





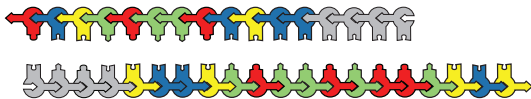
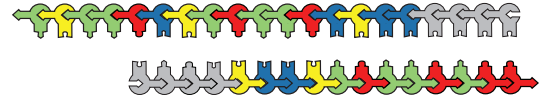


**PCR Activity Guide: Part 1**



**Cycle 3: Denaturation**

Separate the 4 DNA strands.



**Cycle 3: Annealing**

Attach "Cycle 3" flags to 5' ends of Primer 1 and Primer 2 and repeat the annealing step.



**Cycle 3: Extension**

Final product: After 3 cycles, the result will be 8 double-stranded DNA molecules.



## PCR Activity Guide: Part 1



### Note:

- The 3 stages of (1) denaturation, (2) annealing, and (3) extension are repeated 20-40 times, doubling the number of DNA copies each time.
- A complete PCR reaction can be performed in a few hours, or even less than an hour with certain high-speed machines.
- After PCR has been completed, gel electrophoresis can be used to check the quantity and size of the DNA fragments produced.

### Resources:

- <https://www.yourgenome.org/facts/what-is-pcr-polymerase-chain-reaction>