Errata for the Fourth Printing of *Exploring Creation With Physics, 2nd Edition*

With the help of students and teachers, we have found a few typos in the fourth printing of the second edition. These are listed in the errata sheet for the previous printings as well.

Student Text

Module #1:

CD ONLY In the section entitled "Speed and Velocity," near the top, the phrase:

…is 60.0 meters · 30.0 seconds… should read:

…is 60.0 meters ÷ 30.0 seconds…

CD ONLY In Experiment 1.2, step #7, the phrase:

…Dt. Take your value for Dv and divide it by Dt.… should read:

…Δt. Take your value for Δv and divide it by Δt.…

Module #3:

CD ONLY In the section entitled "Vectors," near the bottom, the phrase:

…learned that to solve for q in the above equation… should read

…learned that to solve for θ in the above equation.…

Module #5:

CD ONLY In the section entitled "An Equation for the Frictional Force," The bold-faced sentence should have a closed parenthesis after μs.

Module #6:

CD ONLY In the section entitled "Translational Motion and Measuring Weight 2," "32 m/sec2" should be replaced by "32 ft/sec2"

Module #7:

p. 221 In the fourth line of the third paragraph, the word "strong" should be replaced with "string."

Module #9:

CD ONLY "euation (9.7)" should be replaced with "Equation (9.7)."

In the section entitled "Angular Momentum, the units for angular momentum should be $\frac{kg \cdot m^2}{sec}$, not $\frac{kg \cdot m}{sec}$

Module #13:

p. 322 Last paragraph on this page, fourth line up, should say "force equal to but opposite the weight of the object…"

Module #13:

p. 440 The last three words on the page should be "Figure 13.3, a"

Module 16:

p. 542 The definition of direct current should say "flows" not "flow".

p. 546 The last seven words of #15 should say "magnet is the same in each case".

Extra Practice Problems for Module #9:

p. 573 Question #6 should ask for the velocity, not the speed.

p. 573 Question #8 should ask for the speed, not the velocity.

Solutions and Tests Manual

Solutions to the Practice Problems for Module #6:

p. 55 For question #9, here is a better way of calculating the acceleration. This keeps consistent with our use of significant figures.

$f + -w \cdot \sin(\theta) = ma$

$95 \text{ Newtons} + -(290 \text{ Newtons}) \cdot \sin(23°) = (30.1 \text{ kg}) \cdot a$

$95 \text{ Newtons} + -110 \text{ Newtons} = (30.1 \text{ kg}) \cdot a$

$a = -20 \text{ Newtons} / 30.1 \text{ kg} = -0.7 \text{ m/sec2}$

Solutions to the Practice Problems for Module #7:

p. 61 The answer to question #10, should say 2.24 hours instead of 2.2 hours.

Solutions to the Practice Problems for Module #8:

p. 64 The value inside the square root should be 350 instead of 340 for question 3.

p. 65 The value inside the square root should be 290 instead of 292 for question 4.

Solutions to the Practice Problems for Module #9:

p. 72 The last equation for #6 should have a positive 18 in the numerator. This does not affect the final answer.

Solutions to the Practice Problems for Module #14:

p. 98 The third equation should be:

$$\Delta PE = q\Delta V = (1.5 \in) \cdot (-8 \times 10^9 \ \frac{N \cdot m}{\in}) = -1 \times 10^{10} \ N \cdot m = -1 \times 10^{10} \ J$$

Solutions to the Extra Practice Problems for Module #2:

p. 110 The solution to problem #5 should be -4 ft/sec^2. The units in the underlined portion of the answer should be changed to ft/sec^2 as well.

p. 111 In problems 8 and 9, the very last sentences should both end, “or 270 ft/sec down.” In addition, the acceleration should be -32 ft/sec^2 and the displacement -1,140 ft, since both are directed down.

Solutions to the Extra Practice Problems for Module #6:

p.128 The second equation in the problem should read:

$$T_{2y} = (10.3 \text{ lbs}) \cdot \sin(105°) = 9.95 \text{ lbs}$$

This does affect the weight calculation to make 19.9 lbs. This does not affect the solution. However, the angle must be defined properly, which makes it 105º rather than 75º. This is where the third significant figure comes from.

p. 131 The solution to problem #8 should be -7.0 m/sec^2.

Solutions to the Extra Practice Problems for Module #9:

p. 145 In problem #7, the numerator for $\mathbf{v}_{both}$ should be 1.15×10^5, which changes the answer to 83.2 m/sec.

Test for Module #8:

p. 190 and pullout tests page 15 #13 should start, "A 345-gram box slides down"

Solutions to the Test for Module #8:

p. 238 The final answer for #10 should be 5.3 m/sec.
p. 239 and 240 All references to a "ball" should be replaced with "box" in problem #13

Solutions to Quarterly Test #2:

p. 288 The grading suggestion should read, "(2 pts: one for equating kinetic energy and the work done by friction, one for the distance)"

Solutions to Quarterly Test #4:

p. 297 Problem #5: The answer should read, "The greatest acceleration will occur where the force is the greatest. In an electric field, this occurs where the line density is the greatest, directly next to A or B."
p. 301 Problem #19: the third set of parallel resistors should have a resistance of 9.90 Ω, which makes the total resistance 23.4 Ω, which makes the current 5.13 A, which makes the power 6.16 Watts.