**Homework Assignment #4  
Due: Tuesday, April 10 by 5:00 p.m.**(*Follow all homework submission requirements posted on myCourses!*)

**Problem:**

The settling velocity of a solid particle in a fluid can be estimated using *Stoke’s Law*:

Where *vs* is the settling velocity in cm/s, ** is a shape parameter with no units, *g* is the acceleration of gravity (981 cm/s2), *s* and *l* are th density of the solid and the liquid, respectively, in g/cm3, ** is the dynamic viscosity of the liquid in g/cm·s, and *d* is the diameter of the solid particle in cm.

Create a worksheet with a table that contains all of the input variables and the output settling velocity. Write a VBA Sub Procedure to read in all of the input variables from the worksheet and output the result to the worksheet. Write and use a VBA Function to compute the settling velocity according to Stokes’s Law.

Test your program using the following inputs (spherical silt particles settling in water):

** = 1.0 (perfect spheres)  
*s* = 2.65 g/cm3   
*l* = 1.0 g/cm3   
** = 0.014 g/cm·s  
*d* = 0.001 cm

***Question*:** What is the settling velocity of the silt particles in water?

*Make sure that you read the assignment submission requirements for VBA programming homework! In particular, make sure that all of your VBA code is in a single module and that the “header row” information (your name, PSWC-section #, and the assignment) appear as a comment in your Sub procedure.*

*(Hint: The correct answer is vs* *= 0.006423 cm/s.)*