

DNA Replication Lab

Biology

Instructions

Instructor suggestions:

1. Divide class into groups of three or four students to each group.
2. Provide colored paper (e.g., white, yellow, orange, blue, dark blue)
3. Note: *the colors are not relevant so long as there are five different colors*
4. Distribute tape, scissors, colored paper (of each type) to each group
5. Clarify the objective of the activity: to construct a DNA model

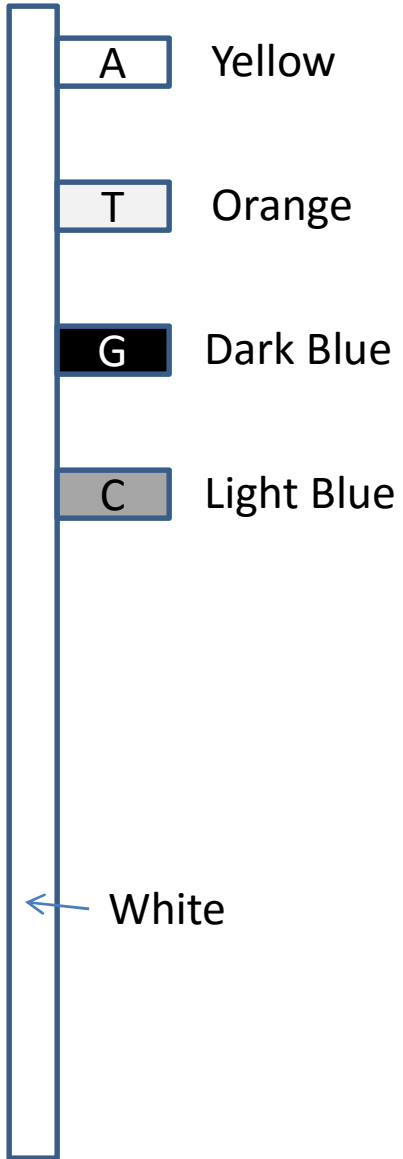
Student instructions:

Phase I

1. Create a two-strand (double-helix) DNA model as shown in step 1
2. Show to instructor for approval to take next step (step 2)
3. Cut the model down the middle to separate one side from the other
4. With the two separated strands, complete each using the complementary base
5. Get instructor approval to make the longer strand

Phase II

1. Follow instructions listed for phase II



A Yellow

T Orange

G Dark Blue

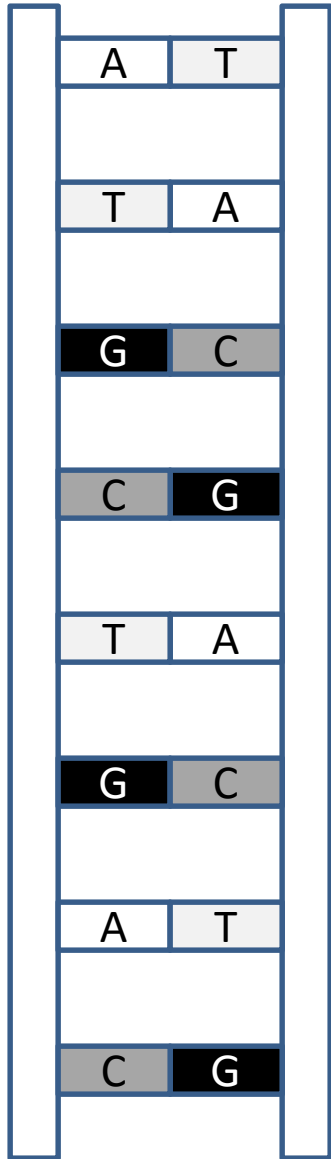
C Light Blue

← White

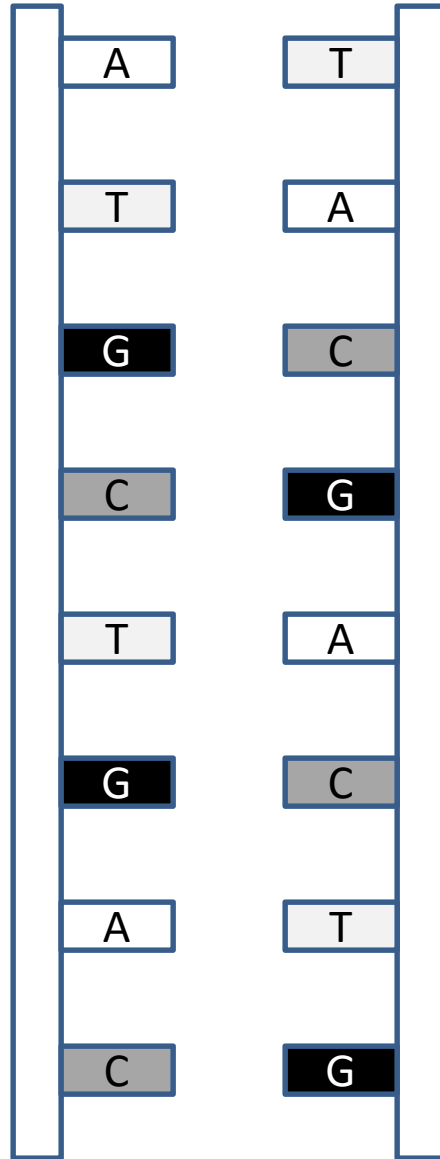
Phase One – Replication Activity

Phase Two – Long Strand

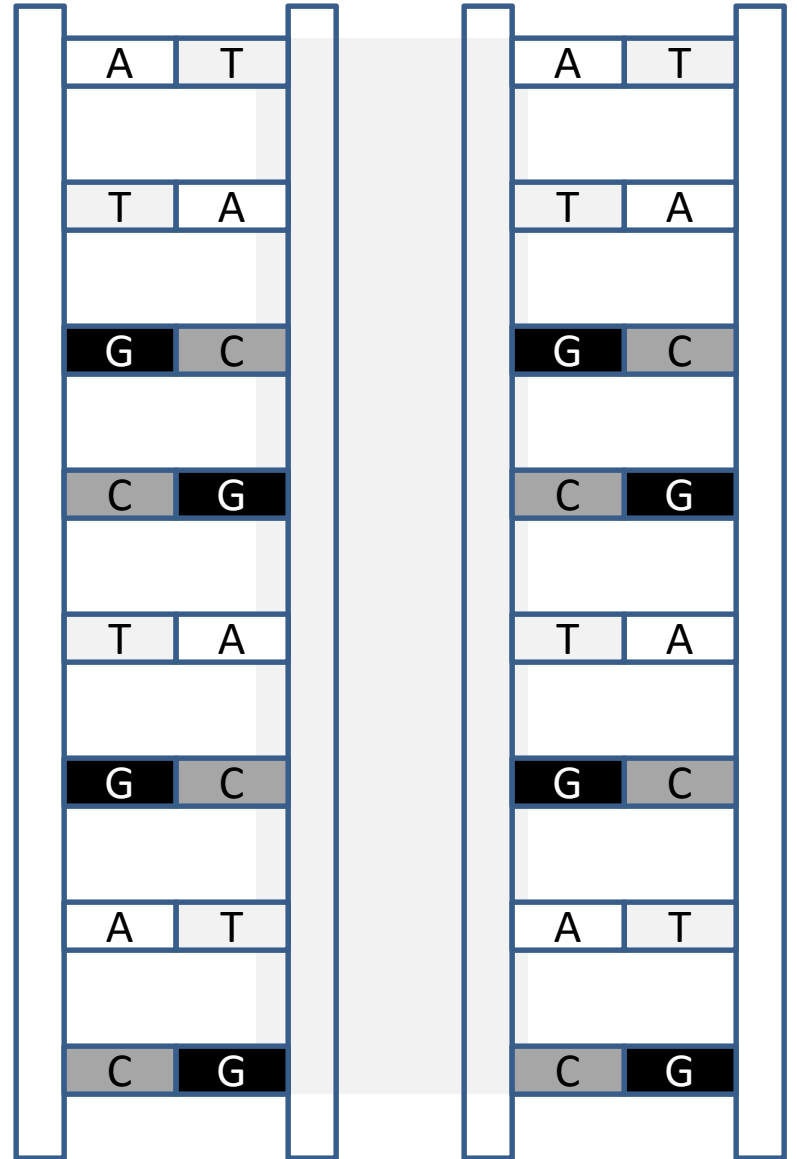
Step 1



Step 2



Step 3



Phase II – Long Strand DNA

1. Construct a DNA segment using the following sequence on one side of the double helix.

A T G C G A G C G T A A A T G G C T G A A G C T A G C

2. Use the appropriate “matching” molecule on the other side.

Use Complementary Base Pairing (Adenine, Guanine, Cytosine, & Thymine)