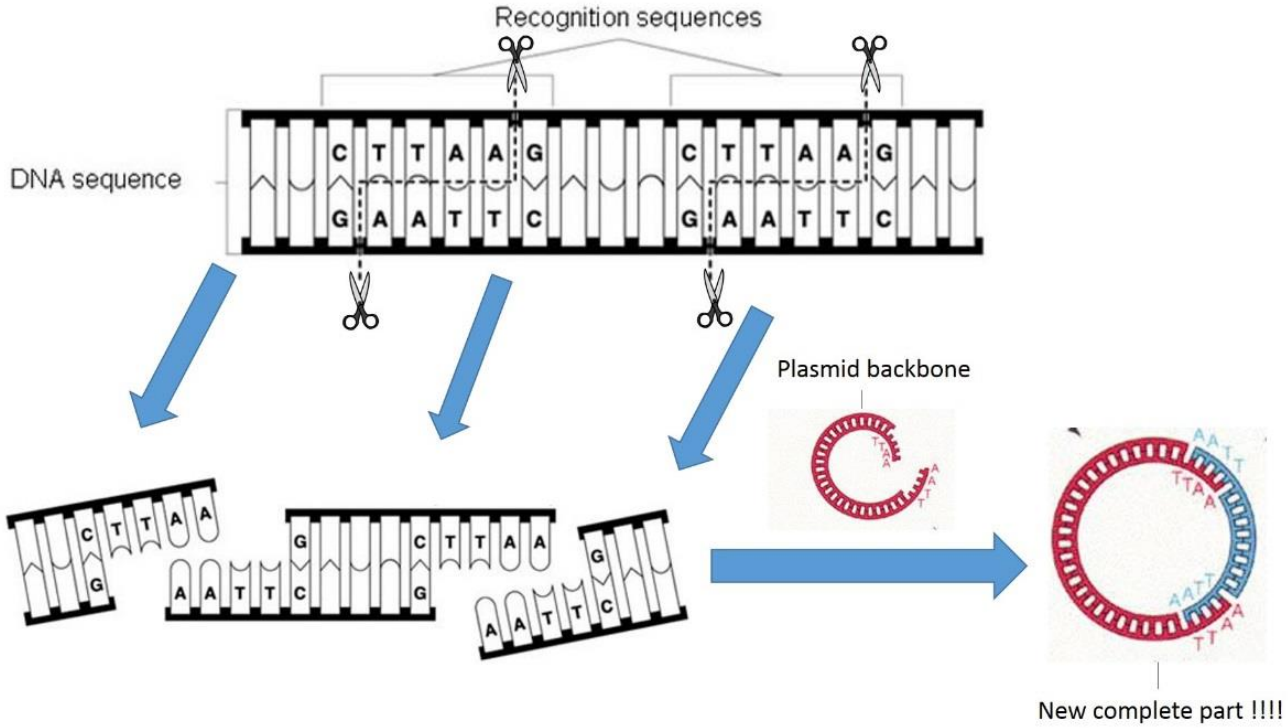
RESTRICTION RELAY

BACKGROUND:

Scientists use special cutting tools to cut sections of DNA so they can use them to stick into another part. These cutting tools are call restriction enzymes, and they cut at special sites on the sequence called recognition sites. The cut out fragments can be stuck into special backbones called plasmids to make new things!



SETUP:

- Long stretch of DNA pieces on your benches
- 5 x Restriction enzyme pieces
- 3 x plasmid backbones

PLAYERS:

2-6 people (One – three people to form 2 teams)

OBJECTIVES:

- The first contestant on each team will be given a restriction enzyme by the judge
- Once received the enzyme you have to find the 2 cutting points on your DNA corresponding to your given restriction enzyme.
- When you think you have the right points, remove the fragment and insert it into the plasmid backbone on the board.
- A judge will check that you have inserted the right fragment, by turning the plasmid around.

If the complete piece reads: “MATCH”

Then you or the next member will receive the second Restriction enzyme.

- The first person or team to reconstruct all 3 plasmids correctly wins the ‘Restriction Relay’

READY SET RACE !!!