How Does Changing the Angular Velocity of the Swinging Mass at the Top of a Whirligig and the Amount of Mass at the Bottom of a Whirligig Affect the Distance From the Top of the Tube to the Swinging Mass?

## **Checkout Questions**

Lab 11. Circular Motion: How Does Changing the Angular Velocity of the Swinging Mass at the Top of a Whirligig and the Amount of Mass at the Bottom of a Whirligig Affect the Distance From the Top of the Tube to the Swinging Mass?

1.	Sketch a	free-body	diagram	for a stop	oper swung	garound	on a whirligig.

2. Sketch a free-body diagram for the hanging mass on a whirligig.

3. Sketch a free-body diagram for a car on a flat road making a turn.

## **LAB** 11

4. Sketch a free-body diagram for Jupiter orbiting the Sun.
5. How would a whiching need to be course to compact a beautier bancing mass?
<ul><li>5. How would a whirligig need to be swung to support a heavier hanging mass?</li><li>a. Faster</li><li>b. Slower</li></ul>
Explain your reasoning.
6. The caries overlain a mhomomon and lavys describe the hoberian of a mhomomon on
<ul><li>6. Theories explain a phenomenon and laws describe the behavior of a phenomenor</li><li>a. I agree with this statement.</li><li>b. I disagree with this statement.</li></ul>
Explain your answer, using an example from your investigation about the whirliging

## **Circular Motion**

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7.	Evidence is data collected during an investigation.
	a. I agree with this statement.
	b. I disagree with this statement.
	Explain your answer, using an example from your investigation about the whirligig.
8.	Why is important to identify factors that contribute to the stability of a system? Be sure to include examples from at least two different investigations in your answer.

9. Why is it useful to create models of a system during an investigation? Be sure to include examples from at least two different investigations in your answer.