# YEARS 5/6 ACTIVITY - FILLING THE FARMS

## ACTIVITY SUMMARY

In this activity students deal with division of numbers with remainders, using their knowledge of other operations to help them solve problems. Provide students with counters, and discuss strategies as they work through the problem. Students share their responses and explain sequences and strategies they found effective.

### AUSTRALIAN CURRICULUM LINKS - LEVEL 5/6 MATHEMATICS

| LEARNING AREA | CONTENT DESCRIPTOR ELABORATION |
|---|---|
| PROFICIENCIES | Problem-solving includes formulating and solving authentic problems using whole numbers<br>Reasoning includes investigating strategies to perform calculations efficiently, and explaining mental strategies for performing calculations |
| NUMBER AND ALGEBRA - NUMBER AND PLACE VALUE | ACMNA098<br>Exploring factors and multiples using number sequences<br><br>ACMNA098<br>Using simple divisibility tests<br><br>ACMNA100<br>Exploring techniques for multiplication such as the area model, the Italian lattice method or the partitioning of numbers<br><br>ACMNA100<br>Applying the distributive law and using arrays to model multiplication and explain calculation strategies<br><br>ACMNA101<br>Using the fact that equivalent division calculations result if both numbers are divided by the same factor<br><br>ACMNA101<br>Interpreting and representing the remainder in division calculations sensibly for the context<br><br>ACMNA291<br>Using calculators to check the reasonableness of answers<br><br>ACMNA123<br>Applying strategies already developed for solving problems involving small numbers to those involving large numbers<br><br>ACMNA123<br>Applying a range of strategies to solve realistic problems and commenting on the efficiency of different strategies |

# FILLING THE FARMS

William has some worms. He puts them evenly into 3 worm farms, and there is one worm left over. If William puts the same worms evenly into 4 worm farms there are 3 worms left over.

1.   How many worms could William have?

2.   How many different answers can you find?

3.   How many worms might William have if the total number of worms is more than 50? List as many possibilities as you can.

**Challenge** Change the rules for the problem so that possible answers could be these: 7, 22, 37, 52