

Name \_\_\_\_\_

## The Marvelous Kidneys: Blood Filtration and Urine Production

### Open-Ended Response Questions

1. Consider a scenario where a person's glomeruli are not functioning correctly, and blood filtration is compromised. How might this impact the production and composition of urine, and what potential health issues could arise as a result?
2. Imagine a situation where a person is severely dehydrated, leading to a reduction in the amount of water in their urine. Explain how the kidneys respond to dehydration, and how this helps maintain the body's internal balance.
3. Discuss the significance of urine as a diagnostic tool in healthcare. Provide examples of how changes in urine color, odor, or composition can indicate different medical conditions and guide medical professionals in diagnosis and treatment.
4. Consider a scenario where a person's kidneys are unable to reabsorb essential substances effectively. How might this affect the composition of urine and potentially disrupt the body's internal balance?

