
12.0 (MIDDLE AND HIGH SCHOOL) WATER-AWARE PORTFOLIO INSTRUCTIONS

WATER-AWARENESS PORTFOLIO INSTRUCTIONS

A portfolio is a record demonstrating what students learn over an extended period of time for a specific unit such as a “global water crisis” unit or “water-awareness” unit. The introduction of a water portfolio is an effective technique teachers can use to interface water curriculum with ongoing assignments and activities in any subject including economics, geography, biology, language arts, social studies, and environmental science.

- The participation and completion of a global water crisis or water-awareness portfolio will give students access to knowledge and awareness of current water conditions in developing nations, an increased awareness of the need for conservation practices and the value of water as a shared global resource.
- Students who are involved in creating the portfolio gain valuable experience in setting their own goals and standards of excellence. The process of creating many entries over time gives students a sense of ownership and control over their own learning.
- Portfolios that have depth, duration, and complexity will challenge students and motivate them towards construction of knowledge. They will acquire problem-solving, planning, and self-evaluation skills. Students will process and generalize information to make predictions about, and generate solutions for, the global water crisis. The written components of a portfolio also strengthen reading comprehension and writing skills that benefit students in standardized testing conditions.

Materials needed:

A three-ring notebook or a folder with pockets

Instructor prompts (see sample portfolio entry prompts below)

A portfolio may include a variety of written assignments: journal entries, poetic responses to a piece of art or journalism, letters, essays, reports, stories, timelines, creative writing, book summaries, article summaries and/or WebQuests.

Non-written entries may include: drawings, original artwork, photos, brochures, maps, charts, computer-generated graphics, maps and/or illustrations, etc. Students should demonstrate correct grammar, punctuation, spelling, and vocabulary usage in all entries.

Sample prompts for a water-awareness portfolio:

Students will visit a broad collection of websites to raise water awareness. Students will create a chart and briefly describe water crisis information found of each of the following websites:

National Geographic: (<http://www.nationalgeographic.com>)

Environmental Protection Agency: (<http://www.epa.gov>)

American Museum of Natural History: (<http://www.amnh.org>)

Discovery Education: (<http://www.discoveryeducation.com>)

- Students will create a proposal to convince the U.S. Congress to take a more active role in assisting developing nations with water and sanitation infrastructures.
- Students will write a letter to inspire and challenge family members to conserve water. Students will read the letter to their family and discuss family reactions the next day in class.
- Students will visit (<http://www.water.org>) and create a Venn Diagram comparing water and sanitation conditions in two of the five following countries: Bangladesh, Ethiopia, Honduras, India, Kenya.
- Students will read the article “Dangerous Waters” by Sharon P. Nappier, Robert S. Lawrence, and Kellogg J. Schwab. Students will identify and describe five infectious pathogens posing serious threats to freshwater sources around the world. Students may research images of infectious pathogens and create visual representations of pathogens such as Norovirus, Plasmodium, Giardia, E. coli, and Cryptosporidium parvum.
- Students will create a timeline that demonstrates the evolution of significant water and sanitation inventions and discoveries since the time of Roman aquifers through the present.
- Students will read the document “Early History of Water Sanitation Technology” and create an invention to assist with the collection, distribution, sanitation or any other aspect of the global water crisis.
- Students will analyze a variety of economic plans to assist water-deprived third-world nations. Students will visit (<http://www.water.org>) to research micro-finance example: WaterCredit and other sources to research oil-for-water programs.