

Student Discussion Worksheet

Directions: Read the online *Science News* article "[How mindfulness-based training can give elite athletes a mental edge](#)" and answer the first two sets of questions with a partner. Your teacher will lead a class discussion using the third set of questions. Make sure to read the questions and be prepared to share answers with your class. A version of the article, "Mental gymnastics," appears in the January 29, 2022 issue of *Science News*.

Why use data visualizations?

Discuss and answer the following questions with a partner.

1. How would you define a data visualization? Give examples of different types of data visualizations.
2. What is the purpose of a data visualization? Why are they helpful?
3. In what fields and careers are visualizations important? Give a couple examples.
4. Aside from the type of data visualization, what features of a visualization influence how the data is interpreted?

Data at a glance

Answer the following set of questions for all the data visualizations in the *Science News* article.

1. What information is being portrayed by the data visualization? Define the type of visualization, the measured variables shown within it and the axes where applicable.
2. Pick out two data points from the visualization and state them along with their units. How does the visualization help you to compare the data points? Explain.

3. State the general trend or takeaway from the visualization. How certain are you of this summarizing message? Explain your reasoning based on the number of outliers or error bars given, the fit of a trendline, the consensus of all the other data presented, etc.

4. Where do the data in the visualization come from? Does the source look credible? How can you tell?

5. What other questions do you have about the visualization? In your opinion, did the visualization present data in a clear, effective way?

Mental health toolbox

1. List a couple examples of psychological tools given in the article, then create a definition of a psychological tool based on your understanding of the article.

2. In what areas other than sports could the psychological tools and practices described in the article be useful. Explain why you think they might help in these areas.

3. How could you apply the psychological tools and practices that have helped elite athletes to your own life?

