**CONCEPT:** ANIMAL VIRUSES: DNA VIRUS SYNTHESIS & REPLICATION

●Most DNA viruses replicate inside of the host cell's _____ using the host cell's components.

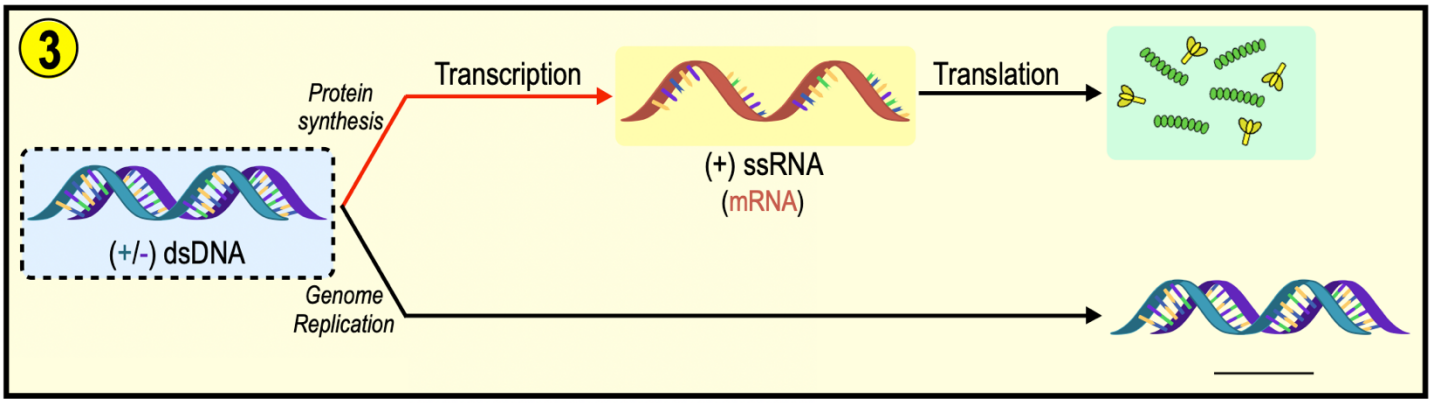
□ Encode their own _____ polymerases so the virus genome can replicate even when the host cell is not.

## Synthesis & Replication of Double-Stranded DNA (dsDNA) Viruses

●dsDNA virus replication/expression follows the _____ steps of the *central dogma of biology*.

□ *Recall:* complementary strands of dsDNA are a (+) strand & (–) strand referred to as *(+/–) dsDNA.*

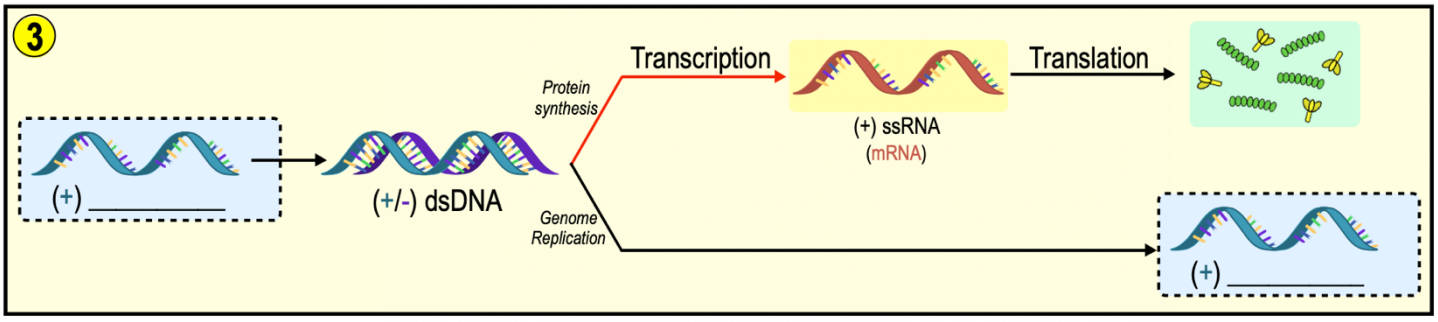
□ Transcription produces _____ (+ ssRNA) which is *translated* to make _____.




## Synthesis & Replication of Single-Stranded DNA (ssDNA) Viruses

●Replication of ssDNA viruses is very _____ to the replication of dsDNA viruses with the *addition* of an extra step.

□ ____DNA is converted to (+/–) ____DNA, which is transcribed to mRNA or used to replicate the ssDNA genome.




**PRACTICE:** Which of the following has never been found in a virus?

a) DNA.
c) Lipids.
**b)** RNA.
d) Ribosomes.

**CONCEPT:** ANIMAL VIRUSES: DNA VIRUS SYNTHESIS & REPLICATION

**PRACTICE:** Which of the following is *not* a described type of animal virus?

a) A virus containing double strand DNA.
b) A virus containing single strand DNA.
c) A virus containing single strand DNA and single strand RNA.
d) A virus containing single strand RNA.
e) A virus containing double strand RNA.

**PRACTICE**: What step is required in the synthesis of ssDNA viruses that is not required in the synthesis of dsDNA viruses?

a) The viral ssDNA must be converted to dsDNA before it can be transcribed.
b) The viral ssRNA must be converted to dsRNA before it can be translated.
c) The viral ssDNA must be replicated before it can be transcribed.
d) All of the steps required to synthesize ssDNA and dsDNA viruses are the same.