

# Ice Bucket Energy Challenge

Step 1: To the right is a picture of the bucket in a random location. Fill into this picture the important details about your problem. That is, the mass of the bucket, the radius of the circle and the strength of the rope.



Step 2: Draw in the forces on the bucket at the two key locations and then find the minimum speed at the top and the maximum speed at the bottom. Show all your work.



Step 3: Draw in the energy types at the two key points in the pictures below. Then calculate the maximum total energy it can have at the bottom and the minimum total energy it can have at the top. Show all your work and then put the answers into the program to see if you did everything properly.



-----  $PE_g = 0$