**GLS10 Sleep Worksheet**

**For this week’s worksheet we have selected some useful information about sleep from two recent articles.**

**Instructions:**

1. **Please read each article.**
2. **Answer the questions that follow each article.**

**Article 1**

### Psychology Today, [Michael J Breus Ph.D.](https://www.psychologytoday.com/ca/experts/michael-j-breus-phd), **Feb. 24, 2020**

<https://www.psychologytoday.com/ca/blog/sleep-newzzz/202002/heres-how-support-brain-health-sleep>

**Sleep Improves Memory**

Memory is directly connected to sleep habits. When you receive new information, your brain needs time for it to completely “stick” and become something you easily recall. This process, called “memory consolidation,” is when what we’ve learned shifts from short-term to long-term memory. And research indicates memory consolidation benefits from sleep.

One example: In a study published in the [Journal of Neuroscience](https://www.jneurosci.org/content/31/5/1563)\*, participants were asked to memorize 15 cards with pictures of animals and different objects. They were then asked to memorize a slightly different batch of cards. Some of the participants were then allowed to sleep, while others were asked to stay up before being tested on how well they memorized the cards.

The group that was allowed to sleep performed much better — remembering 85% of the first batch of cards compared to only 60% for those who weren’t allowed to sleep.

The simple explanation is that while you’re awake, you continue to be inundated with [flooded with] new information that can dislodge [remove] what you just learned. But sleep improves memory by acting as an instant replay machine, allowing the mind to review what it’s learned during the day. Brain scans show the cerebellum, which controls [short-term memory](https://www.psychologytoday.com/ca/basics/memory), is more active when [sleeping](https://www.psychologytoday.com/ca/basics/sleep). By getting a full night of sleep, your brain has more time to reinforce what it has just learned.

\*<https://www.jneurosci.org/content/31/5/1563>

**Questions on Article 1:**

1. In **normal** times, what are your sleep patterns (how many hours, when do you wake up, go to bed?) [ /2 marks knowledge]
2. Connect the yellow highlighted sections to **growth mindset and neuron connections**. Connect means explain how the article re-states in a different way what you have already learned about brain learning. [ /2 marks application]

**Article 2**

# **How to keep COVID-19 stress from ruining your sleep; Sleep experts explain the roots of insomnia and share tips for getting proper shut-eye in a crisis.** [Brandie Weikle](https://www.cbc.ca/news/brandie-weikle-1.3761417) · CBC News · Posted: Apr 05, 2020

<https://www.cbc.ca/news/health/covid-19-insomnia-1.5521402>

## **Evolutionary roots**

It turns out that disrupted sleep in times of crisis has deep roots, said evolutionary anthropologist David Samson, an assistant professor at the University of Toronto Mississauga who studies the evolutionary links between sleep and cognition.

He's the co-author of [a new study published in the journal *Sleep Medicine Reviews*](https://www.sciencedirect.com/science/article/abs/pii/S1087079220300204?via%3Dihub), which explores the evolutionary connection between fear and insomnia.

Sleeplessness is in part a fear-related survival technique connected to how we evolved, he said. We had to be alert to life-threatening forces like predatory animals and severe weather, say, 1.5 million years ago. But we also lived in groups where people could take turns keeping watch at night.

"It turns out fear is actually a good thing from an evolutionary perspective," said Samson. The problem is our psyches stay on high alert when we sense threat.

"This is particularly pernicious in COVID-19, because this is not a lion in the savanna. It's not even a rival group over the next bend that's trying to take our resources."

Because we can't just chase off this problem, we are unable to extinguish our fear, he said. "It's turning into what we classically call insomnia, which is a perpetual chronic condition characterized by the inability to fall asleep."

## **Stick to consistent sleep and wake times**

It's OK to adjust our schedules and use some of the time you might have spent commuting to work or getting ready for school to get a bit more sleep, said sleep coach Alanna McGinn, who advises families on healthy sleep through her company Good Night Sleep Site.

But avoid letting schedules get turned upside down where there's no routine at all.  Teens can sleep until 10 a.m., for example, not the middle of the afternoon.

"We always talk about the 80-20 rule. So 80 per cent of the time try to really stay consistent in terms of bedtimes and wake times." You may want to stay up a little later on a Friday night, but avoid treating every night like it's Friday, she said.

## **Time your naps**

Naps can disrupt your nighttime sleep, especially if you're taking them after 5 p.m., said Khullar. Although they can help you catch up on needed rest, you're best to contain them to 30 to 40 minutes at most. Isolation can lead some people to nap out of boredom, but that will only compound problems with nighttime sleep.

## **Look away from COVID-19 news**

Although it's important to stay informed, it's overwhelming if you're never looking away from news about the pandemic. "Choose one or two news sources that you trust and just check in with them. You don't need to read it all," said McGinn. That includes the questionable content your friends and family may be sharing on social media, she said.

**Questions on Article 2:**

1. Relate the pink highlighted sections to what you learned about **stress**. Hint: re-read the part in the stress worksheet about our long-ago past and how it created our fight or flight response. [ /2 marks application]
2. Relate the green highlighted sections to you **personally**. In other words, how (if it all) have your sleep patterns been disrupted during the pandemic? [ /2 marks knowledge]

Total Marks

Knowledge = /4 marks

Application = /4 marks

**Curriculum Expectations:**

• identify and describe **personal-management skills** required for success, and explain their use to help maximize learning;

* identify and describe personal lifestyle strategies that enhance health and wellness and improve one’s readiness to learn (e.g., exercising regularly, **getting enough rest**, following a nutritious diet, maintaining a balance among priorities; …);
* produce an **action plan** for improving personal-management skills that identifies personal strengths, challenges, and steps for improvement.

• demonstrate the use of **personal-management skills** and strategies to enhance learning.

* identify **internal and external factors that affect behaviour** and school performance (e.g., emotional stress, motivation, **lack of sleep**), and identify strategies for improving behaviour to enhance learning;
* explain how **stress** can positively and negatively affect learning performance (e.g., with regard to **sleep** or lack of), and demonstrate effective use of stress-management techniques to maximize performance.