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Nerve/Sense Investigations Questions

1. The accommodation reflex would best describe a physiological explanation for the occurrences in parts 1 and 2 of this activity. The Accommodation reflex is a reflex action of the eye, in response to focusing on a near object, then looking at distant object, comparing coordinated changes in vergence, lens shape and pupil size. Furthermore, the near point of the eye is defined as the closest distance on which the eye can focus.
2. The near point length is the smallest distance at which the eye will focus, as by definition nearer things are out of focus. The eye accommodates by the muscles changing the shape of the lens. If it can't force enough curvature then it fails to focus. Further, 'the depth of field' as in a camera, states the range in focus depends on the size of the lens. Additionally, in poor light the iris opens wide and the depth of field decreases.
3. Presbyopia, or the loss of vision due to the hardening of the natural lens, happens naturally in people as they age. The eye is not able to focus light directly on to the retina due to the hardening of the natural lens. Aging also affects muscle fibers around the lens making it harder for the eye to focus on up close objects.