**Activity #10**

**Name:**

**High School:**

**HSTA Teacher:**

**Version A: What Superpower Do You Have?**

**Below is the Superpower Gene that you inherited from your parents.**

**3’ A G G T C T A C G G G T C C A G C G C T C C C T A T A T C G G 5’ Template Strand**

**5’ T C C A G A T G C C C A G G T C G C G A G G G A T A T A G C C 3’ Coding Strand**

**1. When a gene is transcribed only the template strand of the DNA is used; the other is ignored. To find out your superpower the first step is to transcribe the template strand.**

**3’ A G G T C T A C G G G T C C A G C G C T C C C T A T A T C G G 5’ Template Strand**

**2. When a gene is translated, the ribosome starts at the 5’ end of the mRNA. To find out your superpower the next step is to translate the mRNA you created in #1. (Hint: the ribosome does not start translating until if finds the START codon.)**

**3. Compare your protein sequence to the key to determine what superpower you inherited from your parents.**

**What is your superpower?**

**Version B: What Superpower Do You Have?**

**Below is the Superpower Gene that you inherited from your parents.**

**3’ A G G T C T A C G T G T G C A G A G C C C T C T A G A T T G G 5’ Template Strand**

**5’ T C C A G A T G C A C A C G T C T C G G G A G A T C T A A C C 3’ Coding Strand**

**1. When a gene is transcribed only the template strand of the DNA is used; the other is ignored. To find out your superpower the first step is to transcribe the template strand.**

**3’ A G G T C T A C G T G T G C A G A G C C C T C T A G A T T G G 5’ Template Strand**

**2. When a gene is translated, the ribosome starts at the 5’ end of the mRNA. To find out your superpower the next step is to translate the mRNA you created in #1. (Hint: the ribosome does not start translating until if finds the START codon.)**

**3. Compare your protein sequence to the key to determine what superpower you inherited from your parents.**

**What is your superpower?**

**Version C: What Superpower Do You Have?**

**Below is the Superpower Gene that you inherited from your parents.**

**3’ A G G T C T A C A T G T C C C G A A A C G T C C A G A C T G G 5’ Template Strand**

**5’ T C C A G A T G T A C A G G G C T T T G C A G G T C T G A C C 3’ Coding Strand**

**1. When a gene is transcribed only the template strand of the DNA is used; the other is ignored. To find out your superpower the first step is to transcribe the template strand.**

**3’ A G G T C T A C A T G T C C C G A A A C G T C C A G A C T G G 5’ Template Strand**

**2. When a gene is translated, the ribosome starts at the 5’ end of the mRNA. To find out your superpower the next step is to translate the mRNA you created in #1. (Hint: the ribosome does not start translating until if finds the START codon.)**

**3. Compare your protein sequence to the key to determine what superpower you inherited from your parents.**

**What is your superpower?**

**Version D: What Superpower Do You Have?**

**Below is the Superpower Gene that you inherited from your parents.**

**3’ A G G T C T A C A T T T C T G G A C A G G T T C G G A C T G G 5’ Template Strand**

**5’ T C C A G A T G T A A A G A C C T G T C C A A G C C T G A C C 3’ Coding Strand**

**1. When a gene is transcribed only the template strand of the DNA is used; the other is ignored. To find out your superpower the first step is to transcribe the template strand.**

**3’ A G G T C T A C A T T T C T G G A C A G G T T C G G A C T G G 5’ Template Strand**

**2. When a gene is translated, the ribosome starts at the 5’ end of the mRNA. To find out your superpower the next step is to translate the mRNA you created in #1. (Hint: the ribosome does not start translating until if finds the START codon.)**

**3. Compare your protein sequence to the key to determine what superpower you inherited from your parents.**

**What is your superpower?**

**Version E: What Superpower Do You Have?**

**Below is the Superpower Gene that you inherited from your parents.**

**3’ A G G T C T A C C C T T C A G G A T A G G C T C T T A T C G G 5’ Template Strand**

**5’ T C C A G A T G G G A A G T C C T A T C C G A G A A T A G C C 3’ Coding Strand**

**1. When a gene is transcribed only the template strand of the DNA is used; the other is ignored. To find out your superpower the first step is to transcribe the template strand.**

**3’ A G G T C T A C C C T T C A G G A T A G G C T C T T A T C G G 5’ Template Strand**

**2. When a gene is translated, the ribosome starts at the 5’ end of the mRNA. To find out your superpower the next step is to translate the mRNA you created in #1. (Hint: the ribosome does not start translating until if finds the START codon.)**

**3. Compare your protein sequence to the key to determine what superpower you inherited from your parents.**

**What is your superpower?**

**Version F: What Superpower Do You Have?**

**Below is the Superpower Gene that you inherited from your parents.**

**3’ A G G T C T A C T T C C C A G C A A A C C C G C A A A T T G G 5’ Template Strand**

**5’ T C C A G A T G A A G G G T C G T T T G G G C G T T T A A C C 3’ Coding Strand**

**1. When a gene is transcribed only the template strand of the DNA is used; the other is ignored. To find out your superpower the first step is to transcribe the template strand.**

**3’ A G G T C T A C T T C C C A G C A A A C C C G C A A A T T G G 5’ Template Strand**

**2. When a gene is translated, the ribosome starts at the 5’ end of the mRNA. To find out your superpower the next step is to translate the mRNA you created in #1. (Hint: the ribosome does not start translating until if finds the START codon.)**

**3. Compare your protein sequence to the key to determine what superpower you inherited from your parents.**

**What is your superpower?**