

GENE EXPRESSION IN PROKARYOTES & EUKARYOTES

Prokaryotes

Eukaryotes

HOW ALIKE

HOW DIFFERENT
WITH REGARD TO

GENE EXPRESSION (TEACHERS COPY)

Prokaryotes

Eukaryotes

HOW ALIKE

Both contain structural genes

Both use RNA polymerase

Both involve the process of transcription

Operate with feedback

HOW DIFFERENT

WITH REGARD TO

Clustered together into an operon	Position of genes ↔	Separated
None	Introns ↔	Contains introns
Occurs simultaneously	Transcription & translation ↔	Nuclear membrane prevents both occurring at once
All genes are switched on at once	Regulation of genes ↔	Genes switched on separately
Regulatory genes	Initial activation ↔	Enhancers

Reference

Supplementary Material Genetics & Evolution Level 3, Crown January 2006.