

## Transcription HL

1. Transcription is the process of creating a molecule of \_\_\_\_\_ from a \_\_\_\_\_ on the DNA. It is carried out by \_\_\_\_\_ enzyme. This enzyme binds first to the \_\_\_\_\_ which indicates the beginning of a \_\_\_\_\_, but does not itself \_\_\_\_\_ for a \_\_\_\_\_, so is called a \_\_\_\_\_ - \_\_\_\_\_ region of DNA with a \_\_\_\_\_. There are proteins called \_\_\_\_\_ which bind to the \_\_\_\_\_ helping to determine whether or not transcription should occur (\_\_\_\_\_, which encourage transcription and \_\_\_\_\_, which prevent transcription). This is crucial for \_\_\_\_\_ expression, to determine which \_\_\_\_\_ to copy and when. Transcription will only occur if an \_\_\_\_\_ is bound to the \_\_\_\_\_ in the absence of a \_\_\_\_\_. There are specific \_\_\_\_\_ sequences to which these proteins bind.
2. Once transcription has started, \_\_\_\_\_ enzyme \_\_\_\_\_ opens the \_\_\_\_\_, by breaking the \_\_\_\_\_ between complementary \_\_\_\_\_. It then adds free \_\_\_\_\_. Complementary \_\_\_\_\_ pairing takes place as normal with the exception of \_\_\_\_\_ replacing \_\_\_\_\_. The enzyme moves in the \_\_\_\_\_ to \_\_\_\_\_ direction. It reforms the \_\_\_\_\_, closing the helix, when transcription is complete.
3. An \_\_\_\_\_ molecule consists of \_\_\_\_\_ of bases called \_\_\_\_\_. These have the same meaning in \_\_\_\_\_ all organisms.
4. A strand of DNA could read as below. Transcribe the correct strand in the space between them.  
  
- A T G C A C A G G A T A C T A - Sense strand  
  
- T A C G T G T C C T A T G A T - Anti-sense strand
5. In \_\_\_\_\_, \_\_\_\_\_ expression is also controlled in part by \_\_\_\_\_, which are \_\_\_\_\_ proteins with \_\_\_\_\_ wrapped around them. They allow the \_\_\_\_\_ DNA molecules to be \_\_\_\_\_. They can un-coil themselves at certain \_\_\_\_\_, thereby facilitating \_\_\_\_\_ expression.

6. Also, in \_\_\_\_\_, the \_\_\_\_\_ undergoes \_\_\_\_\_ - \_\_\_\_\_ modification, which is the removal of non-coding segments called \_\_\_\_\_. The coding sections are called \_\_\_\_\_. This can also be called \_\_\_\_\_ and increased the \_\_\_\_\_ of \_\_\_\_\_ that an organism can make.