Paper Transcription & Translation: Cut-outs

Copy Instructions

Make **single-sided copies** of the cut-outs.
- There are 5 versions of page A; each codes for a different protein.
- Give each student (or pair) one version of page A.
- Divide page B into 3 sets of strips. Give each student (or pair) a set of mRNA strips and a protein strip.

**Tips**
- Make color copies of page A and laminate them so that they may be re-used.
- Cut out the pieces on page A in advance. This will save a lot of classroom time.

To make one long strip each of DNA and mRNA, tape the shorter pieces together end to end.
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TRANSCRIPTION machine (RNA polymerase)

TRANSLATION machine (Ribosome)

DNA: Gene 1

1A

1B

TRANSCRIPT

mRNA

TEMPLATE STRAND

A1

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DNA: Gene 2

TRANSCRIPTION machine (RNA polymerase)

TRANSLATION machine (Ribosome)

mRNA

Template Strand

mRNA

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DNA: Gene 3

TRANSCRIPTION machine
(RNA polymerase)

TRANSLATION machine
(Ribosome)

mRNA

TEMPLATE STRAND
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TRANSCRIPTION machine (RNA polymerase)

TRANSLATION machine (Ribosome)

DNA: Gene 4

AAGACCATGGTTCGCTTTAGCATGGGTA

TACCCATGCTAAAGCGAACCATGGTCTT

AAGCTCTTGTCATCGTTGAGTCCCCGCAAAAGCCAA

TTGGCTTTTGCCGGGGACTCAACGATGACAAGAGCTT

TCCGAATTACTTGTTGATCGTT

AACGATCAACAAGTAATTCGGA

mRNA

mRNA

Template Strand

A4

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DNA: Gene 5

TRANSCRIPTION machine (RNA polymerase)

TRANSLATION machine (Ribosome)

mRNA

TEMPLATE STRAND

TCGTGGGCTGTTATATCCGCATGTCAGA
TCTGACATGCGGATATAACAGCCCACGT
TATGGATTCGAGGATTAAATTTACCAA
CCTTGCAAATCAGAAAAGTATTATGAGGACCCA
TGGGTCCTCATCATAATACTTTTCTGAGTTTGCAAGG
TTGGTAAATTTAATCCTCGAATCCATA

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