

STAAR Practice #2

TEXT

Read the article below about blue light.

Dangers of Blue Light

What is blue light?

- 1 When you step outside, whether it's sunny or cloudy, ultraviolet rays from the sun are hitting your body. But did you know that sunlight also contains blue light, which is in the visible light range? The same short wavelengths of light that make the sky blue, also reach our bodies. Science has shown that some blue light is necessary to help your body adapt to light and dark cycles, like long winter days. It naturally boosts attention and mood.
- 2 Today, our exposure to blue light is rapidly increasing. Modern digital devices that we use every day like smart phones, flat screen televisions, computer screens, and tablets all emit different levels of blue light. Our eyes and skin are in close proximity to these devices for extended periods of time every day. We are also exposed to blue light in our homes from modern LED lights and compact florescent lights.

What are the negative effects of blue light?

- 3 What happens when you're exposed to too much blue light? Increased blue light exposure can damage the eyes, especially the retina which is sensitive to light. Blue light reaches deeper into the eyes than ultraviolet light and it has a cumulative effect, so the damage can build over time. Blue light can also cause digital eye strain which causes dry eyes, headache, and blurred vision.

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4 Along with our eyes, blue light overexposure can impact our bodies as a whole. Blue light naturally boosts attention, mood, and alertness, but it also affects levels of the hormone melatonin more than other wavelengths of light. This is problematic because melatonin helps induce sleep. Changes in sleep patterns can lead to other negative health effects like sleep deprivation, reduced reaction time, and depression. Because exposure to blue light increases cortisol, a hormone that makes you feel hungry, blue light can also lead to weight gain and heart disease.

Possible Effects of Blue Light:

Eyes:

- Eye strain
- Vision loss
- Cataracts

Rest of the body:

- Impaired memory
- Harder to learn
- Insomnia
- Depression
- Obesity
- Breast and prostate cancers

What can we do about it?

5 Many doctors feel the dangers of blue light can be decreased by limiting the use of digital devices an hour to thirty minutes before bed. Today there are also several brands of blue light-blocking glasses on the market. They work by filtering out all or some of blue light before it can reach your eyes. Other options are blue light filters that fit over computer and phone screens. Some smart phones even offer reduced blue light settings. But, perhaps the best thing we could all do is to cut back on our screen time and get outside!



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MODEL

Now look at this assessment item that deals with the author's use of a graphic element.

- 1 The bulleted list after paragraph 4 helps support the author's argument by —
- A adding credibility to the idea that many people use smart phones
 - B showing how blue light exposure can affect a person's health
 - C evaluating how different levels of blue light affect people differently
 - D giving examples of the ways blue light is necessary to the body

What is the focus of the question? It is asking you to identify why the author uses the bulleted list—how does this approach connect to the author's argument in the article?

What is the correct answer? The correct answer is choice "B." The article deals with the fact that blue exposure is increasing in our daily lives, an increase that the author feels may have negative effects. The bulleted list used by the author concerns negative effects to the eyes and body, and it supports the idea about blue light danger that the author is noting.

Why are the other choices not correct?

A is incorrect—it focuses on smart phone usage, but this is not a connection to the list.

C is incorrect—it focuses on how different levels affect people differently, but the list does not speak to this.

D is incorrect—it focuses on positive elements of blue light, but this is noted in the opening paragraph and does not pertain to the list.

Now, using the article, answer the items on these standards using the practice method above.

YOUR TURN

Use "Dangers of Blue Light" to answer questions 2–4.

- 2 The author wrote this selection most likely to —
- A. inform readers about the effects of blue light
 - B. persuade readers to buy products that reduce blue light exposure
 - C. explain what blue light is and how it works
 - D. provide evidence that blue light leads to depression
-

- 3 The author included paragraph 2 most likely to —
- A. provide background information about how digital devices work
 - B. explain why it is important for people to limit blue light exposure
 - C. provide reasons for our increased exposure to blue light
 - D. explain why blue light is harmful to our bodies
-

- 4 Read this sentence from paragraph 5.

But, perhaps the best thing we could all do is to cut back on our screen time and get outside!

What does the inclusion of this sentence from paragraph 5 reveal about the author?

- A. The author thinks that people may need ideas about how to spend their time if they cut back on digital devices.
- B. The author spends more time outside than using digital devices.
- C. The author does not think people will take the warnings about limiting screen time seriously.
- D. The author realizes that most people, including the author, are having too much screen time.

Read the selection and choose the best answer to each question.

Green Living

by *girlshealth.gov*

- 1 Green living is living in a way that helps take care of the earth. It also means using only what you really need of the earth's resources. For example, do you like to take long showers? Or do you leave the water running while you brush your teeth? Both long showers and leaving the faucet running waste our earth's water.
- 2 Sometimes, depending on where you live, it may seem like there is an endless supply of water and so it doesn't really matter how much you use. But this isn't true. The water supply isn't endless because not all water is clean water. You can practice green living by taking shorter showers (set a timer for 5 minutes) and by turning off the tap when you brush your teeth.
- 3 Here are some easy ways you can reduce pollution and protect the environment.
 - **Reuse shopping bags.** Carry your own bag and use it over and over again. Many stores sell cute bags that you can use for shopping so you don't have to take a plastic bag from the store. If you have plastic bags at home, don't throw them away. Some stores will collect these bags for recycling.
 - **Buy products with less packaging.** When you buy things that have less packaging, you are keeping garbage out of the landfills. For example, instead of buying a box of crackers that holds eight little bags of crackers inside, buy a box that doesn't split the crackers up into little bags. Take the time to make your own portions in a reusable bowl at home, and save the extra garbage from polluting the earth!
 - **Use less water.** Do you need to get your car washed? Many car washes actually recycle wash water, and so use less water to wash your car than if you washed it with your hose at home. Ask your car wash if they do this. Did you just blow your nose? Don't flush the tissue down the toilet! Just put it in the trash. No need to waste several gallons of water just to throw away a used tissue.
 - **Turn off electricity and unplug computers when you are not using them.** Many appliances—like DVD players, coffee makers, and TVs—still use a small amount of power even when they are switched off. In the average home, 75 percent of the electricity used to power home electronics and appliances is used while the products are turned off!

- **Buy recycled products.** When you use a piece of paper, you are using a natural resource from the earth. If you use a recycled piece of paper, you are protecting our trees and water.
- **Plant a tree.** Planting a tree can have many benefits! It can provide shade. It can stop erosion. (Erosion is when soil washes away.) Trees help keep the air clean and they make oxygen that we can breathe.
- **Tell your community leaders how you feel about the environment.** Make your voice heard! You can start with leaders at your school.
- **Start a compost pile.** Compost is made from things like grass, clean paper, and vegetables (among other things). As it breaks down, it turns into a dark-brown material called humus that is good for growing plants. There are many things that are thrown into the trash that could be composted, instead. Talk with your science teacher about how to make a compost pile—it could be a fun project that helps the earth!

Getting your parents involved

- 4 You probably don't get to make all the decisions in your house. . . . In order to practice green living, you will need to talk to your parents about some of the ideas up above.
- 5 Remember: your mom or dad have been doing things one way for a much longer time than you have been! When they were growing up, shoppers took a bag from each store they visited. Each purchase meant a new bag. Convincing your mom or dad to keep reusable bags in the car for shopping trips may take a little bit of effort on your part. But talking to adults about the environment, and helping them to make changes that will better the earth, is all part of green living. There are lots of things that adults can learn from teens! And your parents will like the ideas about using less water and unplugging electric appliances because it could save them money.

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5. Paragraphs 1 and 2 help support the author's argument by —
- A. suggesting that taking shorter showers helps to reduce pollution
 - B. explaining how green living applies to water usage
 - C. indicating that there is an endless supply of clean water
 - D. showing how practicing green living can make you healthier
-

6. What does the word portions mean in paragraph 3?
- A. Changes
 - B. Measurements
 - C. Parts
 - D. Servings
-

7. Read this sentence from paragraph 5.

Convincing your mom or dad to keep reusable bags in the car for shopping trips may take a little bit of effort on your part.

Which fact from the selection best supports this claim?

- A. *Many stores sell cute bags that you can use for shopping so you don't have to take a plastic bag from the store.*
- B. *In order to practice green living, you will need to talk to your parents about some of the ideas up above.*
- C. *Remember: your mom or dad have been doing things one way for a much longer time than you have been!*
- D. *But talking to adults about the environment, and helping them to make changes that will better the earth, is all part of green living.*

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8. Which sentence from the selection shows that the author has considered an opposing viewpoint?
- A *Sometimes, depending on where you live, it may seem like there is an endless supply of water and so it doesn't really matter how much you use.*
 - B *When you buy things that have less packaging, you are keeping garbage out of the landfills.*
 - C *No need to waste several gallons of water just to throw away a used tissue.*
 - D *Talk with your science teacher about how to make a compost pile—it could be a fun project that helps the earth!*
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9. The primary method the author uses to express his or her message is to —
- A describe the ways the reader can reduce pollution and protect the environment
 - B relate the ways the reader can get parents and other adults involved in green living
 - C highlight the effects of reducing water usage to help to conserve the water supply
 - D discuss the advantages and disadvantages of living a green lifestyle
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10. Which of the author's arguments is based on faulty reasoning?
- A *In the average home, 75 percent of the electricity used to power home electronics and appliances is used while the products are turned off!*
 - B *There are many things that are thrown into the trash that could be composted, instead.*
 - C *But talking to adults about the environment, and helping them to make changes that will better the earth, is all part of green living.*
 - D *And your parents will like the ideas about using less water and unplugging electric appliances because it could save them money.*

11. In BOTH selections the author organizes the information by -

- A. explaining the advantages and disadvantages of the topic.
 - B. presenting information about a problem and offering solutions.
 - C. including personal stories to support the topic .
 - D. providing the information in chronological order.
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12. Read this sentence from paragraph 3 of "Green Living."

Here are some easy ways you can reduce pollution and protect the environment.

Which quotation from "Dangers of Blue Light" expresses a similar idea?

- A. *When you step outside, whether it's sunny or cloudy, ultraviolet rays from the sun are hitting your body.*
- B. *Today our exposure to blue light is rapidly increasing.*
- C. *Changes in sleep patterns can lead to other negative effects like sleep deprivation, reduced reaction time, and depression.*
- D. *Many doctors feel the dangers of blue light can be decreased by limiting the use of digital devices an hour to thirty minutes before bed.*

Enter your answers in Google Classroom.