

Precious paper

Related outcomes

- N 3.5: A student selects and uses appropriate mental, written and calculator techniques to approximate and calculate solutions to problems involving whole numbers, money and decimal fractions.
- WM 3.1: A student extends a mathematical investigation by asking “what if” questions.
- WM 3.2: A student selects and uses appropriate problem solving strategies to complete investigations.
- S 3.5: A student displays, reads and interprets a variety of graphs.
- VA 5: A student demonstrates a willingness to work cooperatively with others and to value the contributions of others.
- VA 17: A student appreciates aspects of the historical development of mathematics.
- VA 18: A student appreciates the impact of mathematical information on daily life.

Possible indicators

- A student can:
- collect data, then record this information on a graph
 - choose an appropriate method of solving tasks involving money.

Syllabus links

- Space** Graphs 4, 5, 6
- Measurement** Addition 8
- Money 7
- Multiplication 9, 10, 11

Teaching activity

1. Show students a ream of photocopy paper and tell them how much it costs and the number of sheets in a ream.
2. In groups, have students suggest questions about paper that could be investigated. This might include:
 - *Approximately how much paper is used by the class in a day, week, or year?*
 - *What is the cost of this paper per day, week, or year?*
 - *What is our definition of waste paper?*
 - *How much paper used in the classroom is wasted each day, week, or year?*
 - *What is the cost of this waste paper per day, week, or year?*
3. Students choose one investigation and plan a strategy for carrying it out. For example, determining the amount of paper wasted within the school on a typical day might require students to survey other class teachers, clerical staff, and the principal. For large schools it might be necessary to choose one class

per grade as a sample and calculate the total use by multiplying the class use by the number of classes in a grade. The students will need to understand that the definition of waste paper needs to be flexible e.g. what would be considered a waste of paper in Year 6 may not be considered wasteful in a Kindergarten class.

4. Allow students to decide on the type of graph that will best illustrate the information gathered.
5. Students suggest ways to decrease the amount of paper wastage.
6. Discuss the benefits of making cost savings on the use of paper and then possible ways this money could be used.

Language

paper wastage, cost saving, reams of paper

Equipment

ream of paper