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Working Title: GPS and Geocaching in Education

Abstract: Research points to a need to have students return to nature. Activities that take young people outdoors, moving around, and interacting with the environment have many more benefits than only the intended objective or standards of the activity itself. As GPS technology becomes more prevalent and affordable, educators can incorporate GPS and geocaching activities into their instruction in all areas, leading to improved engagement in the curriculum and many positive side effects for students.

Outline:

Introduction: What is the rationale behind getting students outdoors and moving while learning? (References Richard Louv's work on "nature deficit disorder")

What is GPS? (a brief history and overview of global positioning system technology)

How does GPS work? (a brief explanation of the constellation of GPS satellites in orbit and how GPS receivers of all types work in conjunction with these to identify location and guide movement of the person with the receiver)

Visual for this section is an illustration of the GPS satellite constellation in communication with a receiver on earth – trying to find an animated one or one that I could animate myself

How can GPS receivers be used in content areas? (some ideas for integrating handheld GPS receivers into the curriculum, not including geocaching)

Visual for this section would likely be a photograph of students using a GPS receiver to gather data or mark a location.

What is geocaching? (an overview explanation of geocaching as a hobby, including a very brief history)

Visual for this section is a photograph of a child or children with GPS receiver and a geocache container just found.

How can geocaching be used in content areas? (some specific ideas for integrating geocaching activities into content areas such as literature, math, social studies/history, and science)

Visual for this section is a photograph of a geocache container with its contents visible: math problems or science question, etc.