NAME _____ DATE _____

A Focus on Reading

Directions: Read this excerpt from "The Unappreciated, Holding Our Lives in Balance," by Natalie Angier, which appeared in *The New York Times* on October 28, 2008. Then, turn the paper over. Answer the questions and write a two-sentence summary of the article. While answering the questions and writing the summary, **do not** turn the paper back to the article.

If you want to glimpse the handiwork of one of your body's unsung sensory heroes, try this little experiment. Hold your index finger a few inches in front of your face and sweep it back and forth at a rate of maybe once or twice a second. What do you see? A blurry finger. Now hold your finger steady and instead shake your head back and forth at the same half-second pace. This time, no blur, no Marcel Duchamp's "Nude Descending a Staircase" effect. The finger stays in focus even as your head vigorously pantomimes its denial.

And it's a good thing, too. If the brain couldn't distinguish between movements of the viewer and movements of the view, if every time you turned around or walked across the room the scenery appeared to smear or the walls to lurch your way, you soon might cease to move at all, uncertain of external threats, unaided by any internal compass marked You.

Essential to a fully embodied sense of self is the vestibular system, a paired set of tiny sensory organs tucked deep into the temporal bone on either side of the head, right near the cochlea of the inner ear. The vestibular system isn't a high-profile, elitist sense like the famed five of vision, hearing, touch, taste and smell. It's more of a Joe Sixth-Sense, laboring in anonymity and frequently misunderstood. Even its name is a blooper encapsulated, the result of early anatomists thinking the organ merely served as an entrance, or vestibule, to the inner ear.

Despite its humble reputation, the vestibular system has lately won fans among neuroscientists, who marvel at its sophistication and sensitivity, and how it tells us where we are and what we're doing and why we should never again embarrass ourselves by going roller skating. They praise the machine-tool precision of its parts, the way the vestibular system discovered the laws of Newtonian mechanics some 400 million years before Newton and then put those principles to use to provision the head with little organic gyroscopes and linear accelerometers.