Geoheritage in preK-12

Justification and Action Items

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Big ideas for Geoheritage in K12:

Great outcomes	Things to attend to in lesson design	Thinking about standards
Geoheritage aligns well across all grade levels K-12	Engage with the 5 design elements of place-based education (PBE)	Next Generation Science Standards (NGSS), National Geography Standards, Technology standards for students (ISTE), ELA/CCSS
Develop sense of wonder! Explore multiple meanings of a *place*.	Attend to standards alignments	Inherently interdisciplinary - builds strong connections between disciplines
Getting students outside in the field, even on campus / locally, is an insertion point for geoheritage in a curriculum. Local interpreters of the landscape.	Build connections through systems approach. How do we understand the science through the geoheritage site?	*Places*/ geoheritage sites define storylines and phenomena. Engage learners deeply in explaining phenomena.
Skill development and appreciation for the natural environment / stewardship / advocacy.	Cognitive complexity increases as students learn.	Storylines and phenomena contextualize student learning experiences around geoheritage sites.
Student interest in geoheritage sites from across the globe is high across grade levels.	How do the Cross-Cutting Concepts align with the Disciplinary Core Ideas as highlighted in geoheritage sites?	Geoheritage focused activities should align to critical endpoints for grade bands as described in the *Framework for K-12 Science Education* (NAP)
Geoheritage work well for service learning projects and case studies.	Expanding far beyond the “textbook” uses of *places* by providing geoheritage context.	
Local sites highlight the relevance of the science.	Local communities, indigenous communities, community leaders - lead the connections to help bring the place to life for students.	

Big ideas for Geoheritage in K12 teacher PD & resources:

Support for teachers	Community building	Resources
Virtual geoheritage experiences are important. Teacher training will improve student outcomes.	Raise awareness of geoheritage among K12 administrators and at state education board levels.	Development of geoheritage teaching resources and activities.
Research on impact of implementation efforts and training. Grow the body of knowledge.	Build a community of the willing! Local knowledge, heritage bearers, indigenous peoples, others.	Identification of existing resources that honor geoheritage. Tag for geoheritage!
How are teachers recognized for their geoheritage work? Digital badges.	Outreach to teacher groups and professional associations. Engage them in the work.	Resource contact library for parks
Boost comfort level of teachers in teaching across disciplines. Benefits from cross-disciplinary training.	Social media presence around geoheritage in K12.	Encourage sharing of resources and lessons with online platforms such as Teach The Earth.
Opportunities for teachers to engage in learning about local sites.	Encourage conference presentations and peer reviewed journal publications.	Identify insertion points in existing materials to bring a geoheritage presence to the lessons.
Opportunities for teachers to learn about working with students in the field.	Identify organization to support annual geoheritage festival of learning. Student-centered and collaboration focused.	Develop a geoheritage rubric to test for alignment.
Support for teachers in building connections between geoheritage and the standards.	Needs assessment across stakeholder groups related to geoheritage.	Linking related standards with supplemental materials. Map commonly used existing sites to curricula / standards.
Opportunities for teacher collaboration, especially across disciplines.	Clearly communicate ways in which K12 benefits from geoheritage integration.	Local museums, parks, and other repositories of local geoheritage knowledge and interpretation.
Boost comfort level of teachers using virtual approaches to integrating geoheritage.	Help teachers reach resources that provide funding for implementation.	Guest speaker list for in-person and virtual visits.

Geoheritage and preK-12 virtual learning: Equity and inclusion

virtual-appalachian-trail-hike-walk-distance-app