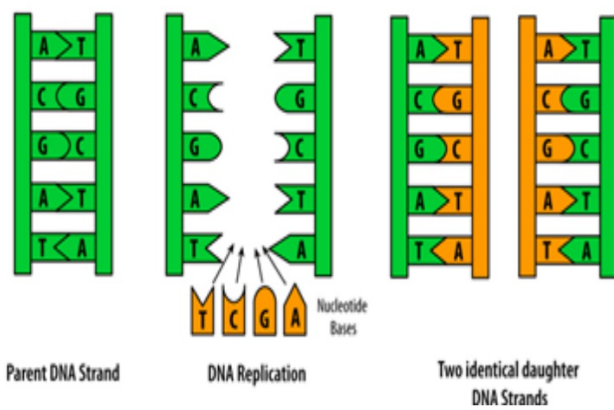


# DNA Replication



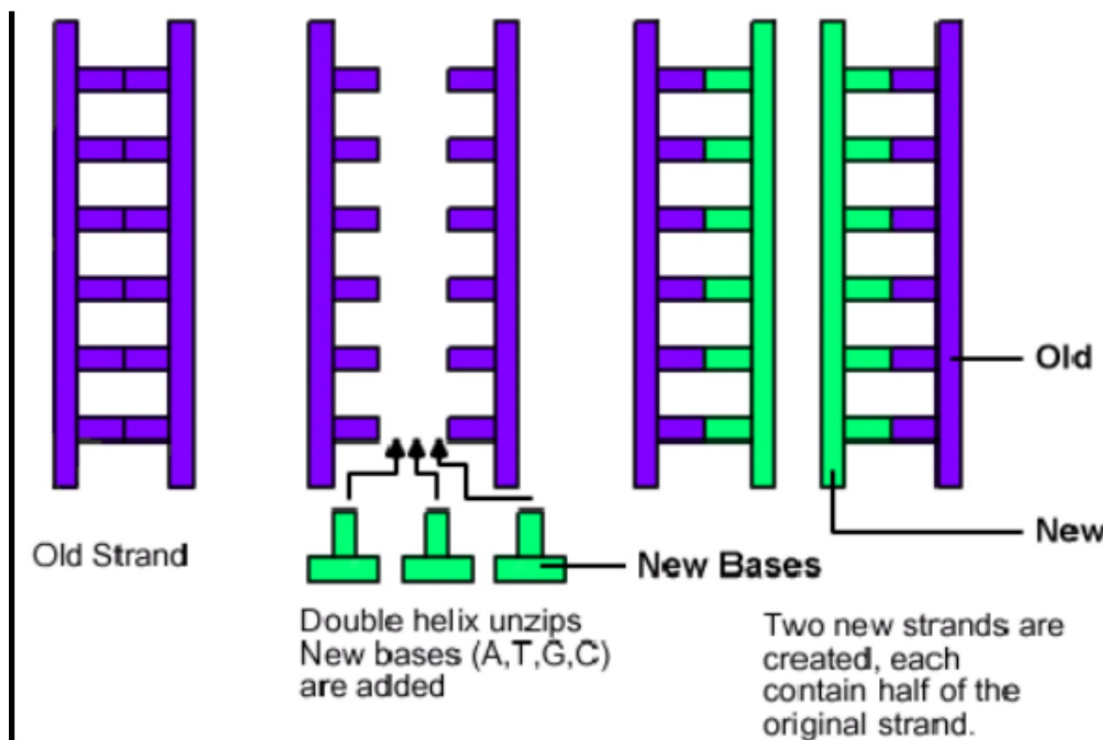
What does "replication" mean?!

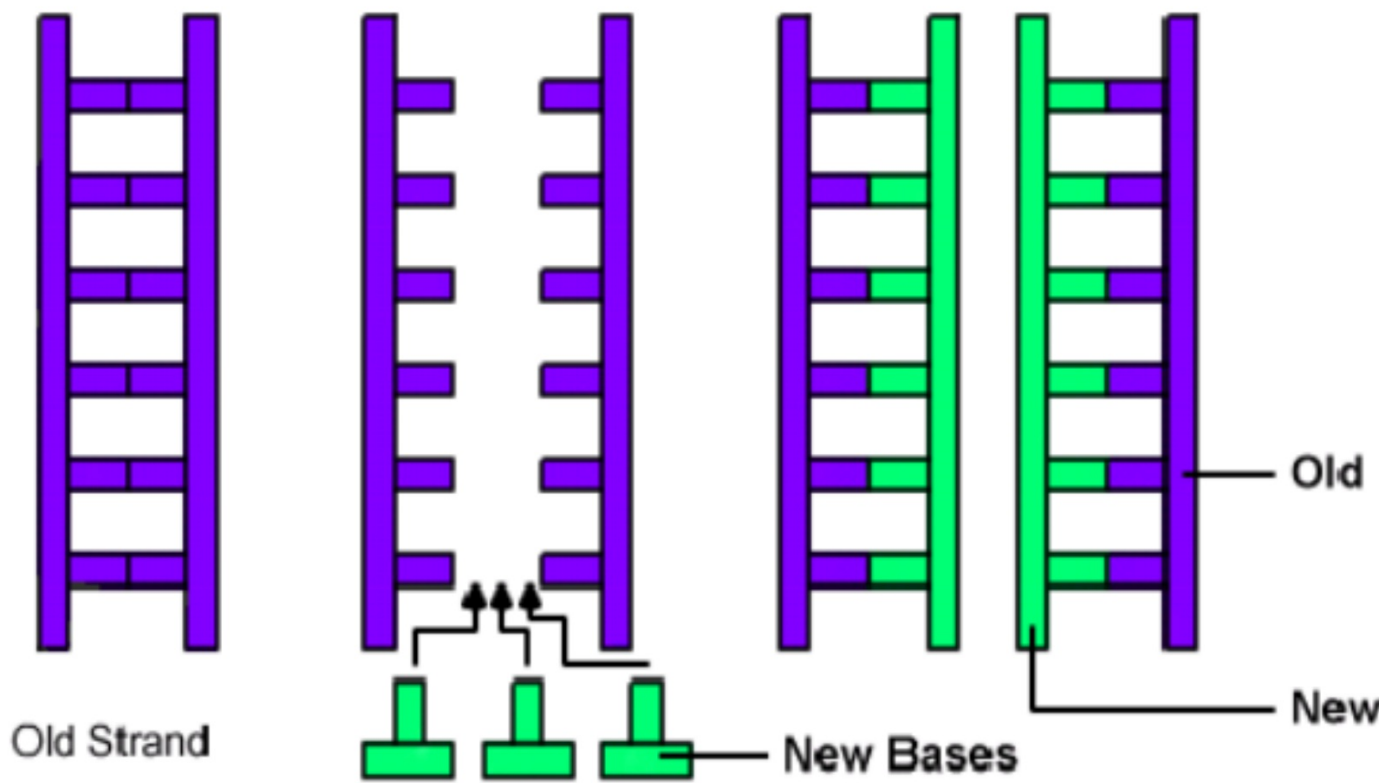
<b>WHAT</b> is it?	<b>When DNA copies itself</b>
<b>WHERE</b> does it happen?	<b>Nucleus</b>
<b>WHY</b> does DNA need to make a copy of <u>itself</u> ?	Cells divide for an organism to <b>grow</b> or <b>reproduce</b> . Every <b>new</b> cell needs a <b>copy</b> of the DNA to know how to be a cell. DNA makes an exact <b>copy</b> of itself <b>before</b> the cell <b>divides</b> .
<b>HOW</b> does it occur?	<ol style="list-style-type: none"> <li><b>UNZIP</b>: An enzyme "<b>unzips</b>" the 2 strands of DNA by breaking the weak <b>hydrogen</b> bonds</li> <li><b>ADD</b>: New nucleotides are added to the old strands (REVIEW: A= <b>T</b>; C= <b>G</b>)</li> <li><b>ZIPUP</b>: Another <b>enzyme</b> zips the strands back up</li> <li><b>PROOFREAD</b>: DNA polymerase <b>proofreads</b> the strands to make sure there are no mistakes</li> </ol>

→ DNA replication is **semi-conservative** = when the DNA copies itself, it always has **one** parental strand, **one** daughter strand

Semi: <b>half</b> Conservative: <b>contains original strand</b>
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**Draw it - Use 2 different colors!!!**





Double helix unzips  
New bases (A,T,G,C)  
are added

Two new strands are  
created, each  
contain half of the  
original strand.

<https://www.youtube.com/watch?v=zdDkiRw1PdU&feature=related>

<https://www.youtube.com/watch?v=V9BZ3zx8b8I&feature=related>