

Studying Heart Rate with **Daphnia** Worksheet

Daphnia Sketch

Observations

Variable	Effect on the Heart Rate (Increased, Decreased, No Change)
Control	
Water, 5 °C	
Caffeine solution, 2.5%	
Ethyl Alcohol, 10%	

Post-Lab Questions

- 1. Explain how the heart rate of Daphnia changed between room temperature water and 5 °C water.
- 2. How do you think warm water would affect Daphnia's heart rate?
- 3. What other chemicals or variables could be tested to determine their effect on heart rate? *Note:* Use additional textbooks or Internet resources.
- 4. What problems might occur in using Daphnia to test the effects of drugs on humans?
- 5a. Examine the data table regarding the effect caffeine and alcohol have on *Daphnia* heart rate. Is this similar or different than the effect of these chemicals on the human heart rate?

5b. Based on these results alone, does it suggest that Daphnia and humans have the same or different type of heart?

© 2019, Flinn Scientific, Inc. All Rights Reserved. Reproduction permission is granted from Flinn Scientific, Inc. Batavia, Illinois, U.S.A. No part of this material may be reproduced or transmitted in any form or by any means, electronic or mechanical, including, but not limited to photocopy, recording, or any information storage and retrieval system, without permission in writing from Flinn Scientific, Inc.