## More Domino Activities

1. What is the total number of spots on a set of dominoes?
2. Once you know this, would it help you to work out which domino is missing if someone took one away? Take turns to remove a domino (while your partner is not looking!) See how quickly you can work out which one is missing!
3. Domino square (see separate sheet)
4. Fives and threes:

You play dominoes in the usual way but you score points when the dominoes at the ends of the chain add up to a multiple of 5 or a multiple of 3 . Divide the total on the ends by 5 or 3 and add the answer to the player's score. If the end total is divisible by both 5 and 3 then you score both, so for the end total of 15 you score 8 points. You also score 10 points for being the first to finish, plus one point for every domino held by another player, but you might not be the winner even if you do finish first.

In the following example the double 5 starts, scoring 2 points. Then the $(0,5)$ domino scores 1 point because the ends add up to 5 . Then the $(4,0)$ domino makes the ends add up to 9 so it scores 3 points. Finally the $(5,6)$ domino makes the end total 10 scoring 2 points.


In this example the $(6,6)$ starts, scoring 4 points. Then the $(6,0)$ scores 4 points, then the $(0,0)$ scores 4 points and finally, with the $(0,3)$ the end total is 15 , scoring 8 points.

5. Windows:

This is a challenge that you might like to take on by yourself or with a group of friends. In this diagram the four dominoes make a 'window' with one empty space. The spots on each side total nine. Can you make seven windows like this using all 28 dominoes so that each window has the same spot-sum for each side? One window need not have the same spot-sum as another.


You can find the solution to this problem on the Nrich website. Go to http://nrich.maths.org/1200/solution
6. You can play dominoes on line also at the Nrich website. Go to http://nrich.maths.org/6361 (or go to the Nrich website and type "domino environment into the search box in the top right-hand corner.)

