Errata for *Discovering Design with Physics*

Student Text

p. 37 "so you won't **aways** use…" should be **always**

p. 82 The Cross-sectional area for the sphere should be $\pi \cdot r^2$, not $4\pi \cdot r^2$.

p. 117 Question #5 should read, "Suppose the correct answer to #4 now represents a force of 15.0 N at 256°. What would have to change for it to represent a force of 7.5 N at 256°?"

p. 133 Comprehension Check question "7**,**" should be "**.**"

p. 145 "This means the ball is in the air for **1.3 s**." should be **1.1 s**

p. 161 "but to each **induvial** part of the system." Should be **individual.**

p. 205 "The **carboard** tube from" should be **cardboard**

p. 206 "1. Use the scissors to cut the **carboard**" should be **cardboard**

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p. 211 In the final two equations on the page, **2.91** should be **2.19**

p. 225 "3.1 has its last significant figure in the **ones** place" should be **tenths**

p. 287 "That's because the **string vibrated**" Should be "**rubber band vibrated like a guitar string**"

p. 253 "KE we calculated for the block/bullet system **(2.37** J)" should be **2.94**

p. 288 "**string** produced got larger" Should be **rubber band**

p. 288 "on the **string**, you increased k" Should be **rubber band**

p. 307 The first equation in the solution to problem 4 should not be there.

p. 326 "A mirror, then, has surface" There should be an **a** before "surface"

p. 353 In the first two equations of Example 13.1, the μC should cancel

p. 357 $B_x = \mathbf{A} \cdot \cos(\theta)$, $B_y = \mathbf{A} \cdot \sin(\theta)$, both should be "**B**"

p. 383 "thunder is the same as the crackle you heard **in** Experiment 13.1" "**in**" is missing

p. 410 In the second equation, there should be a "+" before $0.0243 \frac{1}{\Omega}$

p. 412 In Comprehension Check 9, "shown on the left**,**" there shouldn't be a comma

p. 414 "Example **15.4**" should be **15.5**

Answer Key & Tests

p. 15 In #6, "0.978 **m**," should be **km**

p. 26 The test should be worth **27** points.

pp. 35-36 The mass cancels, so the first equation on page 36 should not have (115 kg) in it, and the second equation should just have 1.5 m/s^2 divided by 9.81 m/s^2.

p. 42 "$\tan^{-1}$(**-0.5**)" should be **-2**

p. 52 In the third equation on the page, "**59.5** ft =" should be **51.0** ft

p. 68 In the last equation on the page, "$\mathbf{r_{7.5g}}$," should be $\mathbf{r_{22.0g}}$.

p. 77 In #4, "Mass doesn't **chane**," should be **change**.

p. 120 "The mass is **0.67** kg." Should be **0.067**

p. 120 The **0.66** kg in the last equation for 34 should be **0.657**

p. 122 For 7c, "The **amplitude** will be the same" should be **period**

p. 153 In #3, "how far from the particle **from** the stationary charge?" should be **is**

p. 157 "When S1 is the only **once** closed" should be **one**

p. 158 "The south pole of the earth's magnetic field **as** at" should be **is**