# Culturally Responsive Curriculum Changes

## Chemistry 120

**Chapter 1:**

1. Slide 5, better explanation of where chemicals are found in everyday life.
2. Slide 43, to better discuss data analysis, examine trends in stem degrees awarded in the last decade to both sexes.

**Chapter 2:**

1. Slide 34, interactive analysis of Moore's law to examine exponential numbers and significant figures with a real-world example.
2. Slide 71, real world medicine unit conversion example with QR code to article about subject for additional reading for interested students.
3. Slide 78, demonstration of different methods of determining density from three different metal samples. Discuss error and significant figures in the measurements. Further discussion on how density is an intensive property, independent of amount.

**Chapter 3:**

1. Slide 24, more accessible pictures with representation
2. Slide 44, 45 more accessible images
3. Slide 68, thermodynamic example and demo
4. Slide 41, nursing mother energy conversion example

**Chapter 4:**

1. Slide 21, additional example of scale of atom
2. Slide 25, story of Maria Göppert and her role as a female nuclear scientist.
3. Slide 587, X marks the spot learning game
4. Slide 30, Cattle branding and elemental symbols

**Chapter 6:**

1. Slide 23, different real-world example of atomic makeup of molecules

**Chapter 7:**

1. Slide 43, combustion examples
2. Slide 41, history of the most important synthesis reaction ever.

**Chapter 8:**

1. Slide 15, a different type of chemical yield, historical context

**Chapter 9:**

1. Slide 8, speed of wave example
2. Slide 83, Mendeleev's Pursuit game

**Chapter 10:**

1. Slide 62, VSEPR interactive visualization

**Chapter 11:**

1. Slide 40, tire example for gas laws

**Chapter 12:**
1. Slide 47, Nitinol demo

**Chapter 13:**
1. Slide 36, strawberry crop nutrients solution preparation
2. Slide 25, example of the dilution equation using the Scoville scale
3. Slides 31-35, diverse and accessible images

**Chapter 14:**
1. Slide 67, applications of pH with stomach acid

## Chemistry 150

**Chapter 1:**
1. Slide 70, real world density scam
2. Slide 67, real world unit conversion example with local references
3. Slide 68, challenging unit conversion example with real world scale
4. Slide 35, image updates

**Chapter 2:**
1. Slide 28, cattle brands/ atomic symbols
2. Slide 24, further analogy on atomic scale
3. Slide 20, story of Maria Göppert and her role as a female nuclear scientist.

**Chapter 3:**
1. Slide 16, additional example of molecular makeup
2. Slide 49, Manhattan project yield example
3. Slide 27, ascaridole example

**Chapter 4:**
1. Slide 19, scoville scale dilution example
2. Slide 14, strawberry fertilizer example
3. Slide 22, real world example of use of precipitation reactions
4. Slide 88, examples of combustion reactions
5. Slide 73, history of Haber and the Haber- Bosch process

**Chapter 5:**
1. Slide 36, methane production gas law example

**Chapter 6:**
1. Slide 25, nursing mother energy conversion example
2. Slide 47, thermodynamic example and demo

**Chapter 7:**
1. Slide 19, faces in quantum physics 1920 and 2020

**Chapter 9:**
1. Slide 120, Mendeleev's Pursuit game
2. Slide 95, Vandenberg launch fuel example

**Chapter 10:**
1. Slide 56, VSEPR interactive visualization

**Chapter 12:**
1. Slide 79, Nitinol demo

**Chapter 13:**
1. Slide 23, history of the discovery of DNA structure
2. Slide 48-52, updated images
3. Slide 53, real world molality example

**Chapter 15:**
1. Slide 64, functional groups in capsaicin
2. Slide 65, flavor in functional groups