

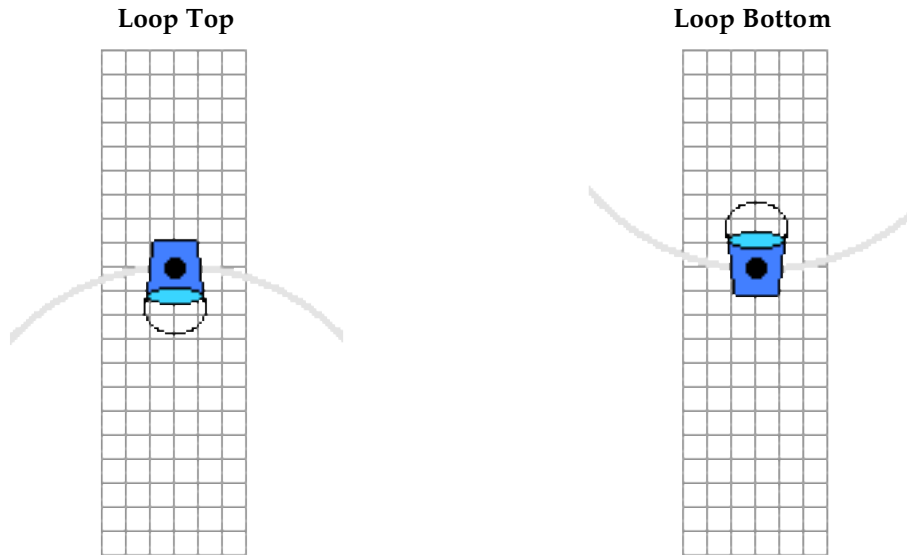
Circular Motion and Gravitation Auxilliary Items

For The Loop-the-Loop Lab

(Tape the following into your Data section and complete using the simulation program.)

Post-Lab Questions:

- Construct a free-body diagram showing the forces acting upon the bucket at the top and the bottom of the loop. The size of the force vector should be in proportion to the size of the force. Label each force according to type.



- Use the following information about speed and radius to determine the acceleration, net force and tension force acting on the bucket at the top and the bottom of the loop. Show your work in an organized fashion.

Loop Top	Loop Bottom
$m = 1.2\text{-kg}$ $R = 1.1\text{ m}$ $v = 4.4\text{ m/s}$	$m = 1.2\text{-kg}$ $R = 1.1\text{ m}$ $v = 6.2\text{ m/s}$
$a = \underline{\hspace{2cm}}\text{ m/s/s}$ $F_{\text{net}} = \underline{\hspace{2cm}}\text{ N}$ $F_{\text{tens}} = \underline{\hspace{2cm}}\text{ N}$	$a = \underline{\hspace{2cm}}\text{ m/s/s}$ $F_{\text{net}} = \underline{\hspace{2cm}}\text{ N}$ $F_{\text{tens}} = \underline{\hspace{2cm}}\text{ N}$