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## FINISH


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Test B

## Visual Perception Worksheet

Station 1: Two Eyes Are Better Than One

## Data Table 1

| Left Eye <br> Covered | Distance between <br> Sticks (mm) | Right Eye <br> Covered | Distance between <br> Sticks (mm) | Both Eyes <br> Open | Distance between <br> Sticks (mm) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Trial 1 |  | Trial 1 |  | Trial 1 |  |
| Trial 2 |  | Trial 2 |  | Trial 2 |  |
| Average |  | Average |  | Average |  |

1. Calculate the average distance between sticks when the left eye was covered; add the measurements for the two trials and then divide the total by two. Record the average in Data Table 1. Do the same for the other two tests.
2. In which test was the average distance between the sticks the smallest?
3. How did keeping both eyes open affect how well you could judge distance?

Station 2: Running the Mirror Maze

## Data Table 2

| Trials | Time (min:sec) | Errors | Score |
| :---: | :---: | :---: | :---: |
| Test A/Run 1 |  |  |  |
| Test A/Run 2 |  |  |  |
| Test A/Run 3 |  |  |  |
| Test B |  |  |  |

1. Calculate your score for each trial in the following manner. Count every 10 seconds (round to the nearest 10 seconds) as one point. Count each error as one point. A lower score indicates a better performance than a higher score. See Examples 1 and 2. Record your score in Data Table 2.

Time 0:55
Time 2:04 (124 seconds)

Errors: 3
Errors: 0

Score: $6+3=9$
Score: $12+0=12$

Example 1
Example 2
2. Where in the maze did you have the most difficulty following the path for Test A? Give an explanation.
3. Describe how your score changed from Run 1 to Run 3 for Test A. Why do you think it changed in this way?
4. How did changing from Test A to Test B affect your score? Why do you think this happened?
5. Do you think doing more runs with Test B would result in an improved score? Why or why not?

## Station 3: Seeing Out of the Corner of Your Eye

## Observations

Visual Field: Motion and Reading
Mark an " $M$ " for motion and an " $R$ " for reading at the appropriate angles on each side of the diagram.


## Data Table 3

|  | Angle of Correct Identification (degrees) | Total Visual Field <br> (Degrees Left + Right) |  |
| :--- | :---: | :---: | :---: |
| Detail | Left |  |  |
| Motion |  |  |  |
| Reading |  |  |  |

1. Compare your motion and reading fields of vision (Total Visual Field). Which one is greater?
2. On what area of the retina was the image of the sight card focused when it was first detected? On what area of the retina was the image of the letters focused? Which type of nerve cell is more numerous in each area of the retina?
3. Think of activities or occupations where good peripheral vision would be advantageous. List several and explain why peripheral vision is important in each.

## Station 4: Colorful Afterimages

The cone cells in your eyes are sensitive to the three primary colors of light-red, green, and blue. The images on the Colorful Afterimages cards are printed in magenta, cyan, and yellow. For each card type (U.S. Flag and Apple), color the image before and after one minute of focus on the card.

## Before



1. Use Figure 10 from page 5 to determine which color-sensitive cones were over-stimulated with each colored part of the U.S. Flag image. Which ones were over-stimulated with each colored part of the Apple image?
2. What afterimage color did you see in place of the black stars and stripes on the U.S. Flag image? Why do you think this happened?
