$\qquad$


Amino Acid
Label the parts of the nucleotide


What is the complementary RNA base
for these DNA bases?
A--
C--
G--
T--
$\qquad$


Amino Acid
Label the parts of the nucleotide


What is the complementary RNA base
for these DNA bases?
A--
C--
G--
T--

Teacher Instructions:
Provide students with "DNA strip" which represents 1 protein/gene.
Put different colored beads around the room. Label containers of like colored beads the different amino acids.

1) Students will write down the bases of their DNA strip along the DNA strand on their worksheet.
2) Students will translate their DNA code into an RNA code.
3) Students will use a codon wheel to transcribe their RNA codons into a chain of amino acids
4) Students will then use their code of amino acids to find their corresponding amino acid beads to make a protein. (Use a pipecleaner to place all the beads on.)


| 1 DNA strand | TAC | GGA | GAA | TCT | GTG | GGG | CTA | TGT | ACG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 DNA strand | TAC | CAC | TAA | TAC | TTT | CGA | AAC | GCC | ATG |
| 3 DNA strand | TAC | CCG | TAC | CGA | TGC | TGA | ACA | AGT | ATC |
| 4 DNA strand | TAC | CGA | TGC | AGG | CTC | CCG | TCT | TTG | ACG |
| 5 DNA strand | TAC | AAT | AGG | GGT | AAA | CAT | ACA | AGT | ATG |
| 6 DNA strand | TAC | CGA | TAG | AAG | ATG | GGT | AGG | GGC | ATC |
| 7 DNA strand | TAC | CTC | CAA | TTC | ATC | CAA | CAC | TCT | ACG |
| 8 DNA strand | TAC | ACG | CCT | TCT | CCA | AGA | GCT | AGT | ATG |
| 9 DNA strand | TAC | AGG | GCA | CCC | TGC | AGT | TGG | AAA | ATC |
| 10 DNA strand | TAC | GGG | AAC | TAT | TTC | GTA | GGG | CGA | ACG |
| 11 DNA strand | TAC | GCC | CAT | ACC | GTC | TCT | CTT | GCG | ATG |
| 12 DNA strand | TAC | GAA | GAC | TTA | ACA | CGA | TAG | GAA | ATC |
| 13 DNA strand | TAC | GGT | TAT | TAA | TCC | TAA | TAA | CGG | ACG |
| 14 DNA strand | TAC | AAC | GCT | GTC | TGG | AGG | ATG | AGT | ATG |
| 15 DNA strand | TAC | AGT | TAC | CCG | CTA | ATC | GAA | CTG | ATC |
| 16 DNA strand | TAC | GGC | GAG | AGA | TCC | CAG | CGC | TGA | ACG |
| 17 DNA strand | TAC | TGC | ACT | CGA | TCC | CGA | GGC | CTG | ATG |
| 18 DNA strand | TAC | TAG | AGC | GGG | GCT | GTT | GAC | GTT | ATC |
| 19 DNA strand | TAC | TGG | GGT | TGA | AAA | AAT | CTA | TTG | ACG |
| 20 DNA strand | TAC | TAC | CAA | TCG | GCT | TCA | ACG | TGC | ATG |
| 21 DNA strand | TAC | TCC | ACG | GCT | GGC | GCC | TGA | GGA | ATC |
| 22 DNA strand | TAC | GAC | TGT | TGC | ACG | TTG | GCG | ATG | ACG |
| 23 DNA strand | TAC | TGC | CAC | AAC | AAC | AGT | ATC | AAA | ATG |
| 24 DNA strand | TAC | GCC | GTA | TAA | AGG | GAA | CAT | CCA | ATC |

