



Engineering: Biomimicry

Paper citation: Weitzman S and Lambert A (2013). More Efficient Helicopter Blades Based on Whale Tubercles. *J Emerging Investigators* 15: 1-7

Paper questions

In reading through the assigned paper, please answer the following questions:

1. What is the question being investigated by the researchers?
2. What is biomimicry?
3. What are tubercles? Why does the authors suggest they make swimming more efficient for whales?
4. Describe the authors' experimental approach.
5. What variables did the authors manipulate in their experiments?
6. What were the results of the authors' experiments? What statistical test do the authors use, and is any data statistically significant?
7. Why do the authors suggest that that they see a relationship between tubercle spacing and helicopter efficiency?
8. What are some shortcomings of this paper?
9. Propose two follow-up experiments that could be performed given the data presented in this paper.