Below is a **bacterium DNA sequence containing the gene that provides resistance to** glyphosate (the active ingredient in Roundup herbicide. This sequence is represented by the following letters – **ATATGCTTG**. We are going to use HindIII (A'AGCTT) in order to cut this DNA. Cut this DNA so we can insert it into soybean DNA. Find someone with soybean DNA and paste your "Round up Ready" gene into the soybean sequence using the sticky ends. Congratulations, you have just performed your first experiment in genetic engineering! (NOTE: an enzyme called "ligase" is used to permanently seal these fragments together).
(Activity inspired by BioPharmaceutical Technology Center Institute, Madison WI)

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

IMPORTANT !! RUN THIS PAGE ON YELLOW PAPER (OR ANY COLOR EXCEPT GREEN) !!

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

Below is a **soybean DNA sequence**. We are going to use HindIII (A'AGCTT) in order to cut this DNA. Cut this DNA so we can insert the gene that will make the soybean resist the effects of Roundup (glyphosate). Find someone with the "Round up Ready" gene and paste this gene sequence into the soybean sequence using the sticky ends. Congratulations, you have just performed your first experiment in genetic engineering! (NOTE: an enzyme called "ligase" is used to permanently seal these fragments together). *(Activity inspired by BioPharmaceutical Technology Center Institute, Madison WI)*

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

Below is a **soybean DNA sequence**. We are going to use HindIII (A'AGCTT) in order to cut this DNA. Cut this DNA so we can insert the gene that will make the soybean resist the effects of Roundup (glyphosate). Find someone with the "Round up Ready" gene and paste this gene sequence into the soybean sequence using the sticky ends. Congratulations, you have just performed your first experiment in genetic engineering! (NOTE: an enzyme called "ligase" is used to permanently seal these fragments together). *(Activity inspired by BioPharmaceutical Technology Center Institute, Madison WI)*

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