

Post-Quiz Answer Key

1. How do our eyes see? Briefly explain.
Similar answer to pre-quiz, but expect more detail and clarity.
Light reflects off objects, enters the eye through the lens, forms an image in the eye, and the brain interprets this in the visual cortex.
2. How do scientists “see” how our brains work?
Expect some detail regarding experimental techniques, models or machines.
3. Why do scientists use multiple trials of experiments? Why is it more accurate to get more data points?
Increases accuracy, decreases effects of outliers, reduces effects of error.
4. Why are graphs useful for interpreting scientific data? Give one example of how scientists or engineers use graphs for interpreting data.
Similar answer to pre-quiz, examples may include something from this activity (but not required).
Visualization, show relationships, makes trends and patterns easier to see. Often data in aggregate simplifies the image of any structure and reduces the distraction of noise.
5. Why are histograms useful for interpreting scientific data? Give one example of how scientists or engineers use histograms for interpreting data.
Visualizations help to see distributions, make it easier to categorize data.
6. What is the visual cortex?
The visual cortex is the area of the brain responsible for processing visual information. Strong answers mention of the fact that the visual field can be mapped onto the visual cortex, that is, specific areas of the visual cortex correspond to specific regions in the visual field.
7. What gets you excited about science?
↓ The last four questions are opinion-based. ↓
8. Are you interested in a career in science or engineering? Why?
9. What did you like best about this activity?
10. If you could change anything about the activity, what would it be?