

**S Phase Worksheet**

Name \_\_\_\_\_ Per. \_\_\_\_\_

You will draw out the steps of the S phase of Interphase, DNA replication. In each box, draw the event described. You will use 3 different colors: one for the original strands of DNA, one for the leading strand, and one for the lagging strand. You must label all the bold words in each drawing. Use the drawing on the back to help you.

<p>1. Draw the DNA double helix, with the sequence on the 5' to 3' strand: ACCGTATTGATC Label the 5' and 3' on each strand.</p>	<p>2. <b>Helicase</b> (■) begins to unwind the DNA at the <b>replication fork</b>.</p>	<p>3. <b>DNA polymerase</b> adds complementary bases in the 5' to 3' direction (<b>leading strand</b>).</p>	<p>4. DNA polymerase adds complementary bases discontinuously in the 5' to 3' direction (<b>lagging strand</b>), forming <b>Okazaki fragments</b>, connected by <b>DNA ligase</b>.</p>	<p>5. Two DNA double helices are formed, showing <b>semiconservative replication</b>.</p>