Melinda Carpenter-Consider Standards in Relation to Global Education

3. Cite specific lesson plan modifications for each standard that demonstrate global competencies (indicate which global competencies you are targeting)

Standard 1:

A. SC.O.PS.1.3 conduct and/or design investigations that incorporate the skills and attitudes and/or values of scientific inquiry (e.g., established research protocol, accurate record keeping, replication of results and peer review, objectivity, openness, skepticism, fairness, or creativity and logic).

Source: West Virginia Department of Education (<http://wvde.state.wv.us/policies/csos.html>)

B. Given a relevant global problem, students will partner up with students from another country via Skype, email, google drive to research problem and design investigation or experiment to solve problem.

C. My students usually do preplanned experiments to learn scientific inquiry. Now they will be in charge of their own research and they must use ideas and honor perspectives of students from across the globe to investigate the world, recognize perspectives, communicate ideas, and take action.

D. Students will present a research paper explaining their data, collaboration, and strategy to solve their global problem.

Standard 2:

A. SC.O.PS.2.10 compare the types of particles liberated in nuclear decay and interpret half-life graphs: radiometric dating, nuclear medicine, nuclear waste disposal.

Source: West Virginia Department of Education (<http://wvde.state.wv.us/policies/csos.html>)

B. Students will research uses of radiometric dating, global advances in nuclear medicine, worldwide nuclear energy consumption, and pros and cons of nuclear energy and nuclear waste disposal.

C. Usually my students will just learn about apha decay, beta decay, gamma decay, and different methods of waste disposal. I have never had them present their own research or debate the pros and cons of different methods of nuclear waste disposal. In this new way students will have to become experts in order to investigate the world and recognize perspectives.

D. Students will give a presentation on their research about radiometric dating, advances is global medicine, and global energy consumption. Students will participate in a Socratic seminar/debate on the pros and cons of nuclear energy and nuclear waste disposal.

Standard 3:

A. SC.O.PS.2.22 analyze latitude, altitude and surface features to predict climatic conditions

Source: West Virginia Department of Education (<http://wvde.state.wv.us/policies/csos.html>)

B. Students will use meteorological data to predict climatic conditions of various locations across the globe. Students will also research climate trends and forecast models to predict the effects of climate change on regions of the globe (redistribution of precipitation, extreme weather, and effect to global economy)

C. I usually discuss what climate is, what weather is, and how both are being effected by global warming or climate change. With this new method, students with get a real world experience, working remotely with scientists to investigate the world, communicate ideas, and take action.

D. Students will collaborate with scientists from Oak Ridge National Labs (ORNL) Climate Research Division, via Lync, skype, or Edmodo. They will investigate ongoing research on how CO2 affects plant growth, climate change effects of methane emissions from defrosting tundra, and how ORNL uses super computers to configure elaborate climate forecast models.

Students will create a video newscast as a weather reporter. In their segment, they must predict the climate, much as a meteorologist does, using global maps and data that they collected from their collaboration with ORNL climatologists. They must also summarize scientists’ concerns about the increasing amount of atmospheric CO2 and its effects on plant growth and how a thawing Tundra is cause for climate alarm. Students will be graded on creativeness of character and delivery and thoroughness of research.