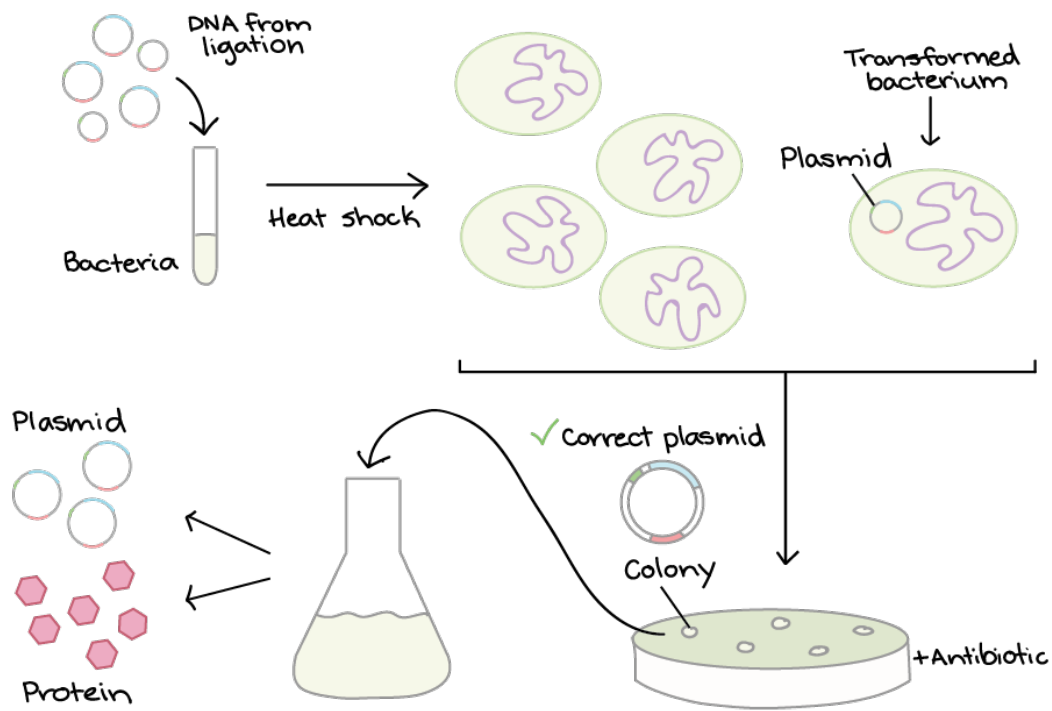


## Heat Shock Bacterial Transformation



*Credit: Khan Academy*

- Thaw chemically competent cells on ice.
- Add DNA, pipette gently to mix (1 $\mu$ l of prepped plasmid is more than enough).
  - Note: If you are adding small volumes (~1 $\mu$ l), be careful to mix the culture well. Diluting the plasmid back into a larger volume can also help.
- Let sit for 30 minutes on ice.
  - Note: If you are in a rush, you can shorten this incubation time to 5-10 min.
- Incubate cells for 45 seconds at 42°C.
- Incubate cells on ice for 2 min.
- Add 1 mL LB or 2xYT at room temp.
- Incubate for 1 hour at 37°C on shaker.
  - Note: Can also save some time here by reducing incubation to ~45 min.
- Spread 100-300  $\mu$ l onto a plate made with appropriate antibiotic.
- Grow overnight at 37 °C.