project WET

WATER EDUCATION TODAY

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What is Project WET?

Advancing water education to understand global challenges and inspire local solutions.

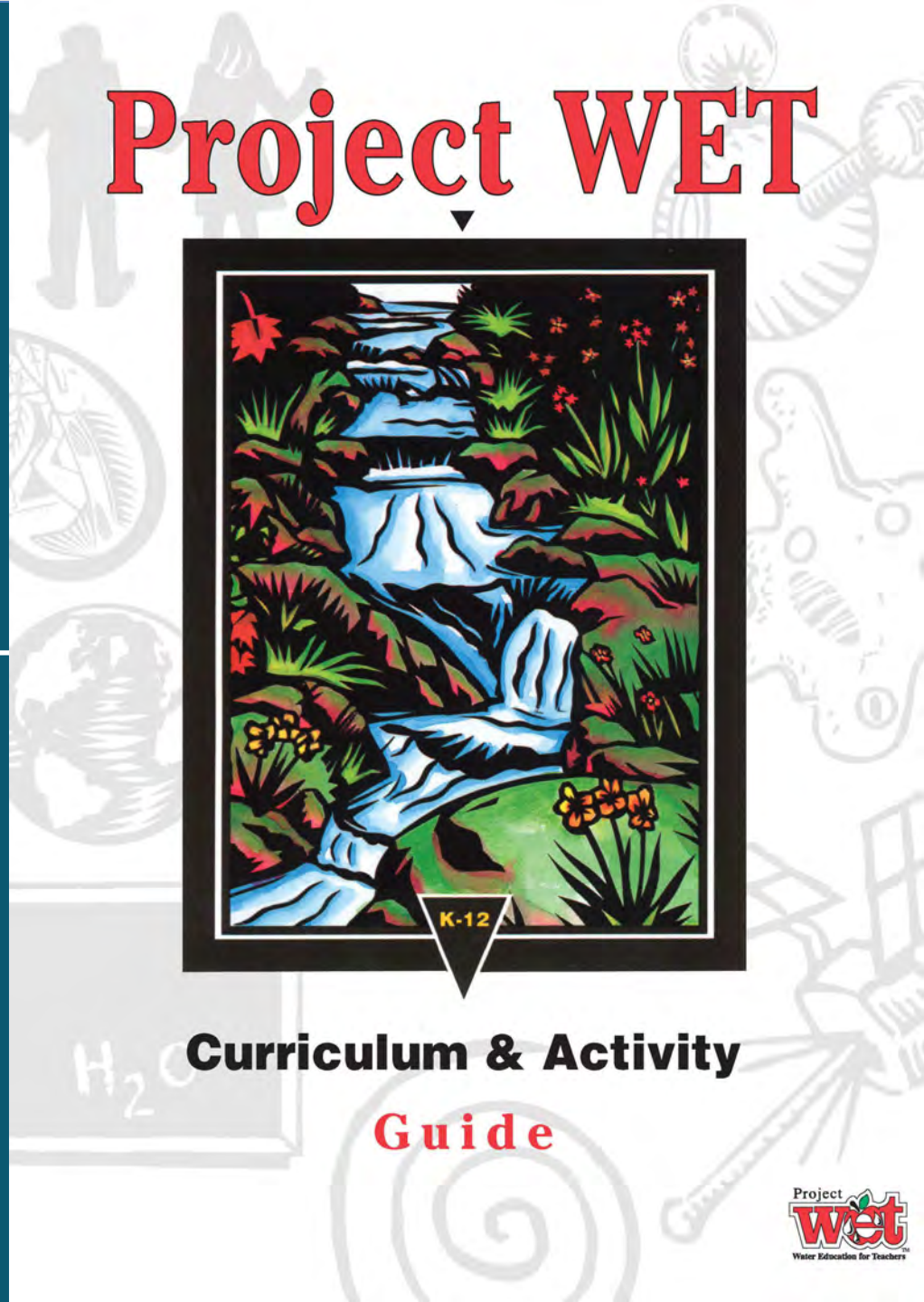
We envision a world in which action-oriented education enables a better understanding of the value of water, ensuring a sustainable future.

History

- 35+ years educating communities about water (since 1984)
- 1995 - *Project WET Curriculum & Activity Guide* published with lessons defined by conceptual framework of seven principles
- 2011 *Guide 2.0* published – “Seven Essential Principles of Water Literacy” term used

Water Literacy Principals History

- 1991 – Conceptual framework defining the seven principles (with sub-bullets)
- Research-based, surveyed people to determine priority topics
- Page 471 of *Guide 1.0*



Project WET's Water Literacy Framework

1. Water has unique physical and chemical characteristics
2. Water is essential for life to exist
3. Water connects all Earth systems
4. Water is a natural resource
5. Water resources are managed
6. Water resources exist within social constructs
7. Water resources exists within cultural constructs

Water Has Unique Physical and Chemical Characteristics

The nature of the water molecule determines the physical properties of water and its behavior. The physical and chemical properties of water are unique and complex.

PHOTO CREDIT: © iStockphoto–Thinkstock Photos

Water Is Essential for All Life to Exist

Life processes, from the level of the cell to that of the ecosystem, depend on water. Both the quantity and quality of water contribute to the sustainability of life on Earth.

PHOTO CREDIT: © Hemera –Thinkstock

Water Connects All Earth Systems

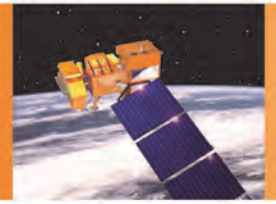
Water is an integral part of Earth's structure and plays a unique role in Earth's processes. It is found in the atmosphere, on the surface and underground. The water cycle is central to life on Earth and connects Earth systems.

PHOTO CREDIT: © Hemera–Thinkstock Photos

Water Is a Natural Resource

All living things use water. The available freshwater supply on Earth is limited and must sustain multiple users. Multiple uses of water can lead to water resource issues.

PHOTO CREDIT: © Hemera–Thinkstock Photos



Water Resources Are Managed

Multiple use of water resources leads to diverse and sometimes conflicting demands, which require water resource management practices. Management decisions involve distribution of water resources and protection of acceptable water quality and quantity.

PHOTO CREDIT: © Landsat imagery courtesy of NASA Goddard Space Flight Center and U.S. Geological Survey

Water Resources Exist within Social Constructs

Over time, societies develop water management systems and practices to meet the needs of diverse water users. People's values, attitudes and beliefs shape political and economic systems that are dynamic.

PHOTO CREDIT: © Peter Elvidge / Dreamstime.com

Water Resources Exist within Cultural Constructs

Cultures express connections to their unique water environments through art, music, language and customs. Cultures around the world hold similar and contrasting views toward water.

PHOTO CREDIT: © Terisagreen / Dreamstime.com

Early Childhood Water Literacy

Examples

Water has unique physical and chemical characteristics

Some objects sink and some objects float.

Water is essential for all life to exist

Living things have water in them.

Water connects all Earth systems

Water is different in all the seasons.

Water is a natural resource

Water is used to make food I eat.

Water resources are managed

Water must be transported for use.

Water resources exist within social constructs

My family and I use water in at home, in school and at play.

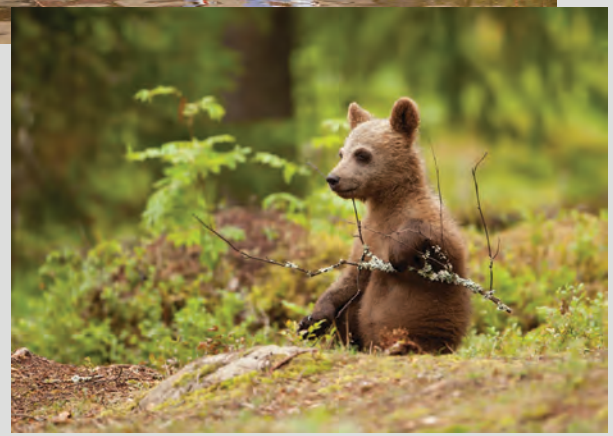
Water resources exist within cultural contexts

Water inspires music.







What makes a person water literate?

Understanding the value of water and its role in various systems (biological, ecological, economical, social and cultural)

Project WET

Curriculum & Activity Guide

Project WET
Water Education for Teachers

Project WET Curriculum Framework

The Project WET Curriculum Framework consists of three major areas: conceptual, affective, and skills. The framework is based on current educational research, water-related curricula, and national education reform efforts. It incorporates key concepts related to learning about water and water resources.

Conceptual Framework

Water has unique physical and chemical characteristics.

- The water molecule has a specific structure.
- The structure of the water molecule gives water characteristic properties.
- The properties of water lead to unique chemical and physical behaviors.

Water is essential for all life to exist.

- Chemical processes of life occur in a water solution.
- Life processes are based on water quality.
- Life processes are based on water quantity.
- Water is a limiting factor of life.

Water connects all Earth systems.

- Water is an integral part of Earth's structure.
- Water plays a unique role in Earth processes.
- The water cycle is central to all Earth systems.

Water is a natural resource.

- Water resources are based on supply.
- Water resources are used by all living things.
- Multiple uses of water can lead to water resource issues.

Water resources are managed.

- Water resources are managed by individuals and communities of people.
- Water resource management sets objectives based on needs and issues.
- Water resource management develops strategies to resolve issues.
- Water management effectiveness is determined by assessing progress toward expected outcomes.

Water resources exist within social constructs.

- Water resource use has changed over time.
- Water resources have value based on economic systems.
- Water resources are governed through political systems.

Water resources exist within cultural contexts.

- Different cultures often express different beliefs about water.
- Cultural beliefs about water resources change over time.
- Cultural beliefs about water vary within a society.
- Cultures express their connections to water through art, music, language, and customs.
- Various cultures influence our understanding of water resources.

Affective Framework

NOTE: The following affective components of water education are interrelated; they are not necessarily listed in sequential order. People's attitudes and values are constantly evolving; classifying them and placing them in discrete categories can be difficult. The categories listed below are based on arrangements presented by various professional environmental educators (Caduto 1985; Engleson 1994; Marcinkowski 1993).

- People's awareness of and sensitivity toward water and water-related concepts and issues.
- People's attitudes (opinions, likes, dislikes) toward water and water-related concepts and issues.
- People's values (consideration of worth, need to cherish, importance) toward water and water-related concepts and issues.
- People's behavior toward and expression of water and water-related concepts and issues, influenced by awareness and sensitivity, attitudes, and values.

References

Caduto, M. 1985. *A Guide on Environmental Values Education.* UNESCO-UNEP International Environmental Education Program, Environmental Education Series, no. 13. Paris, France: UNESCO.

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