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## The Challenges – Teacher Resources

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### Water Conservation Log

Students must use their math skills to determine how many gallons of water per minute pour through faucets around their home and school.

#### Materials

- Gallon-size plastic container (1 per group)
- Stopwatch (1 per group)
- Calculators (optional)
- Class graph chart

#### Directions

1. Divide students into small groups and assign them one faucet or water fountain to monitor around the school.
2. Each group will visit its faucet or water fountain and fill the jug with water while using the stopwatch to see how long it takes the fixture to fill the gallon container.
3. Students will record the time it took to fill the jug to the top.
4. Remind students that the water collected in the jug should be used to water a nearby plant.
5. Students will then take their recorded time and convert their numbers into gallons per minute using one of the following formulas:
  - If it took less than one minute to fill the gallon jug, use this formula: 60 divided by the number of seconds to fill the gallon jug = gallons per minute: (example) 60 divided by 10 seconds to fill jug = 6 gallons per minute.
  - If it took more than one minute to fill the gallon jug, mark down the time as it was recorded: Example: It took three minutes and 30 seconds to fill the jug = 3:30. Divide 1 by the number of minutes = 1 divided by 3.5 = .28 gallons per minute
6. Have students record their data (location of water source and time) on the class graph.
7. Discuss the difference between the school's fixtures in terms of gallons of water per minute.

