20-21 District Wide High School Science Priority Level 3 Learning Targets-Environmental Science

In response to the COVID-19 pandemic and changes to educational contexts, the following level 3 learning targets from the 20-21 Environmental Science curriculum guide will need to become the primary priority for all sections of this course. **This is subject to change as new information becomes available.** Current as of 1/11/21. Expires 6/30/21

The below topics and learning targets are deemed of critical importance and should be the primary focus of teachers enhancements to the district provided virtual course, paced to be the majority of learner time and engagement, fully supported with descriptive learning centered feedback on formative and summative assessments, encouraging multiple opportunities to revise and demonstrate proficiency.

All other learning targets are to remain incorporated as provided in the district ready virtual course, but necessarily emphasized in the facilitation. **Prioritization should not be interpreted to mean elimination of secondary/non-prioritized topics or learning targets.** There may be circumstances in exception to this. Any topics and/or targets to be eliminated will clearly identified below as instructing to them in the COVID-19 context is an unacceptable risk and the topic/target is not required by the Iowa Core.

Emphasizing a priority target could include, but not limited to:

- **Adding** lessons, activities, engagements to the provided district ready virtual course modules
- Providing extended target/success criteria centered individualized or whole group feedback following assessments
- Communicating encouragement to revise or offer multiple opportunities to accomplish deeper learning toward the priority targets
- Composing and posting instructional themed and appropriately timed course announcements proactively or responsively toward improving growth to a priority target
- Planning agendas for live/synchronous meetings with mini lessons or discussion toward priority targets.
- Providing pace planning documents/ pages, checklist to be sure learners seek to accomplish a deep level of learning in the priority targets
- **Evaluating the Body of Evidence for grading/topic scores which recognizes the priority targets having been an emphasis during facilitation. Once adequate evidence is collected for the prioritized target(s) which is credible and defensible a topic score can be determined.**

Semester 1 SCI201

Topic 1: Ecosystems: Cycles of Energy

Priority- 3A. Use mathematical representation(s) to support claims that include the idea that energy flows from one trophic level to another as well as through the environment.

3B. Analyze and use mathematical representation(s) to account for the energy not transferred to higher trophic levels but which is instead used for growth, maintenance, or repair, and/or transferred to the environment, and the inefficiencies in transfer of matter and energy.

Resource: ICC HS-LS2-4 Evidence statements to guide learner feedback and course customization.

Topic 2: Populations and Biodiversity

Priority- 3A. Analyze simulations to identify the interdependence of factors (both living and nonliving) and the resulting effect on carrying capacity.

3B. Create a claim, using evidence, to explain which factor(s) have the largest effect on the carrying capacity of an ecosystem for a given population.

3C. Analyze mathematical representations (charts, histograms, data tables, etc.) to identify and describe the relationship between factors that affect the biodiversity of ecosystems including number and types of organisms represented and interaction between ecosystems at different scales.

Resource: ICC HS-LS2-1 (3A & 3B) and HS-LS2-2 (3C)Evidence statements to guide learner feedback and course customization.

Topic 3: Ecosystems: Cycles of Matter

Priority- 3A. Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere. HS-LS2-5

Resource: ICC HS-LS2-5 Evidence statements to guide learner feedback and course customization.

Topic 4: D.   Energy Resources

Priority- 3B. Predict the impact of energy sources on the relative amounts of carbon present in different spheres and the effect on climate. (HS-ESS2-6) Priority for 20-21 COVID-19 year.

Resource: ICC HS-LS2-6 Evidence statements to guide learner feedback and course customization.

Semester 2 SCI202

Topic 1 Driving Forces of Weather and Climate

Priority 3A Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that causes changes to other Earth systems. HS-ESS2-2

Topic 2 Human Induced Climate Change

Priority 3C. Illustrate and describe how human induced changes in the atmosphere and climate can cause changes in other Earth systems. HS-ESS3-6

Topic 3 Land Use and Waste Management

Priority 3C. Use a computational representations (land-use maps, satellite photography, population graphs, and demographic data) to illustrate how the geosphere and atmosphere has been modified by human activity. (Examples should focus on manipulations of the Iowa landscape with a priority given to land use, air quality, and waste management) HS-ESS3-6

Topic 4 Water and Farming

Priority 3B. Evaluate a technological solution that reduces the impact of human activities on natural systems with an emphasis on farming practices and water quality issues. HS-ESS3-4

Topic 5 Designing Solutions to Address Human Impacts-

No targets prioritized