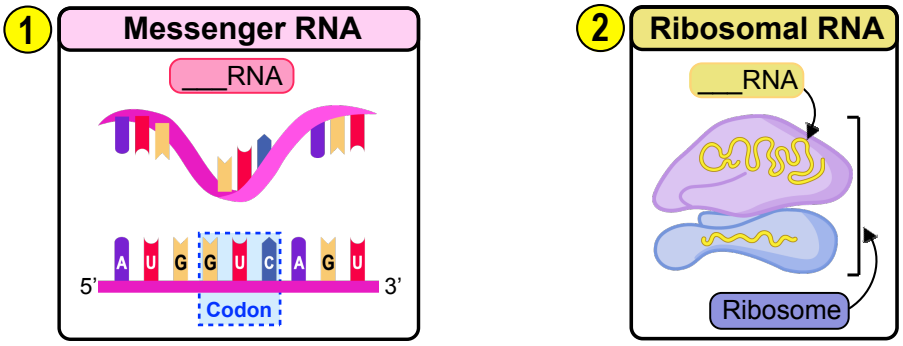
CONCEPT: TYPES OF RNA

- RNA is shorter and _____ stranded compared to DNA strands; but can have complex _____.

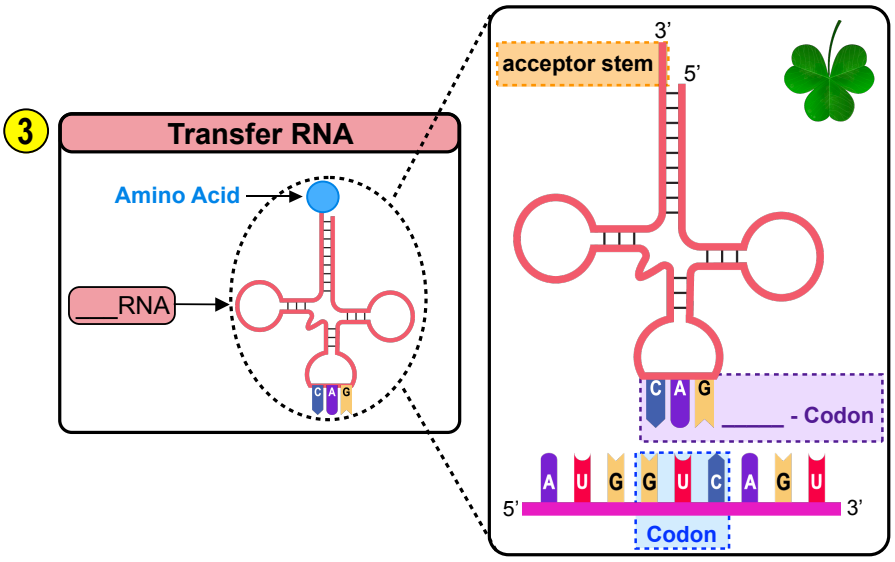
Types of RNA

- There are ____ types of RNA that differ in their size and functions.

1. **Messenger RNA** (_____): acts as a messenger (carrying DNA encoded info) & is translated to _____.
   - □ Contains **codons** (____ nucleotides that correspond to a specific _____ acid).
   - □ Formed in the nucleus and transported to the *ribosomes*.
2. **Ribosomal RNA** (_____): largest RNA, forms part of the structure of ribosomes (site of _____ synthesis).



3. **Transfer RNA** (_____): smallest RNA, carries amino acids to the ribosome during protein synthesis.
   - □ Contains _____**-codon** (3 nucleotides complementary to the _____ codon).
   - □ Contains _____ **stem** at ____ end where amino acid binds.
   - □ Forms a complex 3D cloverleaf shaped structure.



CONCEPT: TYPES OF RNA

EXAMPLE: Match each statement with mRNA, rRNA, or tRNA.

_____ Transfers amino acids to ribosomes for polypeptide synthesis.

_____ Created in the nucleus of the cell and carries genetic info to the ribosomes.

_____ Forms the structure of ribosomes.

_____ Contains anti-codons complementary to the codons of mRNA.

_____ Acts as a template for protein synthesis.

PRACTICE: Which type of RNA contains groups of 3 nucleotides that code for a specific amino acid?

a) tRNA

b) rRNA

c) mRNA

d) none of the above

PRACTICE: Rank RNAs in order of smallest to largest.

a) tRNA, rRNA, mRNA

b) tRNA, mRNA, rRNA

c) rRNA, mRNA, tRNA

d) mRNA, rRNA, tRNA

PRACTICE: If tRNA has an anticodon 3' UCG 5', which of the following is the complementary mRNA codon?

a) 5' AGC 3'

b) 5' CGA 3'

c) 3' AGC 5'

d) 3' CGA 5'