

1 | mRNA Pre-Processing

Between Promoter and Terminator, **Exon** and **Intron** alternate. Exon is coding, whereas Intron is non-coding and works as metadata.

After reading the intron, they are spliced out during mRNA processing => done by the "spliceosome". The mRNA, after splicing, is "capped and tailed" to mark pre-processing completion, at which point they leave the nucleus + go to the ribosome.

1.1 | Slicing out the non-coding parts

- Begin by assembling helper proteins at intron-exon borders => "slicing factors"
- Other helping factor proteins come together and form the "spliceosome" to do the splicing
- Spliceosome splices by bringing exon ends together
- After it's done, the spliceosome disintegrates

1.2 | Marking for Maturity

After the slicing is done, each finished mRNA is marked for maturity:

- 3' end => AAAAAA tail (using poly-adenine tailing enzyme)
- 5' end => GGGGGG cap (using guanine-capping enzyme)