



**WEAPONS OF  
MICROSCOPIC  
DESTRUCTION**

HOW YOUR IMMUNE SYSTEM KEEPS YOU SAFE FROM ATTACK



Assemble your defences in time  
The V(D)J recombination jigsaw game



# Can you assemble your defences in time?

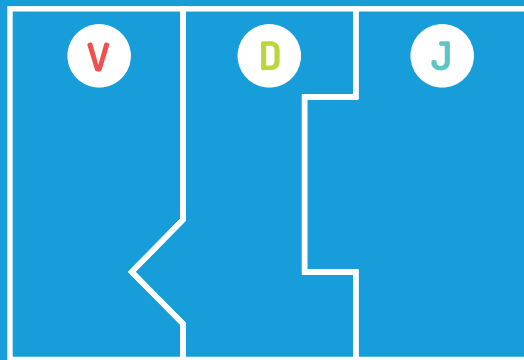
Have a go at our V(D)J recombination jigsaw game.  
How many different antibodies can you make in 2 minutes?

These antibodies patrol your body until they find a foreign invader that they recognise.  
Then they attack the invader and remove it from your body.



## Remember

- You must use 1 'V' gene, 1 'D' gene and 1 'J' gene
- You can use the same genes more than once, but not in the same combination



## How did you get on?

5-10



If you got between 5 and 10 V(D)J recombinations, then you've made/created the antibody repertoire of a baby.

11-30



If you got between 11 and 30 V(D)J recombinations, then you've made/created the antibody repertoire of an older adult.

31-50



If you got between 31 and 50 V(D)J recombinations, then you've made/created the antibody repertoire of a young adult.

  
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