

Name: Robert A. Johnson

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Title: An Evaluation Of A 6th Grade Environmental Education Experience Across All Schools In Prince William County, Virginia

Thesis Director: Dr. Dann Sklarew

Committee Members: Dr. Cynthia Smith, Ms. Joy Greene

ABSTRACT

Appreciation of the natural environment is a vital step on the way to environmental sustainability. Environmental education in K-12 education plays an important role in developing ecologically literate and environmentally responsible citizens. Outdoor environmental education experiences in primary and secondary education (grades K-12) provide opportunities to generate this appreciation during the early stages of knowledge development (Sobel, 2004 and 2008).

Today, many school systems struggle to achieve federal and state-mandated education goals while, by and large, US education efforts are diverging from an “ecologically literate and culturally critical citizenry” (Gruenewald and Manteaw, 2007). As the global population continues to increase, it is important for people to understand the impact of their choices on the environment. Integrating environmental education and sustainability principles into the curricula of grades K-12 can help to foster understanding and consideration of human environmental impact throughout students’ lifetimes (Kozicki, 2010b). Incorporating outdoor environmental education experiences improves students’ knowledge and sows the seeds for

environmental sustainability. Sixth grade students participating in a meaningful watershed educational experience (MWEE) (CBP, 2010) with an outdoor education component increase their watershed knowledge. This would indicate that student learning would benefit by including an outdoor education component (Hungerford and Volk, 1990; Sebba, 1991; Yerkes and Haras, 1997; Dillon, Rickinson, Teamey, Morris, Choi, Sanders, and Benefield, 2006; UNESCO, 2008).

This thesis examined the literature surrounding K-12 environmental education; indicated barriers to implementing outdoor activities in existing curricula; and showed the impact of incorporating outdoor education experiences into a 6th grade watershed curriculum. A recently implemented watershed education program in Prince William County, Virginia, provided context to examine a collaborative development process and describe and test a methodology to determine teacher and student improvement in watershed knowledge. By analyzing teacher workshop questionnaires and pre- and postexperience student surveys, this thesis evaluated the first year of a recently implemented 6th grade watershed education program in Prince William County, Virginia, to determine students' watershed knowledge. This evaluation indicates that a teacher workshop improves teachers' confidence and intentions in teaching about watersheds and the OEE improves students' knowledge of watersheds, familiarity with watershed issues, and ability to accurately assess the health of the Chesapeake Bay.