



# DNA Replication Manipulative

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## Summary

Manipulatives for demonstrating DNA replication/synthesis to students.

[Learning](#) > [Chemistry & Biology](#)

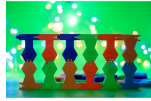
Tags: [dna](#) [polymerase](#) [nucleotide](#) [helicase](#)

This is a remix of [JC\\_Workshop's DNA/RNA Building Toy Set With Improved Joints](#) on thingiverse to allow for easier pivoting of the nucleotides. The 3' and 5' ends of the nucleotides have also been labeled. DNA strands can split easier allowing for demonstration of helicase, primase, and polymerase activity. Primer models allow for demonstration of Okazaki fragments. Also added a polymerase with arrows to show direction in which nucleotides should be added.

If printing for classroom manipulatives, I recommend printing 2 polymerases for the leading and lagging strand and enough nucleotides to provide a large enough replication fork for students to manipulate. Students can also use primer pieces in their model and then remove them to demonstrate Okazaki fragments and the gaps left over that need to be filled by ligase.

Only need supports for polymerase.

# This remix is based on



**DNA/RNA Building Toy Set with Improved Joints**

by JC\_Workshop

## Model files

**adenine.stl**



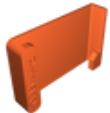
**cytosine.stl**



**guanine.stl**



**primase.stl**



**primer-3.stl**



**primer-2.stl**



**thymine.stl**





**uracil.stl**

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**primer-4.stl**

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**primer.stl**

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**helicase.stl**

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**polymerase.stl**

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