

WATERSHED GAME

LESSON PLAN



Sea Grant
Minnesota



WOLF RIDGESM
ENVIRONMENTAL LEARNING CENTER

WATERSHED GAME



CLASS DESCRIPTION: An Aquatic Ecology Class

The Watershed Game is a large-format board game to help students understand the relationship between land uses within a watershed, water quality, and their community. Working in teams, students apply tools (prevention, practices, plan, and policies) to decrease water pollution while balancing financial resources. The goal of the activity is to reduce nonpoint source water pollution from various land uses to the stream without going broke.

This curriculum was created by the University of Minnesota Extension and Minnesota Sea Grant. There are more resources at watershedgame.umn.edu.

Total time: 1 hour 30 minutes (indoors)

Audience: 6-20 students, 8th grade through adult

Activity level: minimum

Travel: none

Total uphill travel: none

PURPOSE

To show how human actions impact watersheds.

CONCEPTS

1. A watershed is the area of land that drains to a particular lake, river, or stream.
2. Phosphorus and sediment levels can impact the health of a watershed if they are too high and unbalanced.
3. Citizens, organizations, and governments cooperate to make decisions about land use while factoring in economics and water quality.

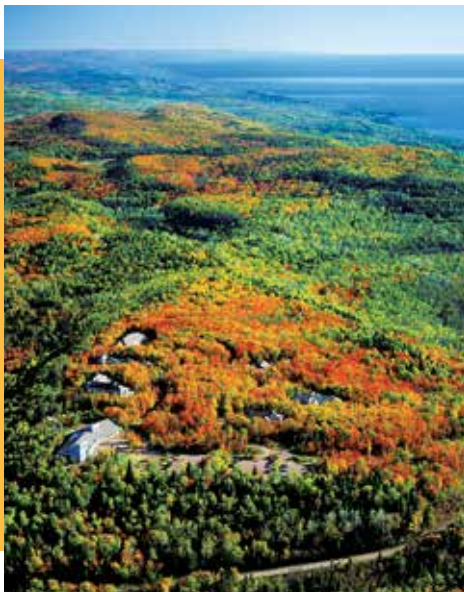
OUTCOMES

Upon completion of the Watershed Game class students will be able to:

- Understand that sediment and phosphorus are natural parts of healthy ecosystems.
- Describe how human activities associated with various land uses within a watershed may pollute a stream with excess sediment or phosphorus.
- Practice working cooperatively in Land Use Teams to evaluate the costs and benefits of tools that can decrease pollution.



This Curriculum was created by Minnesota Sea Grant.



Our mission is to develop a citizenry that has the knowledge, skills, motivation and commitment to act together for a quality environment.

6282 Cranberry Road | Finland, MN 55603-9700 | www.wolf-ridge.org

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Equipment

- 4 large laminated land use maps: farmland, city, residential, and forest
- watershed score box map (8.5x11 laminated)
- payment box map (8.5x11 laminated)
- full watershed map (11x17 laminated)
- pollution key map (11x17 laminated)
- water shed game money
- role cards (4 sets of 6 unique roles)
- tool cards (in brown folder pockets; labeled city, farmland, forest, and residential)
- student worksheets
- pencils
- white board/chalk board for score keeping
- full lesson plan

Appendices

- Glossary
- References
- Sources
- Student Information Sheets

Set-up (10 min.)

- Classroom/class prep description
- Safety Management

I. Introduction (10 min.)

- A. Greeting
- B. Assess Learner Level

II. Team Play (20 min.)

- A. How to Play
- B. Play

III. Full Class Play (30 min.)

- A. Share Reports
- B. Calculate Remaining PUs
- C. Cooperate with other Land Use Maps to Further Reduce
- D. Campaign

IV. Conclusion (20 min.)

- A. Review
- B. Stewardship Action

Clean-up (10 min.)