

# 40 Weeks of Math Challenges

## Week 9



These visual math challenges have been created to intrigue and inspire your children. They are designed to be hands on, open-ended inquiries, to challenge them to think deeply about the world around them.

Each week a new set will be released with four levels.

- Preschool
- Years 1/2 (approx. age 6-8)
- Year 3/4 (approx ages 8-10)
- Year 5/6 (approx. ages 10-12)

I hope you enjoy exploring the ideas with your children! The challenges don't require any special resources, however your children will need a 'Math Journal' to record their discoveries. Any notebook will work, but if you can, try to encourage them to use a Grid book.

You are welcome to freely print these cards for your family but please respect our creative copyright and link back to the original file on our web page to share with others. Thanks, Jo

# Area

Definition:

Is a measure of how much space there is on a flat surface.

1. This is what happens when you place a mushroom, gills down, on a piece of paper overnight. We covered each with a glass and carefully lifted them up in the morning.
2. Why do you think we get this print?
3. The spores fall onto the paper and cover the area of the paper where the mushroom lay.
4. Find or buy some mushroom to do this. Make sure you are careful and wash your hands, some mushrooms are poisonous!



## Challenge 9

# Area

Definition:

Is a measure of how much space there is on a flat surface.

1. Do you like to grow vegetables? This is our veggie patch.
2. Would you like to plan a garden? Draw a 15cm by 15cm square in your math journal. What can you fit in it if
  - cabbage takes a 2x2 cm space
  - silverbeet takes a 3x3 cm space
  - strawberries take a 1x1 cm space
  - fruit trees take a 8x8 cm space
  - carrots take a 1x1 cm space
 Colour each vegetable or fruit a different colour.



# Area

Definition:

Is a measure of how much space there is on a flat surface.

1. Look at the picture? What do you notice? What do you wonder?
2. It is thought that during breeding season emus defend an area of a few kilometres in diameter.
3. If we said that the breeding territory was  $2\text{km}^2$  How much land would these emus need if there are 3 breeding pairs? Draw your thinking in your journal.



# Area

Definition:

Is a measure of how much space there is on a flat surface.

1. Have you ever seen wind turbines close up, they are enormous. Each wind turbine needs about 60 acres of land to operate.
2. Estimate what area of land was needed for this wind farm. (In acres)
3. An acre is approximately  $4047\text{ m}^2$  Use a calculator to estimate how many square metres 1 wind turbine would need.

