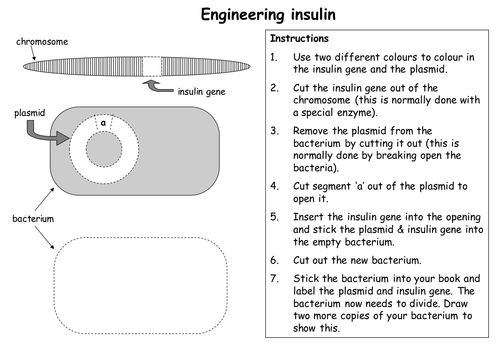
**Engineering Insulin – Recombinant DNA**

Instructions

1. Use 2 different colors to color in the human insulin gene and the bacterial plasmid.

2. Be a restriction enzyme - cut the insulin gene out of the chromosome.

3. Remove the plasmid trom the bacterium by cutting it out. (This is normally done by breaking open the bacterium with enzymes.)

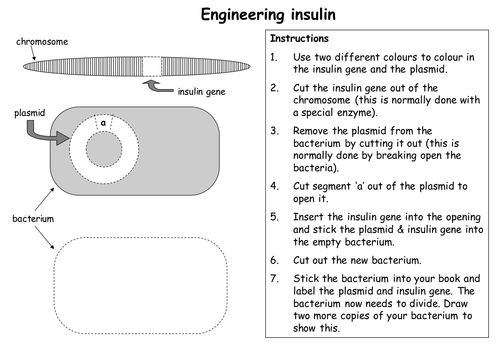
4. Cut segment “a” out of the plasmid with a restriction enzyme (scissors).

5. The “sticky ends of the plasmid will bond with the insulin gene. Insert the insulin gene into the open plasmid with sticky tape.

6. Electricity and chemicals shock the new bacterium into taking up the plasmid. Insert the plasmid into the new bacterium. Cut out the new bacterium and glue it into your BILL.

7. The new bacterium will divide by mitosis. Draw 2 more copies of your bacterium in your BILL

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