

Name:

Student Number/Homeroom:

DNA Replication and Transcription

LO: Show how the information in DNA is copied into a “messenger” form (RNA).

SLE: Meet NGSS.

1. Below is a segment of single-stranded DNA. It is currently shown as single-stranded because enzymes have “unzipped” the 2 strands. Use your knowledge of **DNA replication** to fill in this portion of the new strand.

Old (template) DNA:	A	A	G	C	T	T	A	T	C	C	G	A	A	A	A	G	G	C	G	A	T
New DNA:																					

2. What words do the letters A, C, G, and T stand for?

A =

C =

G =

T =

3. Which part of the DNA structure – sugars, phosphates, or bases – do these 4 letters represent?

4. Now consider **transcription** of the same segment of DNA shown above. List one way in which **transcription** of this DNA is different from **replication**:

5. Now show the sequence of the transcribed RNA:

(Template) DNA:	A	A	G	C	T	T	A	T	C	C	G	A	A	A	A	G	G	C	G	A	T
RNA:																					

6. What will happen to this strand of RNA once it is made?

7. Describe one aspect of today’s material that is currently confusing to you.

OPTIONAL. Do you think that all of the cells in your body contain the same RNA? Explain.