

2022-23 Pentathlon Curriculum Updates

In the *Social Science Resource Guide*, on page 46, in the second column, the third line of the third paragraph should read: “relationship between the colonies and **Great Britain....**”

In the *Science Resource Guide*, on page 11, in the second column, the paragraph should read “For an element with two isotopes, such as natural chlorine, which has 75 percent $^{35}_{17}\text{Cl}$ atoms and 25 percent $^{37}_{17}\text{Cl}$ atoms, we can use the following formula to determine the weighted average of a mass of a chlorine atom: weighted average mass of a chlorine atom = $(0.75 \times \text{mass } ^{35}_{17}\text{Cl atom}) + (0.25 \times \text{mass } ^{37}_{17}\text{Cl atom})$ ”

In the *Fine Arts Resource Guide*, on page 26, in the Listening guide 1: “Springfield Mountain”, in verse 4, the following sentence should read “His voice was **heard** both far and near”.

In the *Math Resource Guide* on page 5, example 1.1B should read as follows:

EXAMPLE 1.1B: Identify each root as either rational, irrational, or not real.

1. $\sqrt{3}$
2. $\sqrt[3]{-8}$
3. $-\sqrt{36}$
4. $\sqrt[4]{-16}$

SOLUTION:

1. Irrational
2. Rational
3. Rational
4. Not a real number

In the *Math Resource Guide* on page 8, 1.2C should read as follows:

$\frac{1}{x^{-n}} = x^n$	$\left(\frac{x}{y}\right)^{-n} = \left(\frac{y}{x}\right)^n$	$\frac{x^{-m}}{y^{-n}} = \frac{y^n}{x^m}$
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In the *Science Resource Guide*, on page 21, in the second column, the last paragraph should read: “Notice that the structures for **CCl₄**, **NH₃**, **O₃** have...”

In the *Social Science Resource Guide*, on page 54, in the bottom of the second column, the date North Carolina ratified the Constitution should be November 21, 1789.

In the *Math Resource Guide* on page 12, 1.4B should equal: $2x^2 + 15x + 25$.

In the *Literature Resource Guide* on page 67, in the second column under Historical Context the sentence should read: “Patrick Henry gave this speech in **Richmond**, Virginia because the Royal Governor Dunmore had dissolved the Virginia state legislature the year before.”

In the *Science Resource Guide*, on Page 9, in the top of the first column the sentence should read “Dalton found that the variation of vapor pressure for all liquids was the same, if given the same variation in temperature.”

In the *Science Resource Guide*, on page 22, column two, the last sentence of the first paragraph should read: “Figure 28 shows how one s and one p type orbital can hybridize; consequently, hybridization of one s and three p orbitals yields four equivalent sp^3 orbitals.”

In the *Science Resource Guide*, Page 30, the last line of the last full paragraph should read: “As he studied the properties of gases, Charles came up with the idea that hydrogen could be used as a **lifting agent for** balloon flight.”

In the *Science Resource Guide*, Page 31, in the first line of the second complete paragraph, “hot air balloon” should read: “hydrogen balloon.”

In the *Science Resource Guide*, Page 65, column 2, in the second line of the first complete paragraph, the word “oxygen” should be replaced with O_2 .

In the *Science Resource Guide*, Page 70, column 2, third bullet, “replacements” should read “replacement.”