fill a glass just a little too much, the water forms a tiny lump at the top. This is great for keeping water in your

glass but bad for cleaning, Nathan explains. Dishes are riddled with tiny cracks and pores—places where dirt and germs can hide. Surface tension holds water together, keeping it out of these itty bitty spots. Instead of going into the pores where it can reach the dirt, the water bridges over these places, Nathan explains. And that "can make it difficult to clean the stuff stuck in the crevices," he says.

Surface Tension Diagram

When a glass of water is filled a little too much, molecules bond to one another on the surface and form a slight lump at the top.

6 The teen wanted to see how he might reduce the surface tension of water. That would break up the bridging over the pores, he explains. Then, the water could flush through and rinse out the dirty substances.

Weighty Water

7 Nathan didn't have a lot of fancy equipment to work with. That didn't stop him. To measure surface tension, he gathered a large plastic syringe, some tubing, a kitchen scale—and of course some water. If a water droplet has a high surface tension, it holds together longer—and gets bigger—before a drop breaks apart. Nathan filled his syringe with water and slowly pushed it out over the scale. Bigger drops have more surface tension. So by weighing his drops, the teen could find out if changes he made to the water increased or decreased the surface tension.

8 Nathan started with drops of water that had different temperatures. As water gets hotter, the molecules in it move faster. The teen hypothesized that this would make it harder for the water to form a film on the surface and its surface tension would decrease. He tested water at 5°, 15°, 20°, 35° and

50° Celsius (41°, 59°, 68°, 95° and 122° Fahrenheit). Nathan avoided water at 0 °C (32 °F) since ice doesn't drip well. He also avoided boiling water, which could get dangerous. The teen dripped water at each temperature and weighed it to determine the size of his drops, running each temperature test three times.

9 As the temperature of the water increased, the size of the drops decreased, which suggested the surface tension was also decreasing. Nathan concluded that cleaning a dish with hot water is probably more efficient than cold.

10 Next, he tested soap—or rather a main ingredient in it, sodium lauryl sulfoacetate (or SLSA). This chemical is a surfactant—a chemical that decreases the attraction between water molecules, which lowers surface tension. Nathan tested pure water, water with 0.01375 percent, 0.01275 percent, 0.055 percent, 0.1 percent, 0.2 percent and 0.5 percent SLSA. (All were held at the same temperature of 20 °C.) He dripped and weighed his mixtures again.

11 The addition of the surfactant decreased surface tension more than simply heating water, Nathan found. After reading more about the chemical, the teen discovered that SLSA is a chemical with two ends. One is hydrophobic—it is repelled by water. The other is hydrophilic, or attracted to water. When SLSA with its two ends is placed in water, the molecules of the chemical line up at the water's surface. Their hydrophobic heads stick out into the air while their hydrophilic tails stay comfortably in the water. This film of molecules means water can't form its usual bonds at the surface. The whole mixture has lower surface tension.

12 At high concentrations of SLSA, something else happens. The surface of the water is filled with the chemical, and the rest of the molecules are stuck under the water. There they form clumps called micelles. These clumps are very good for cleaning up oil, Nathan notes. Oil is also hydrophobic, and a micelle isolates the oil from the water.

13 Finally, Nathan wanted to see what would happen if he added regular old table salt. He thought that salt might decrease surface tension, because adding the tiny molecules to the water would stop the water bonding to itself at the surface. But he found that salt made very little difference.

14 The teen ended up with an answer to why we use hot water and soap to clean dishes instead of cold water alone. Both reduce surface tension. And this helps water get into the nooks and crannies of our dirty dishes. If you have no soap, he says, use hot water. But adding soap is usually a good idea.

15 Nathan found that his apparatus—a syringe and tube with a scale—was great for measuring surface tension. He wants to sell his setup as a surface tension kit for classrooms, so other teens can do his experiments. Then they, too, can learn that invention and research don't require fancy materials or expensive equipment.

Bethany Brookshire, *Science News for Students*, November 11, 2016. Used with permission.

47 What is the most likely reason the author wrote this article?

A To provide an example of how easy it is to win a science award

B To explain some surprising uses of household products

C To promote an award-winning science fair attended by a young scientist

D To describe an experiment designed and completed by a young scientist

---

48 What key idea about experimentation do the details in paragraph 7 support?

F Experimentation requires careful timing to ensure accuracy.

G Experimentation needs to be conducted in a scientific laboratory.

H Experimentation does not necessarily require expensive lab materials.

J Experimentation cannot be completed in multiple steps.

---

49 What is the most likely reason the author presents paragraphs 8 through 14 chronologically?

A To suggest that the course of an experiment can change over time

B To emphasize the methodical nature of scientific experiments

C To indicate the difficulty in documenting research results

D To show that planning requires a significant amount of time

50 What is the most likely reason the author includes the photograph in the article?

F To show why Nathan focused his experiment on surface tension

G To show a step in the process Nathan followed

H To illustrate why surface tension is commonly misunderstood

J To provide a visual reference of an unfamiliar term

---

51 Read this quotation from paragraph 13.

> *He thought that salt might decrease surface tension, because adding the tiny molecules to the water would stop the water bonding to itself at the surface. But he found that salt made very little difference.*

What can the reader infer from the quotation?

A Altering factors in an experiment may not change the outcome.

B Common substances could have beneficial uses.

C Expected results can still provide valuable information.

D Making errors is common when working alone.

52 What is the best summary of the article?

F Every year Broadcom MASTERS awards the Lemelson Award for Invention to a middle school student. MASTERS, which stands for Math, Applied Science, Technology and Engineering for Rising Stars, is an event that recognizes middle school students for their scientific achievements. Nathan Deng won the award by creating an experiment that tests how well hot water and soap clean dishes. He wants other teams to conduct the same experiment.

G Nathan Deng was able to construct an experiment that determined why hot water and soap are used to clean dishes. He kept the experiment simple by only testing the surface tension of water. The surface tension of water is the effect that results when molecules bond to each other on the surface of the liquid. Nathan found that hot water and soap reduce surface tension.

H Nathan Deng's use of simple experimentation to answer basic questions about dish washing won him the Lemelson Award for Invention. Curious about why hot water and soap were needed to clean dishes, Nathan set up an experiment to test surface tension. Nathan tested drops of water at different temperatures as well as the use of a soap ingredient to determine their effects on surface tension. He found that soap and hot water are most effective.

J Inspiration for science projects can come from everyday life. For this reason, anyone can complete a science project. Nathan Deng investigated the way soap and hot water affect the cleanliness of dishes. There are often tiny cracks in dishes that are difficult to reach when washing dishes. Surface tension keeps water out of these spaces. Nathan's experiment showed that using soap and hot water would be effective.

53 What is the most likely reason the author included paragraphs 1 through 6?

A To highlight the topic of a science experiment

B To emphasize the value of winning an award for a science experiment

C To introduce background information about a science experiment

D To promote the scientific goals of an experiment

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS ON THE ANSWER DOCUMENT.

STAAR
English II
April 2022