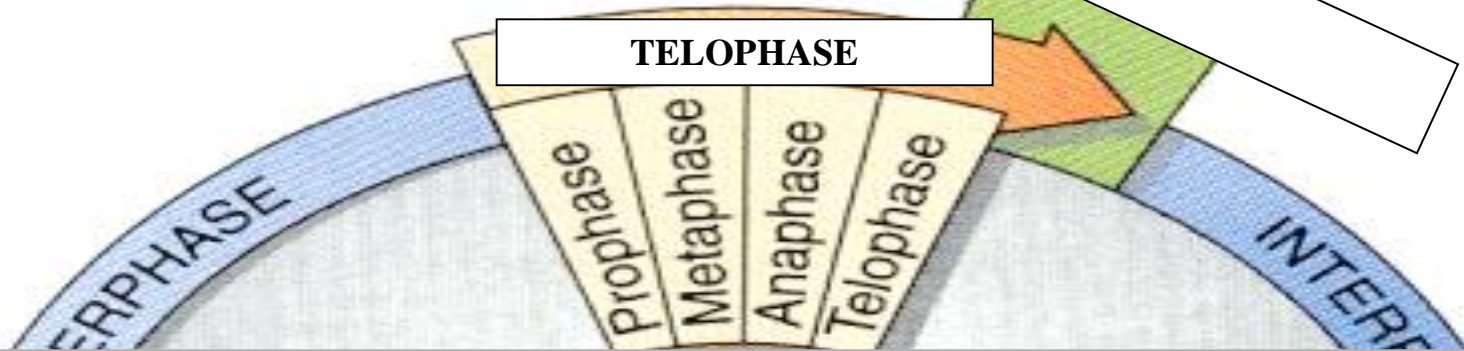


# SOMATIC CELL CYCLE

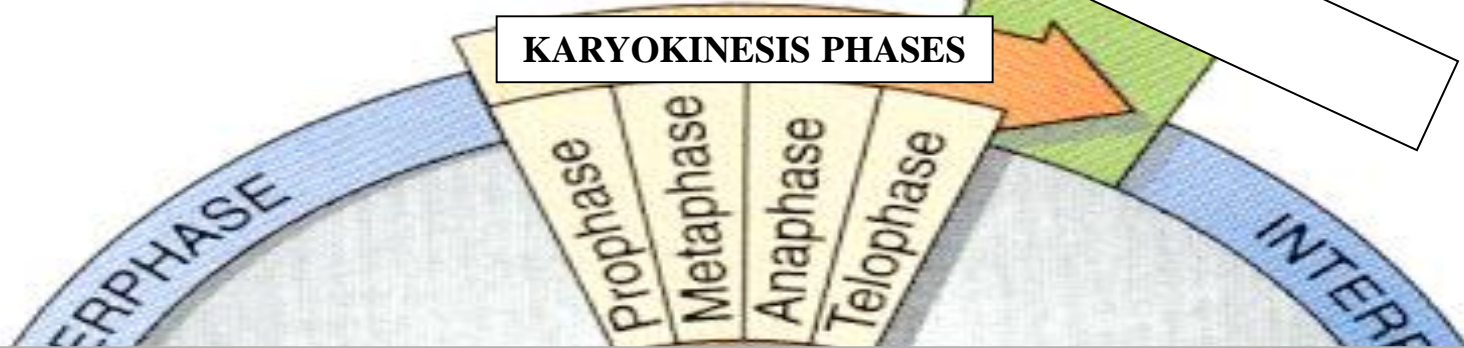
S



**INTERPHASE  
IS NOT A  
KARYOKINESIS  
PHASE**

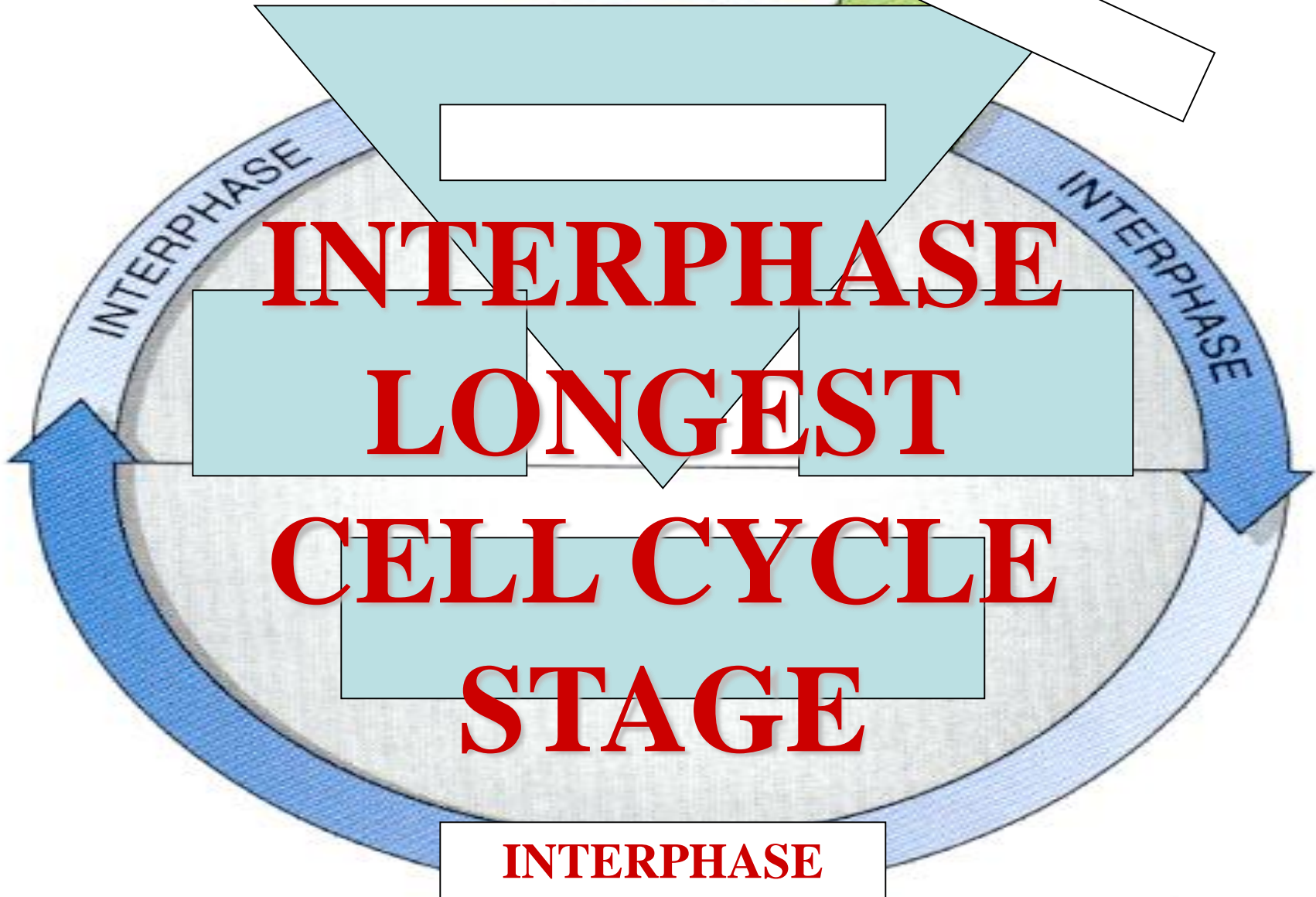
# SOMATIC CELL CYCLE

L



**INTERPHASE  
IS A  
CELL CYCLE  
STAGE**

# SOMATIC CELL CYCLE



INTERPHASE

# INTERPHASE PERIODS

# **SOMATIC CELL CYCLE INTERPHASE PERIODS**

**G1 PERIOD**

**SOMATIC CELL CYCLE  
INTERPHASE PERIODS**

# **SOMATIC CELL CYCLE INTERPHASE PERIODS**

**G1 PERIOD**

**S PERIOD**

# **SOMATIC CELL CYCLE INTERPHASE PERIODS**

# **SOMATIC CELL CYCLE INTERPHASE PERIODS**



**G1 PERIOD**

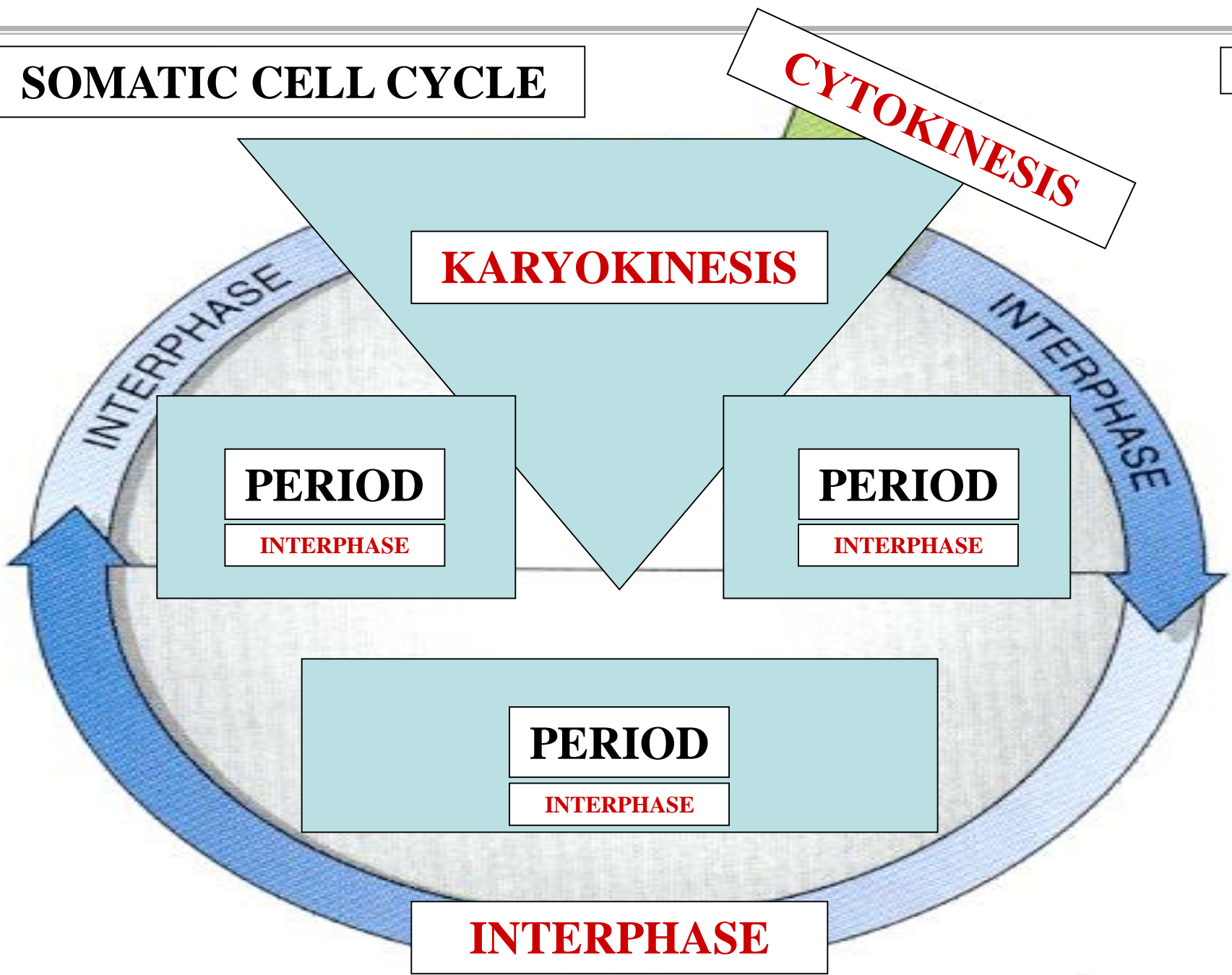
**S PERIOD**

**G2 PERIOD**

# **SOMATIC CELL CYCLE INTERPHASE PERIODS**

# SOMATIC CELL CYCLE

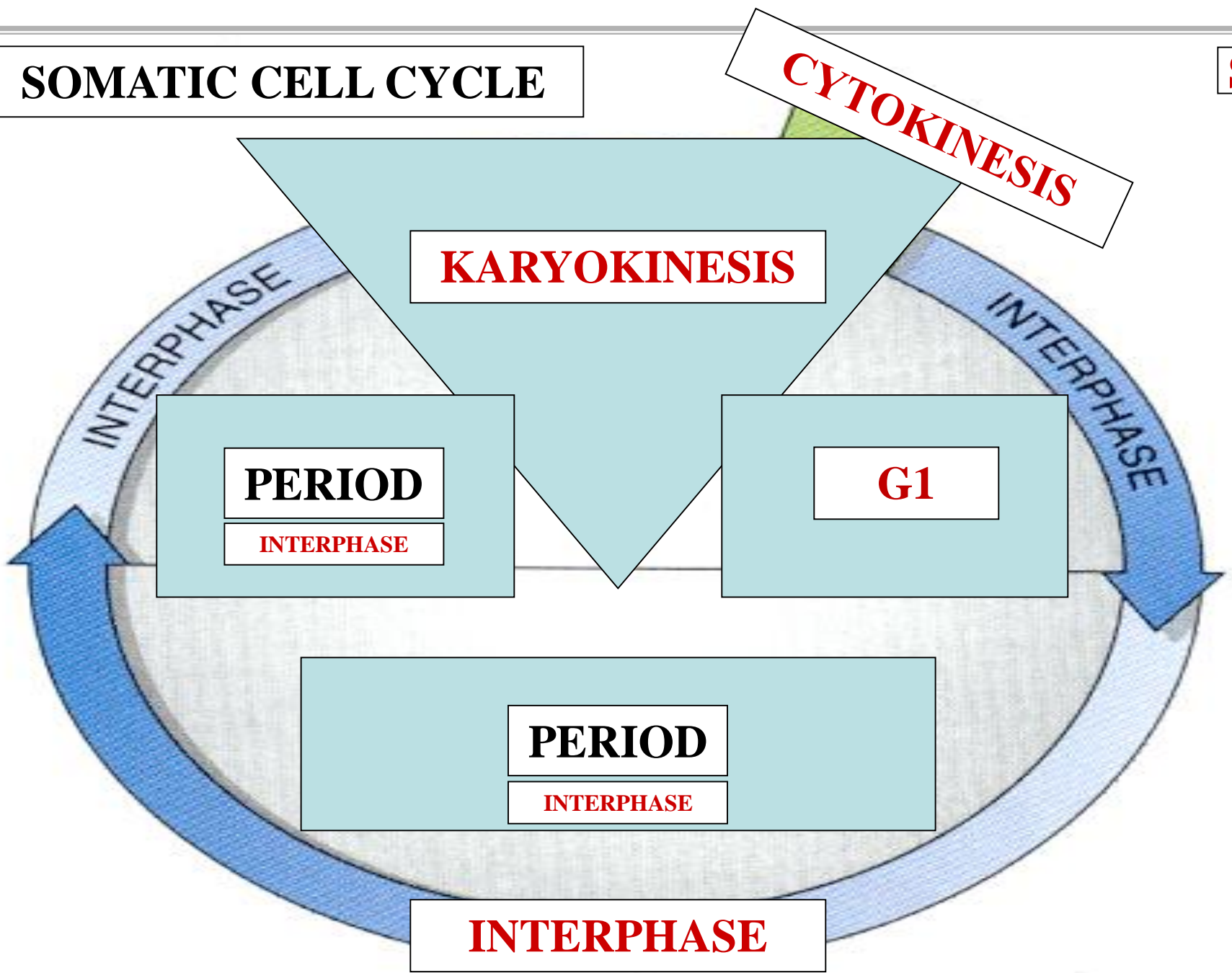
1





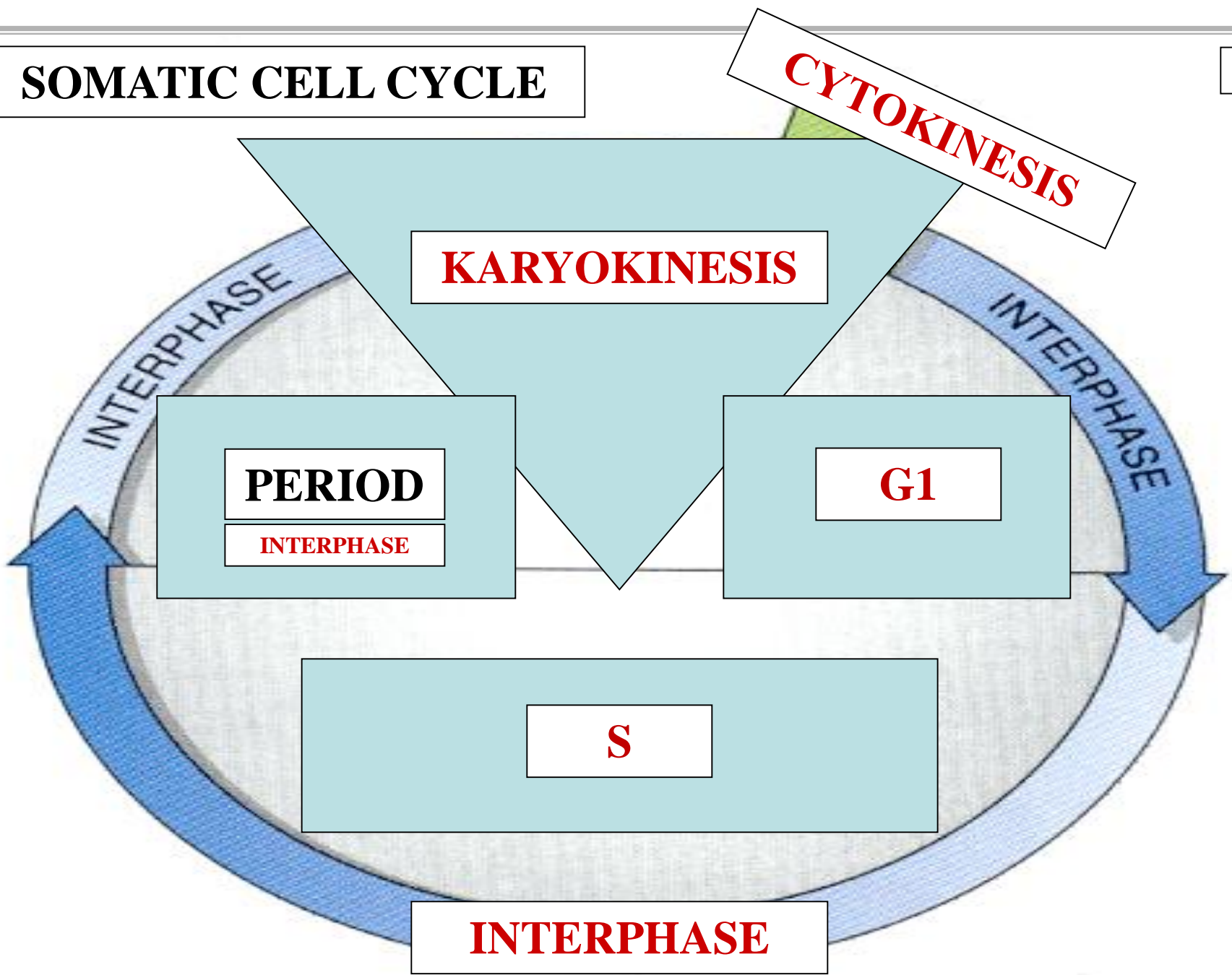
# SOMATIC CELL CYCLE

S

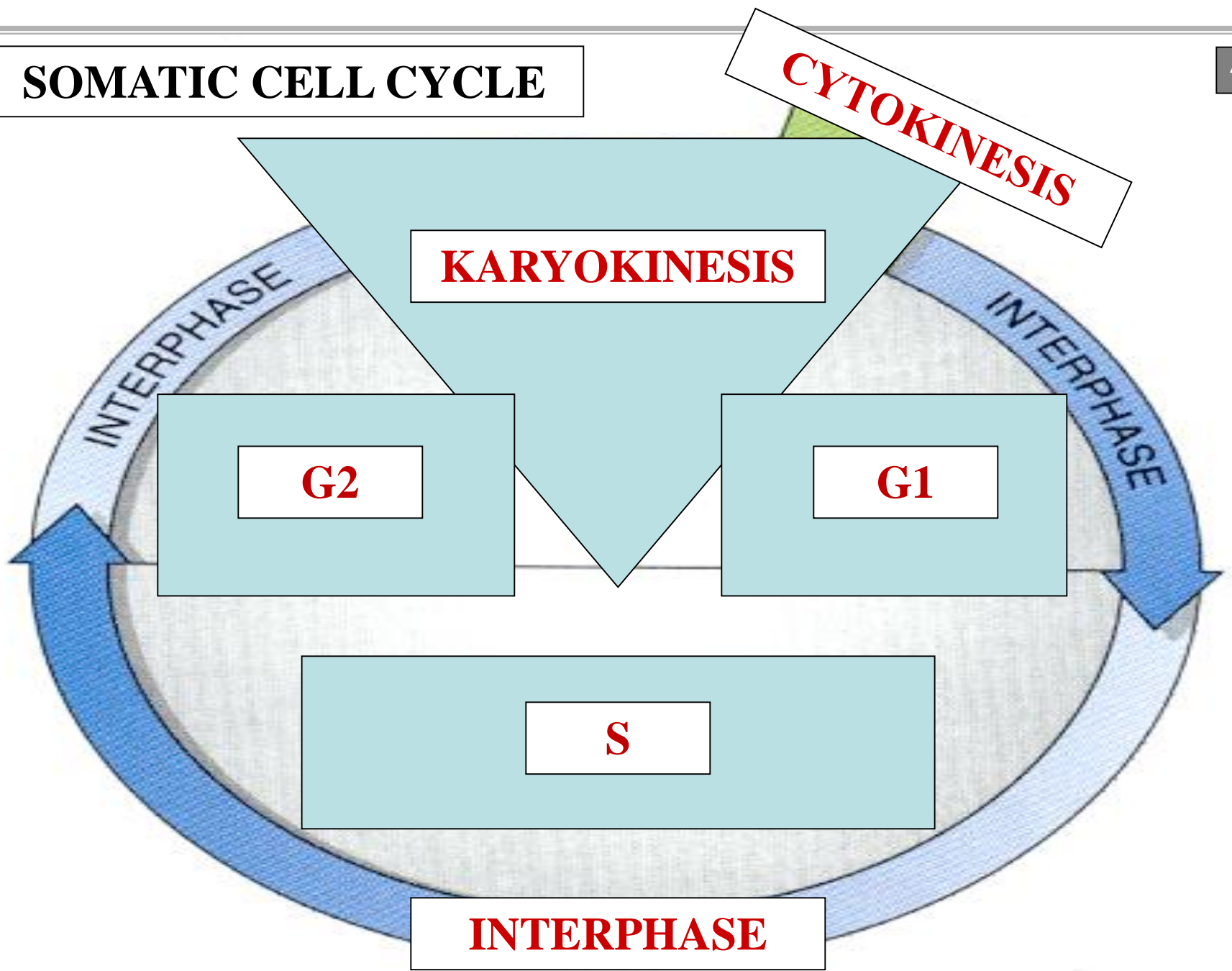


# SOMATIC CELL CYCLE

2



# SOMATIC CELL CYCLE



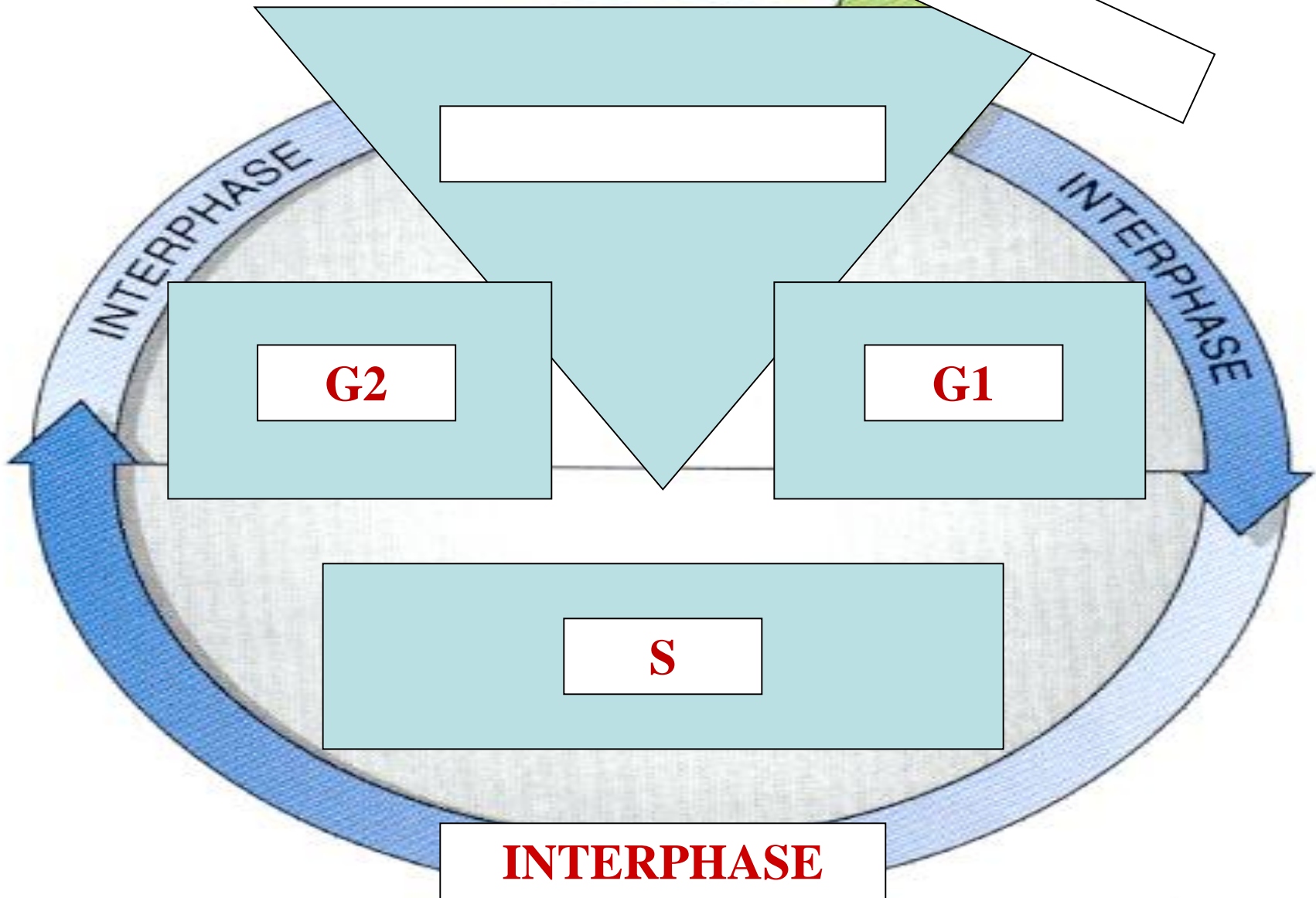
# INTERPHASE PERIODS SPECIFICS



# **INTERPHASE G1 PERIOD SPECIFICS**

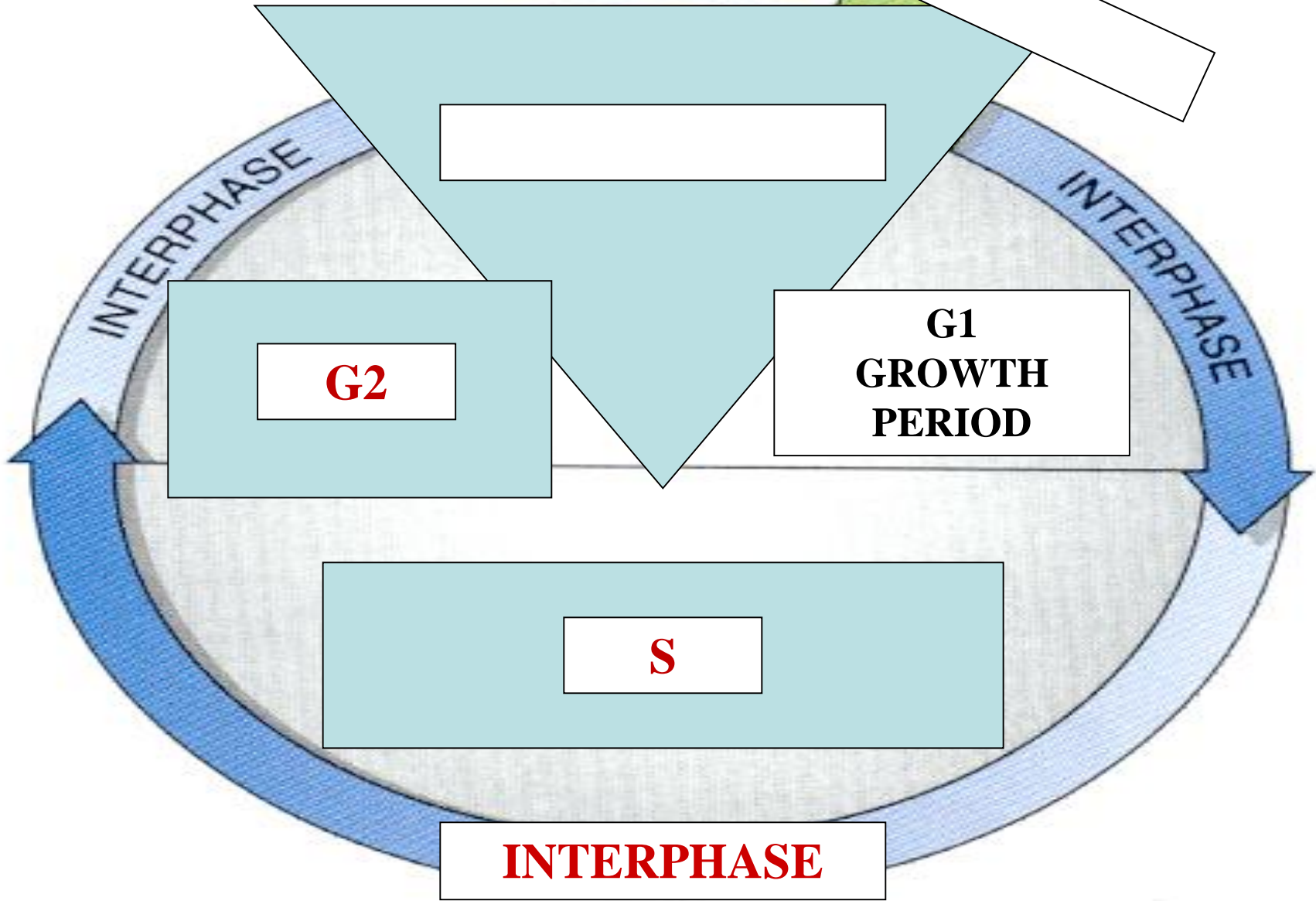
# SOMATIC CELL CYCLE

G



# SOMATIC CELL CYCLE

P

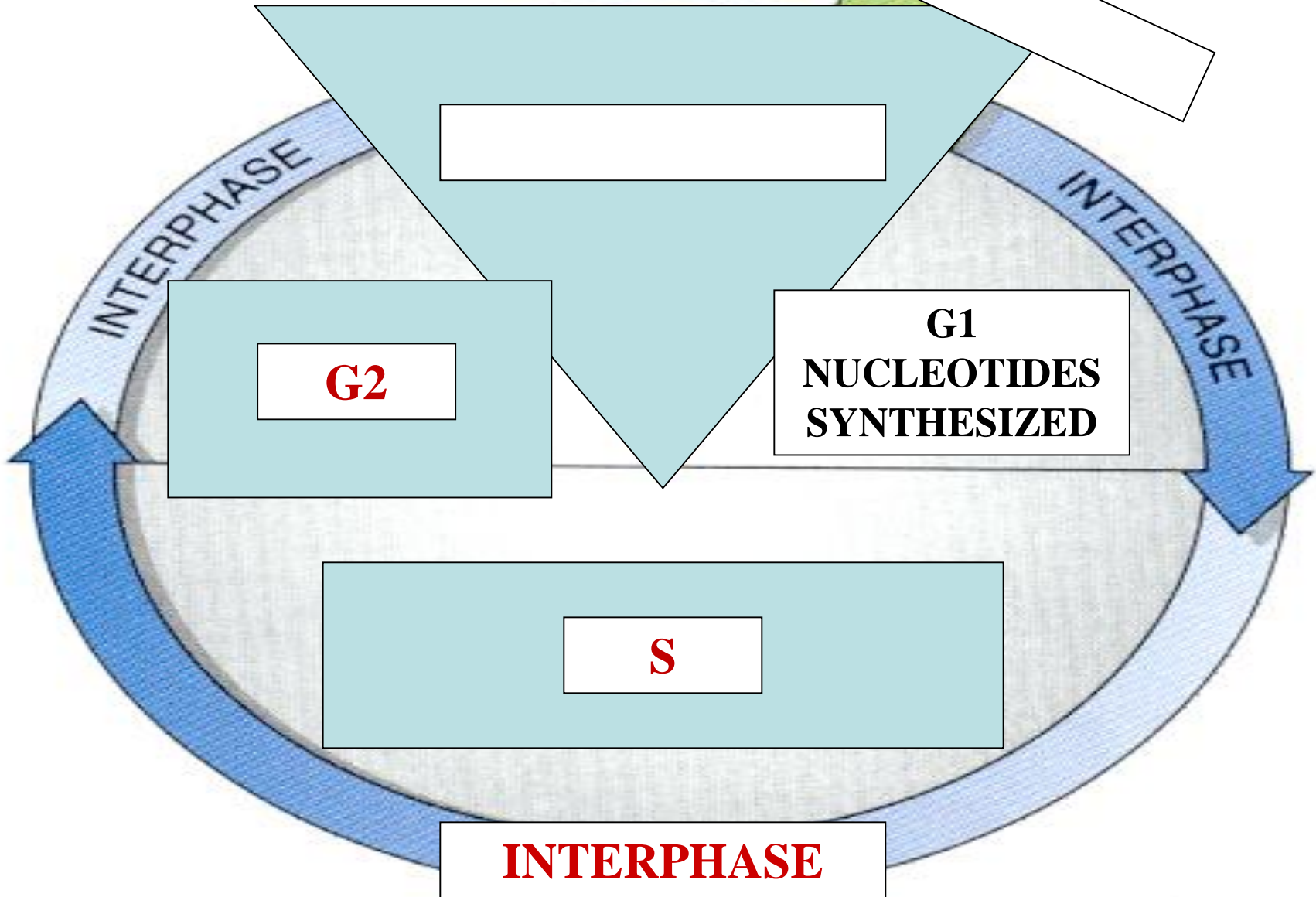






# SOMATIC CELL CYCLE

^

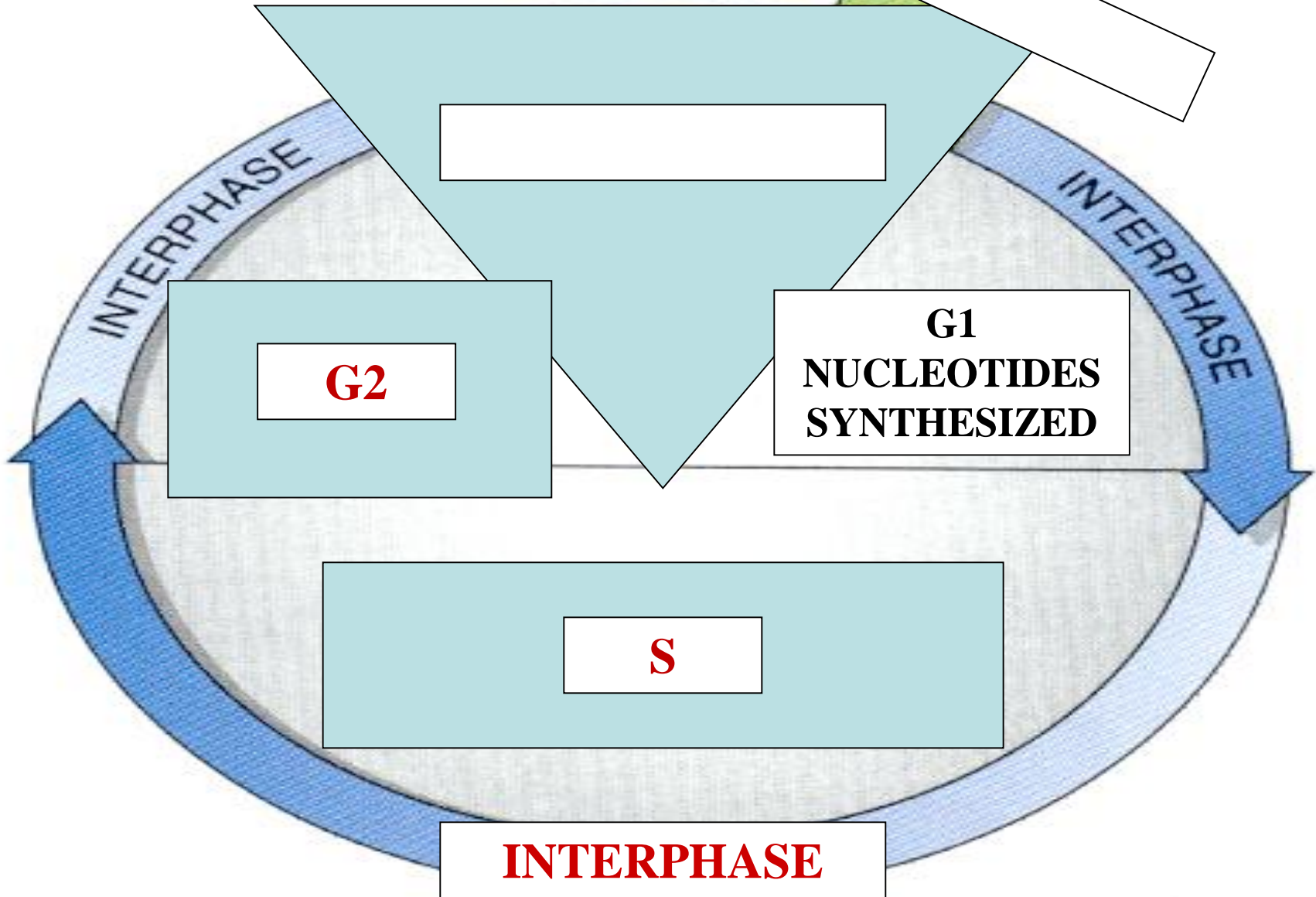




# **INTERPHASE S PERIOD SPECIFICS**

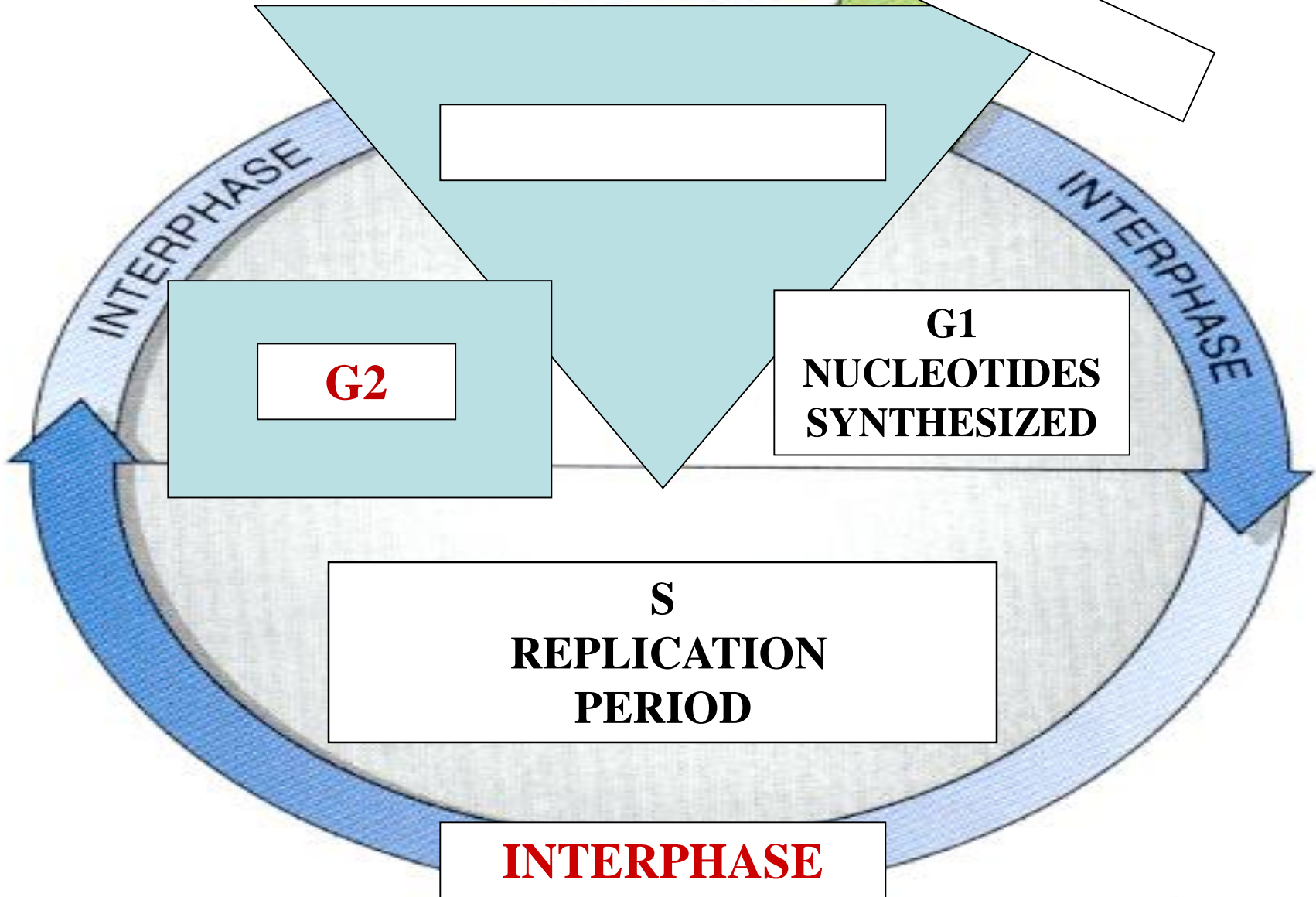
# SOMATIC CELL CYCLE

R



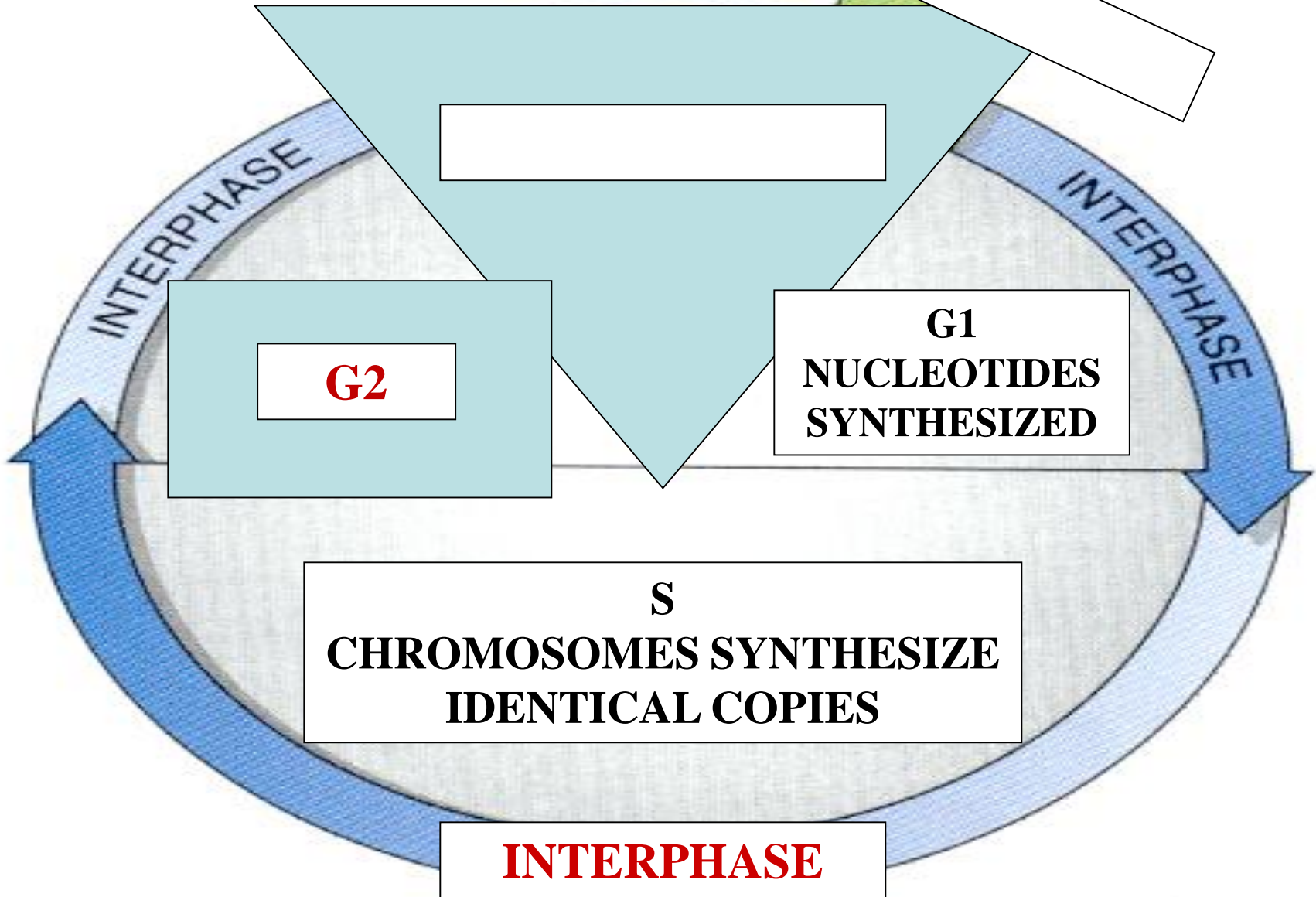
# SOMATIC CELL CYCLE

C



# SOMATIC CELL CYCLE

^

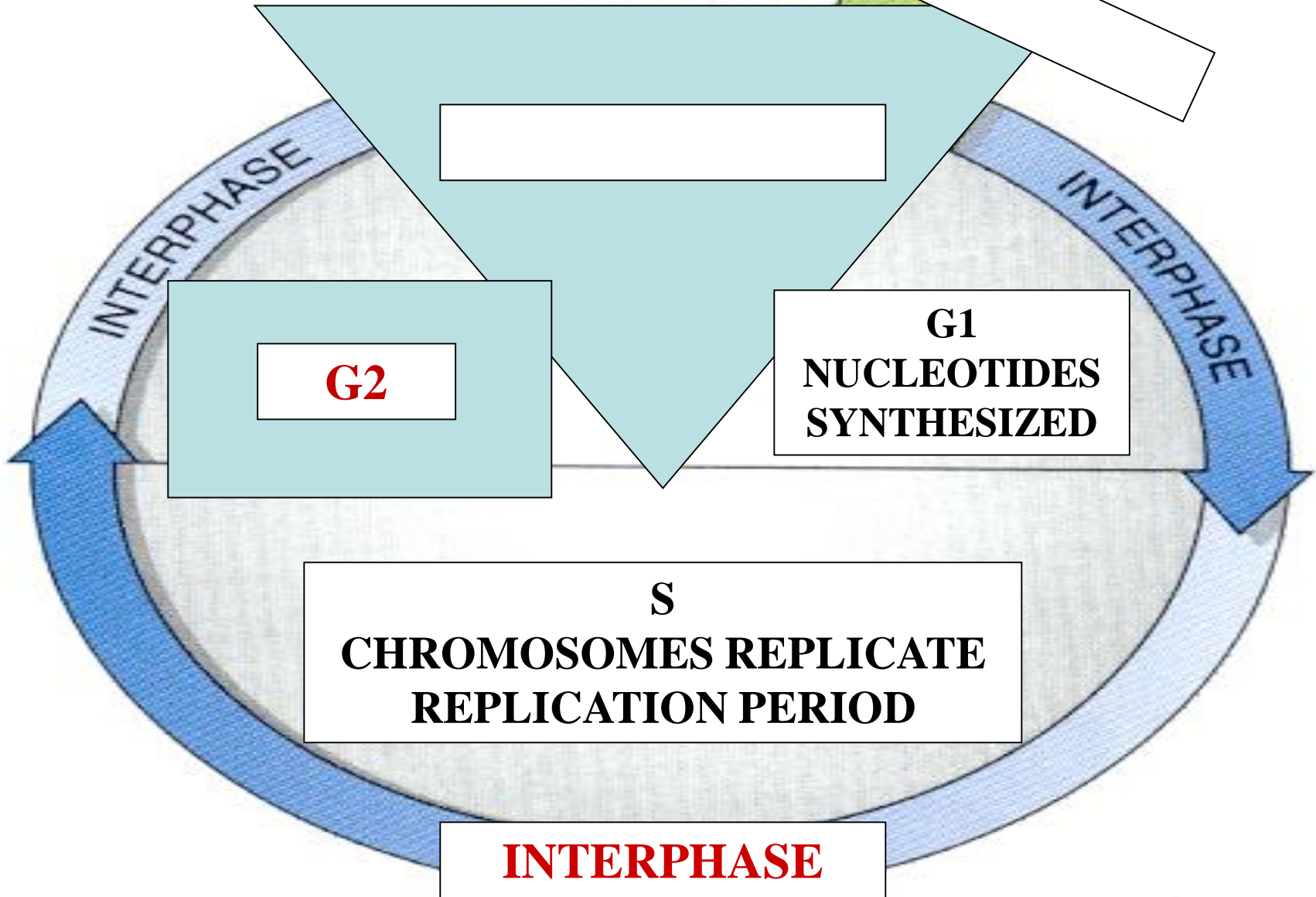




# **INTERPHASE G2 PERIOD SPECIFICS**

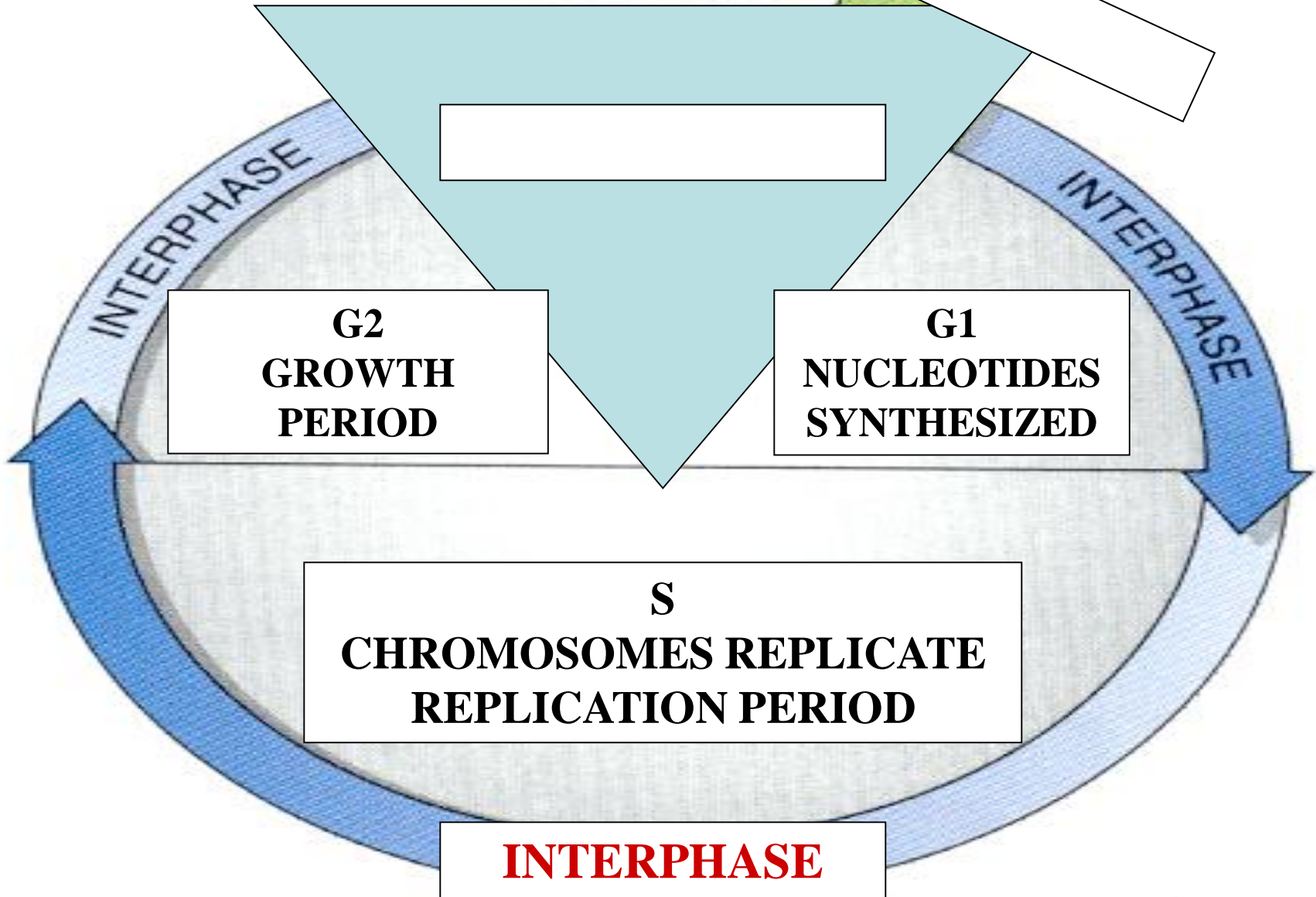
# SOMATIC CELL CYCLE

G



# SOMATIC CELL CYCLE

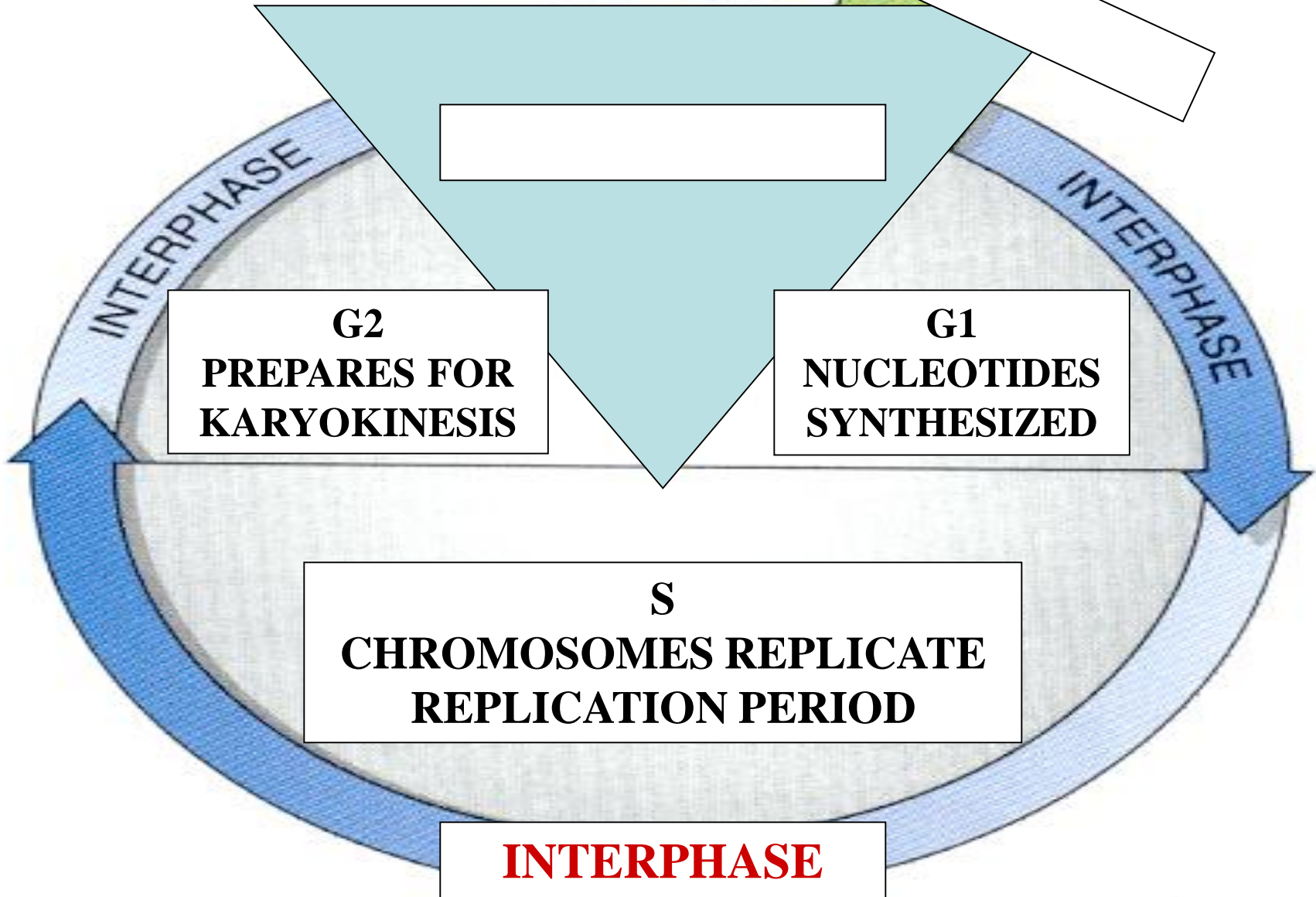
P



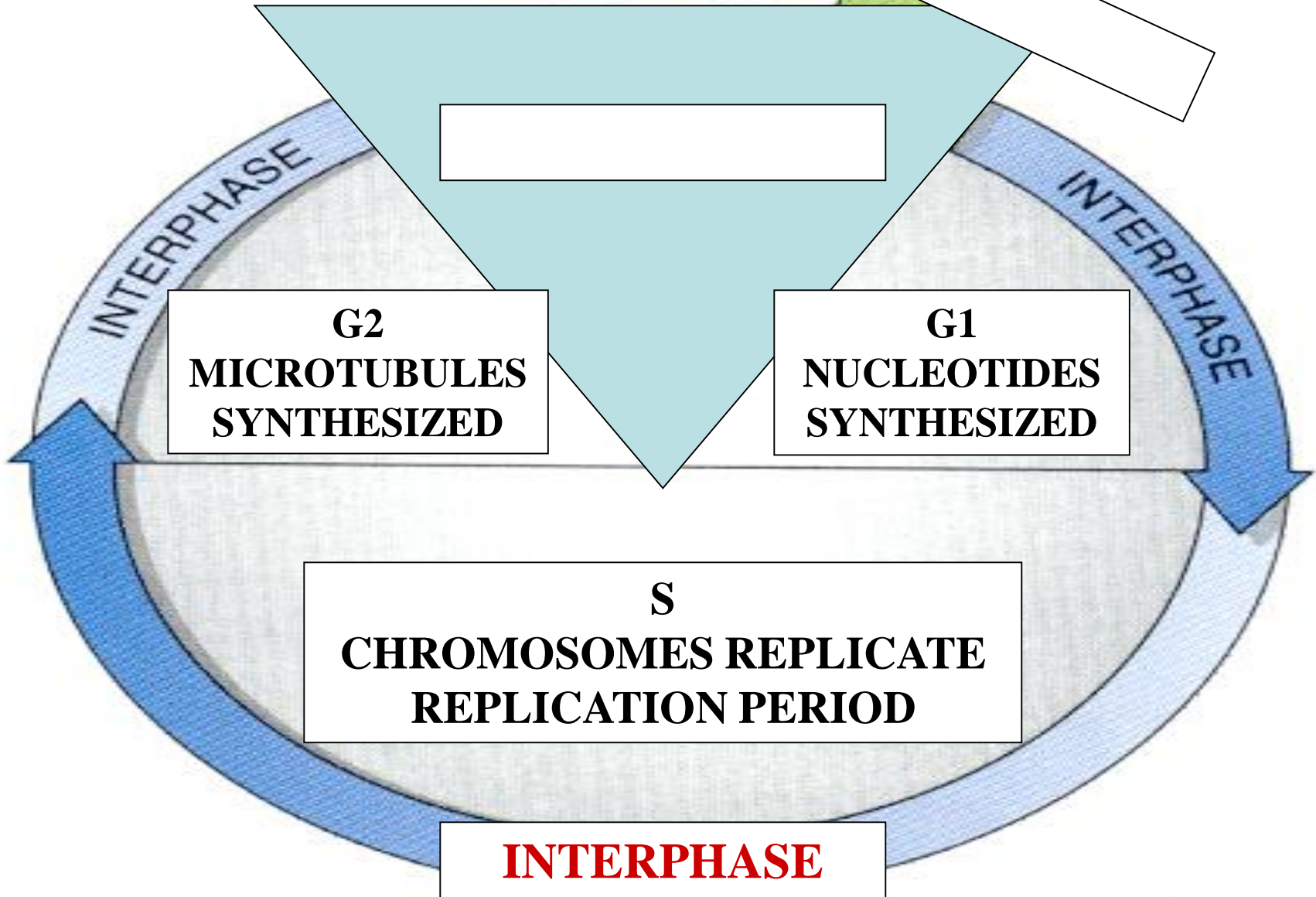


# SOMATIC CELL CYCLE

M



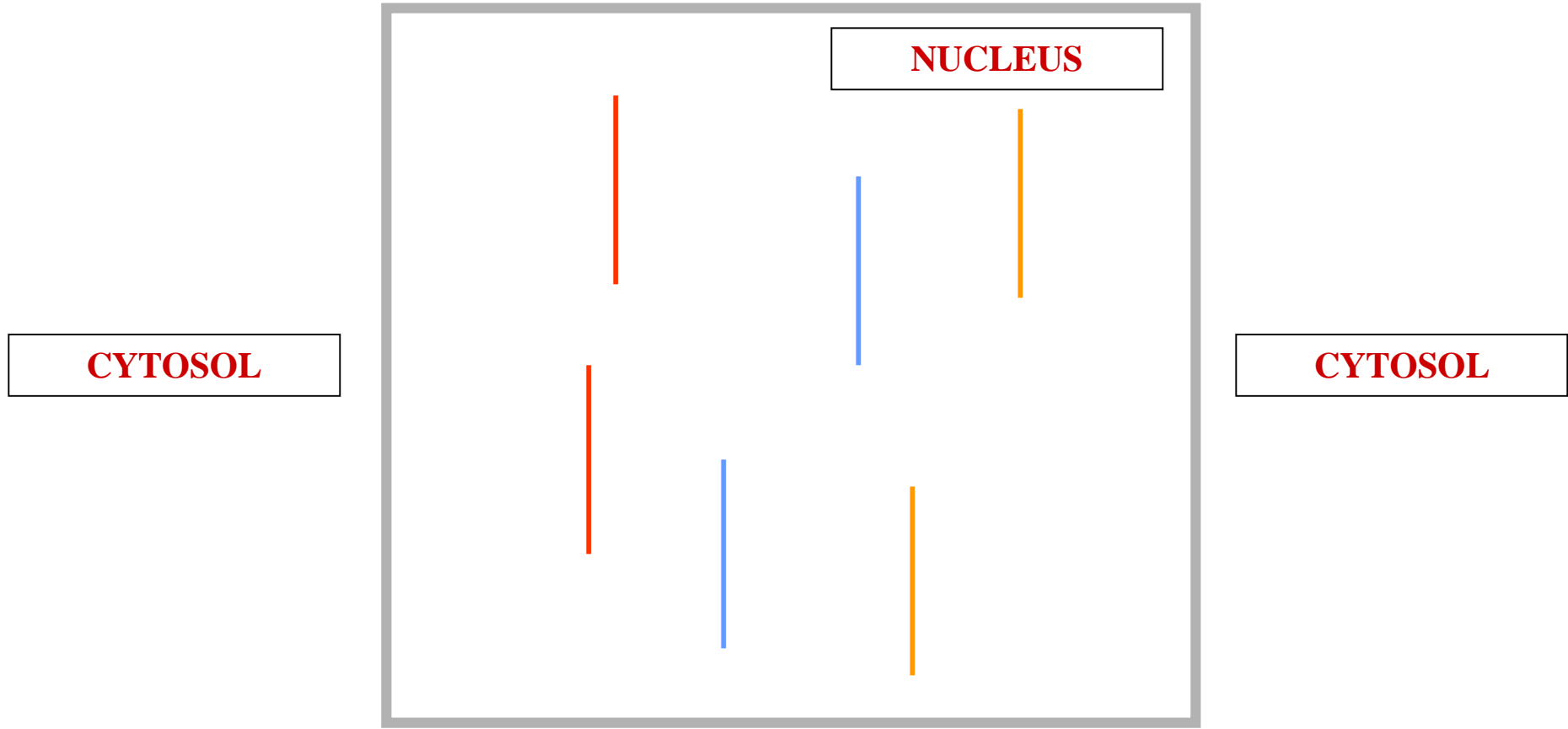
# SOMATIC CELL CYCLE





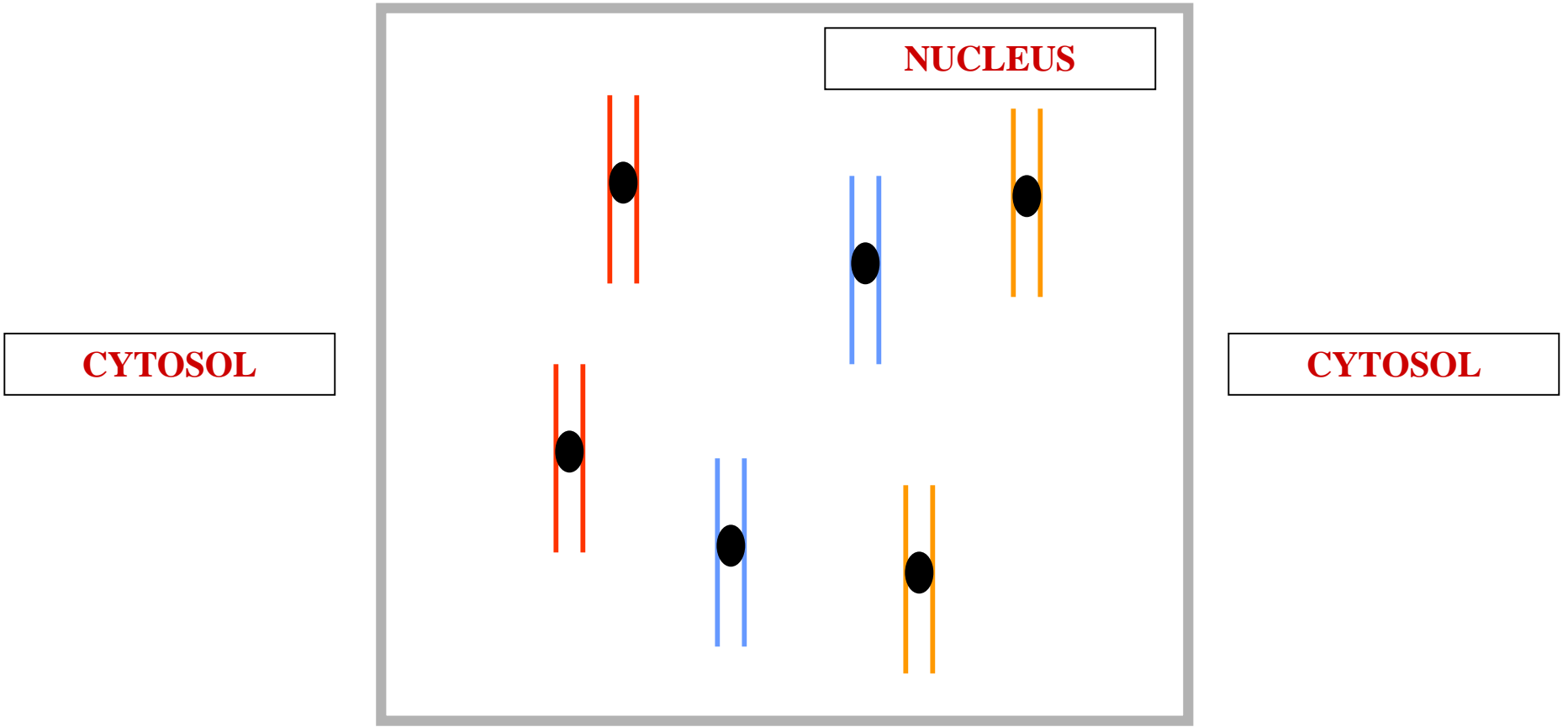
# INTERPHASE SUMMARY

# INTERPHASE



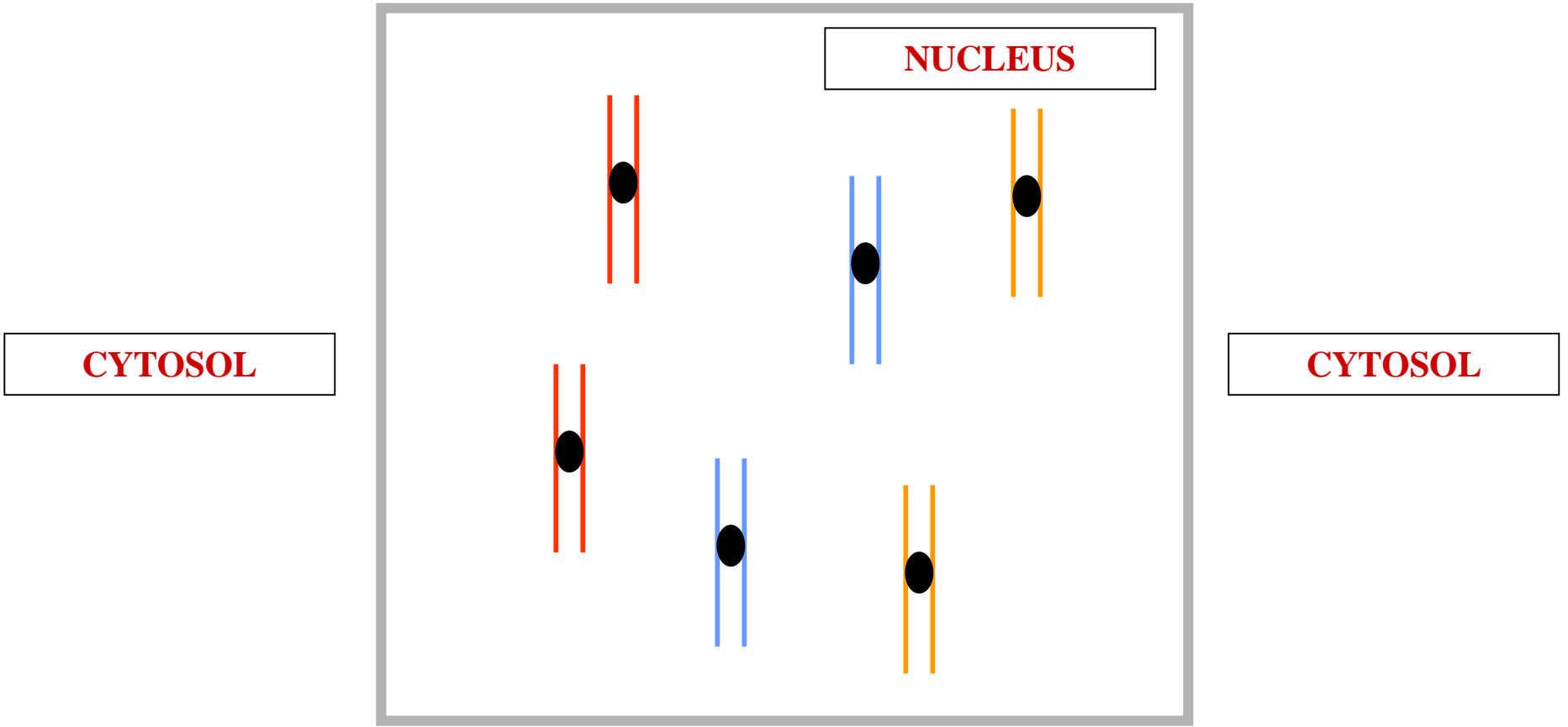
**6 CHROMOSOMES**

# INTERPHASE



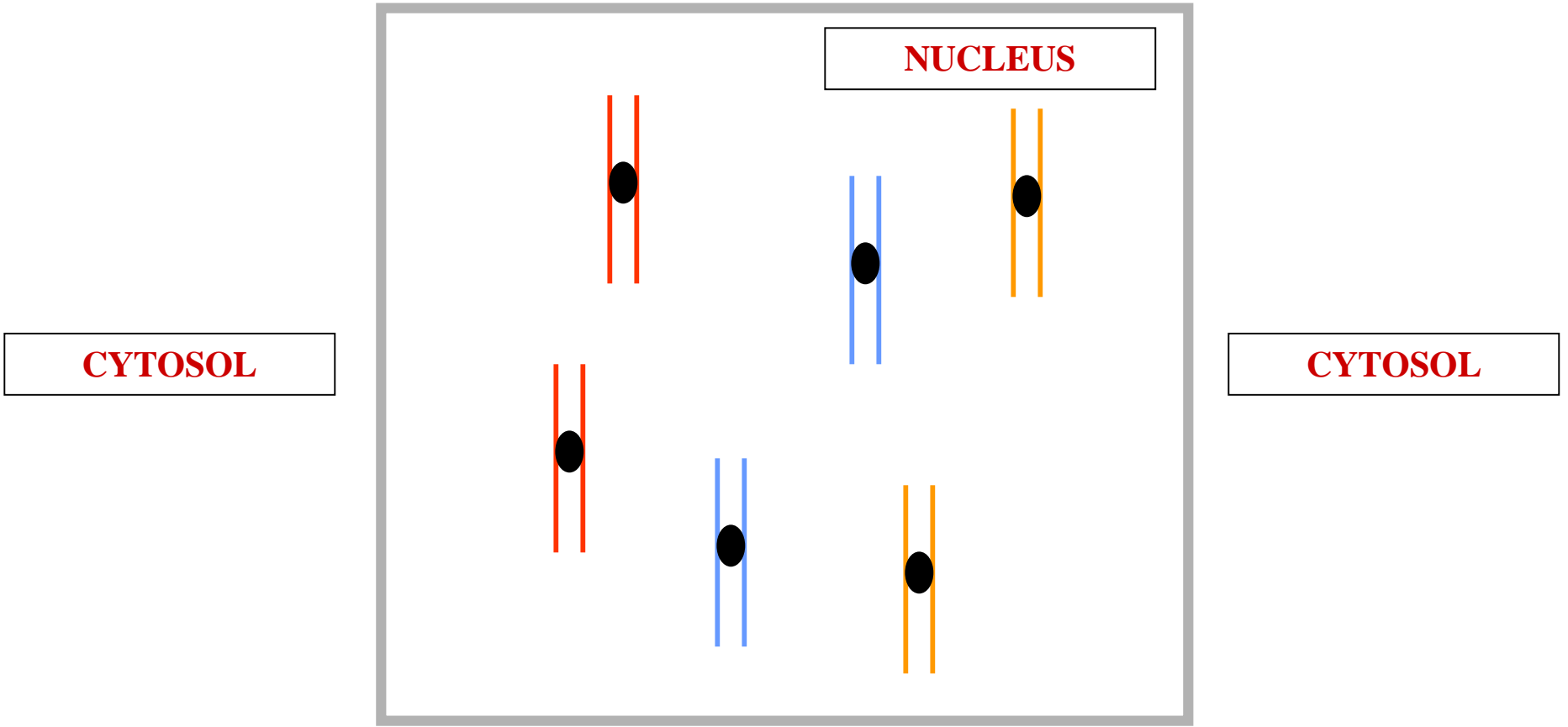
# CHROMOSOMES REPLICATE

# INTERPHASE



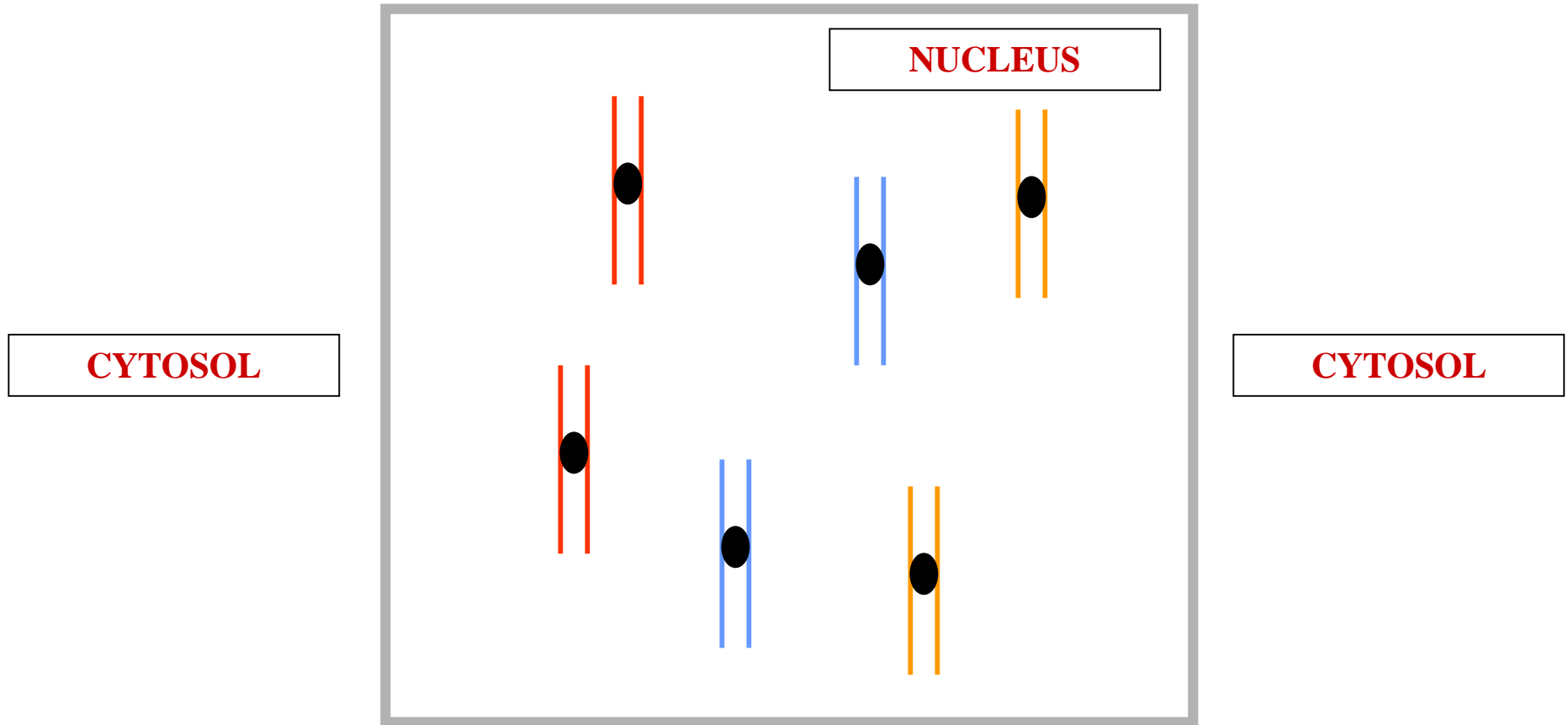
# TWO CHROMATIDS

# INTERPHASE



## DNA CONTENT DOUBLED

# INTERPHASE



**6 CHROMOSOMES**



**INTERPHASE**



**SOMATIC ROOT CELL**

**WILD ONION**

# INTERPHASE



**NUCLEOLUS  
CONCENTRATED  
RED REGION WITHIN  
NUCLEUS**



**SOMATIC PLANT CELL**

**WILD ONION**

# **KARYOKINESIS STAGE**

# **KARYOKINESIS**

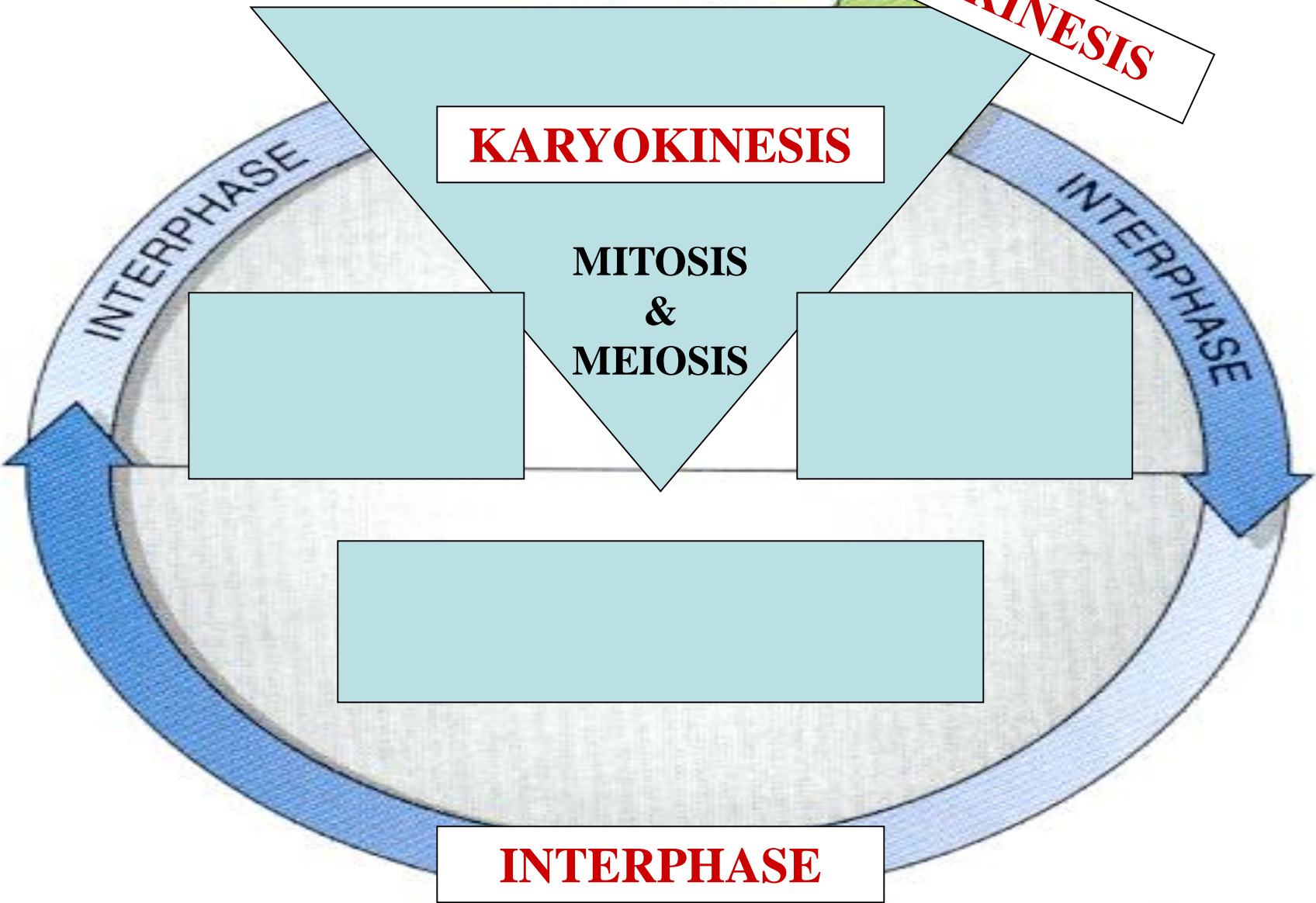
# **KARYOKINESIS STAGE**



**NUCLEUS DIVISION**

# **KARYOKINESIS STAGE**

# CELL CYCLE



**CYTOKINESIS**

**KARYOKINESIS**

**MITOSIS  
&  
MEIOSIS**

INTERPHASE

INTERPHASE

**INTERPHASE**



# **KARYOKINESIS**

# **MITOSIS**

# KARYOKINESIS MITOSIS PHASES



# **KARYOKINESIS MITOSIS PHASES**

**PROPHASE**

# **KARYOKINESIS MITOSIS PHASES**

**KARYOKINESIS  
MITOSIS PHASES**

**PROPHASE  
METAPHASE**

**KARYOKINESIS  
MITOSIS PHASES**

**KARYOKINESIS  
MITOSIS PHASES**

**PROPHASE**

**METAPHASE**

**ANAPHASE**

**KARYOKINESIS  
MITOSIS PHASES**

# **KARYOKINESIS MITOSIS PHASES**



**PROPHASE**

**METAPHASE**

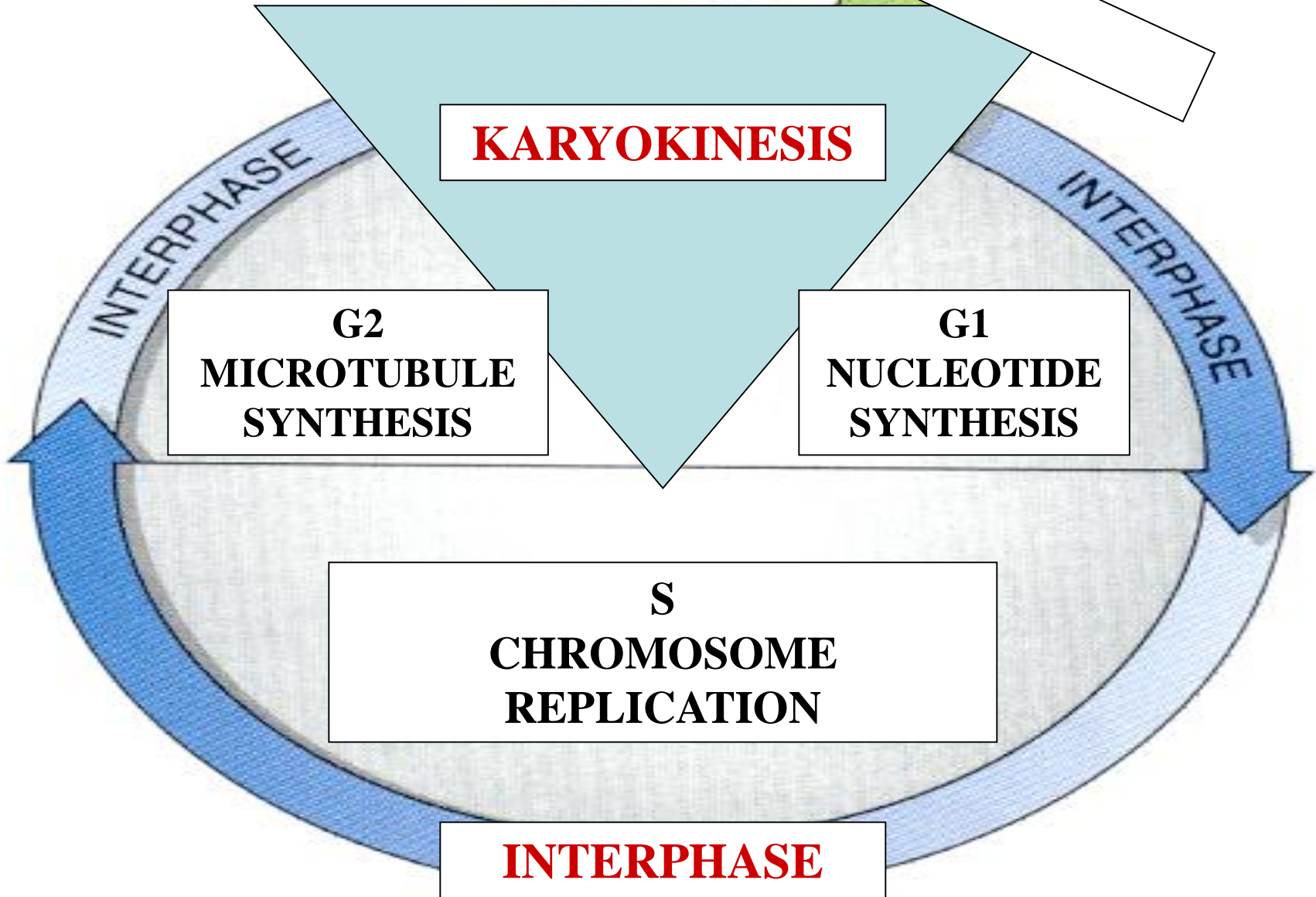
**ANAPHASE**

**TELOPHASE**

# **KARYOKINESIS MITOSIS PHASES**

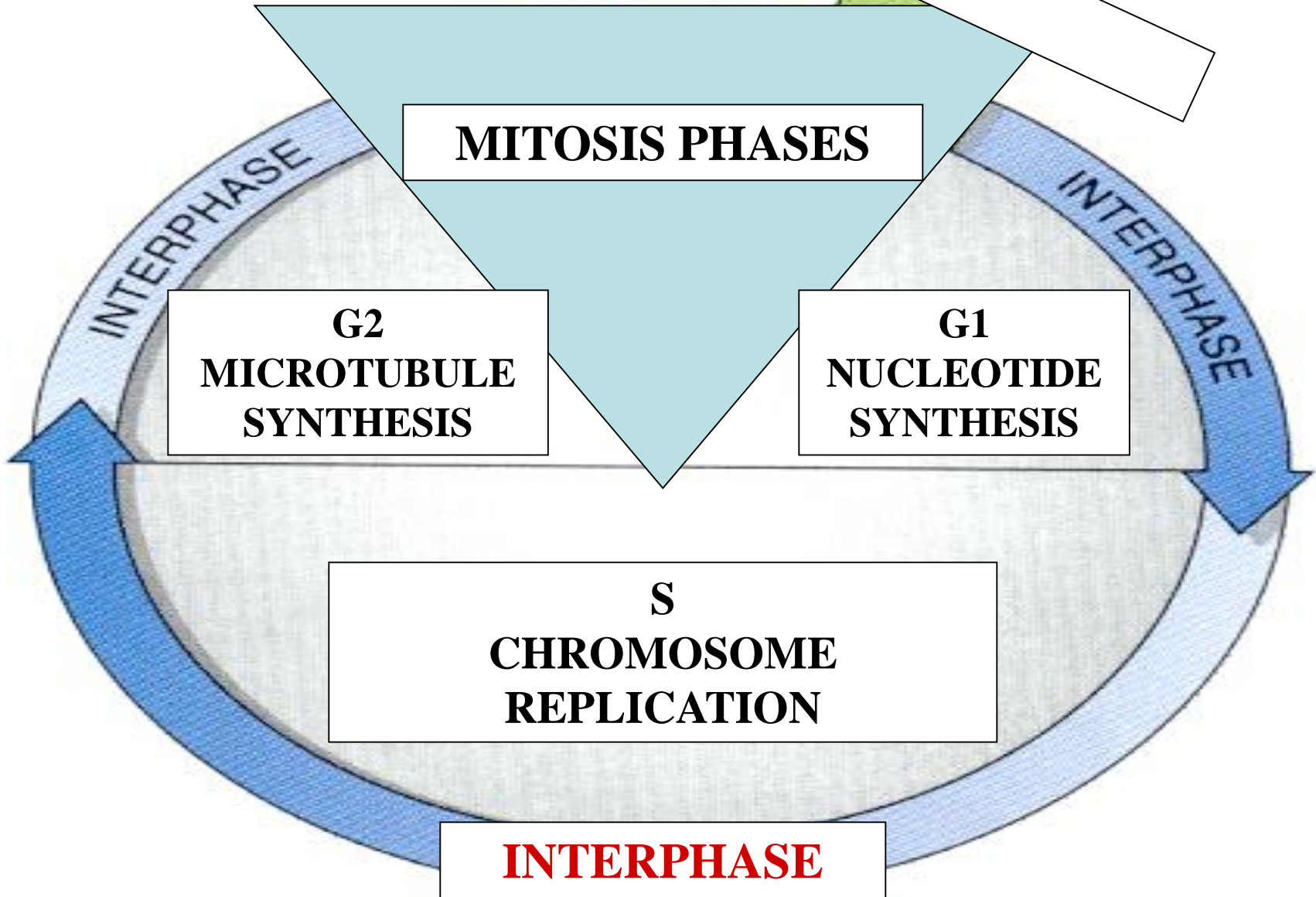
# SOMATIC CELL CYCLE

MP



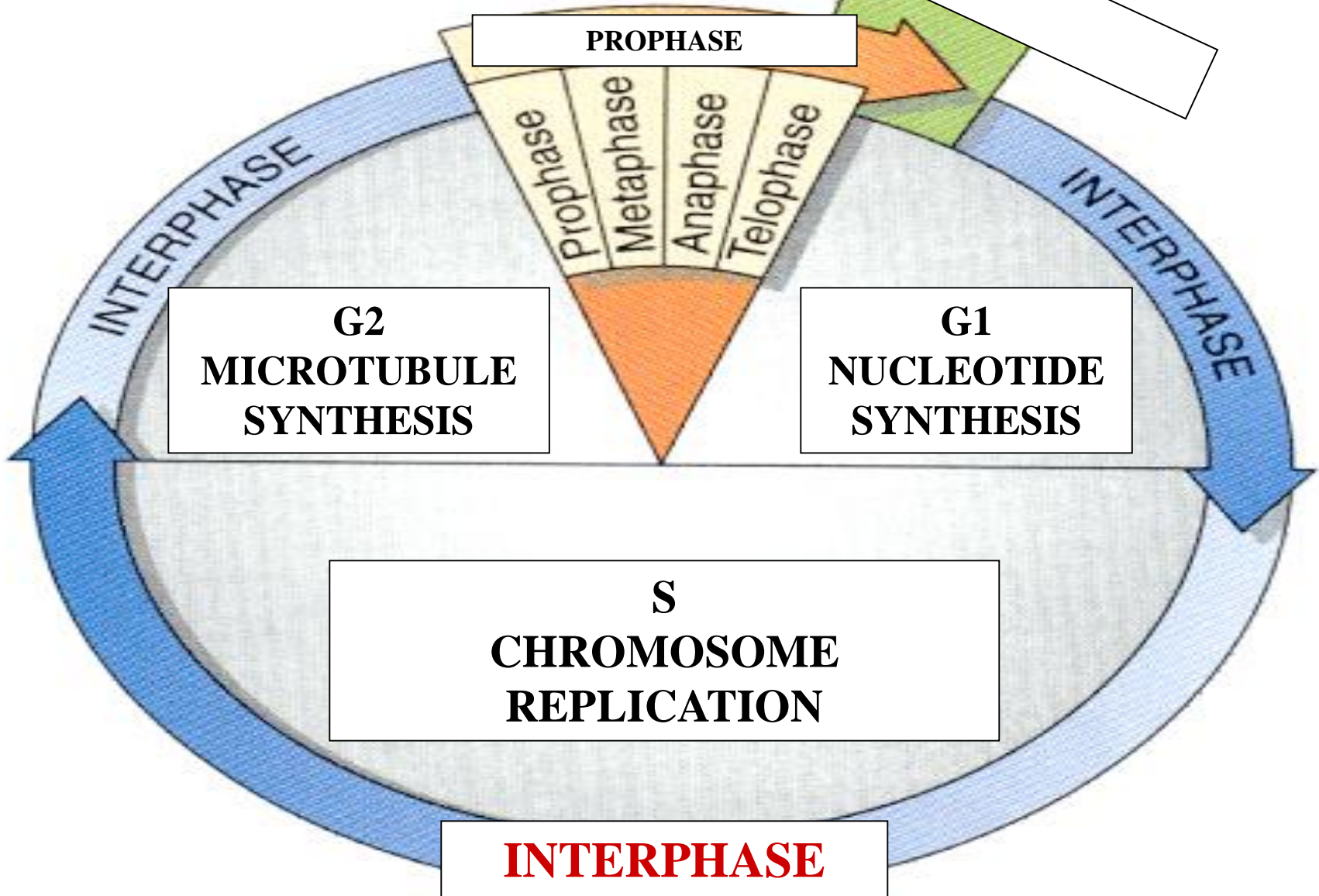
# SOMATIC CELL CYCLE

P



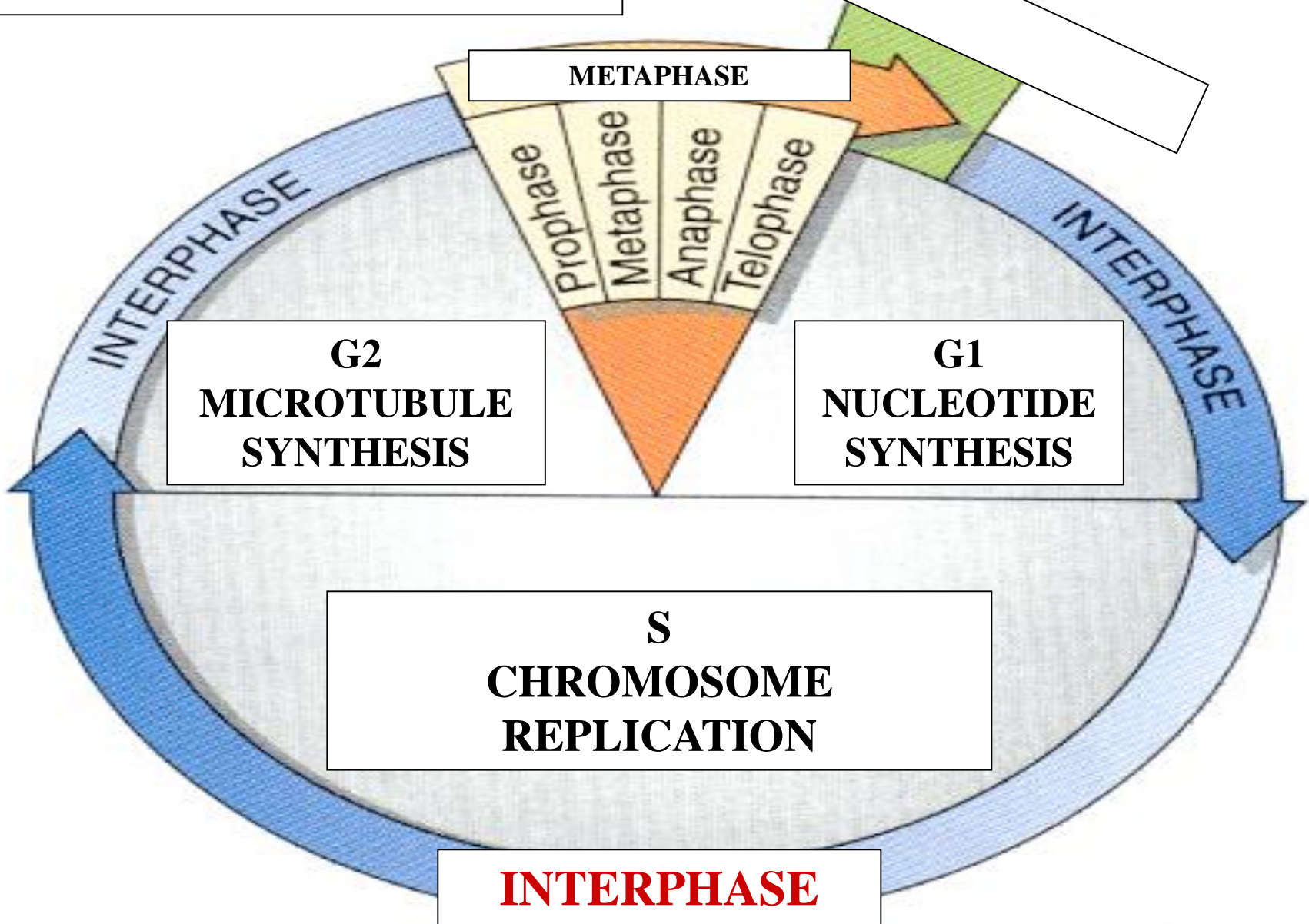
# SOMATIC CELL CYCLE

M



# SOMATIC CELL CYCLE

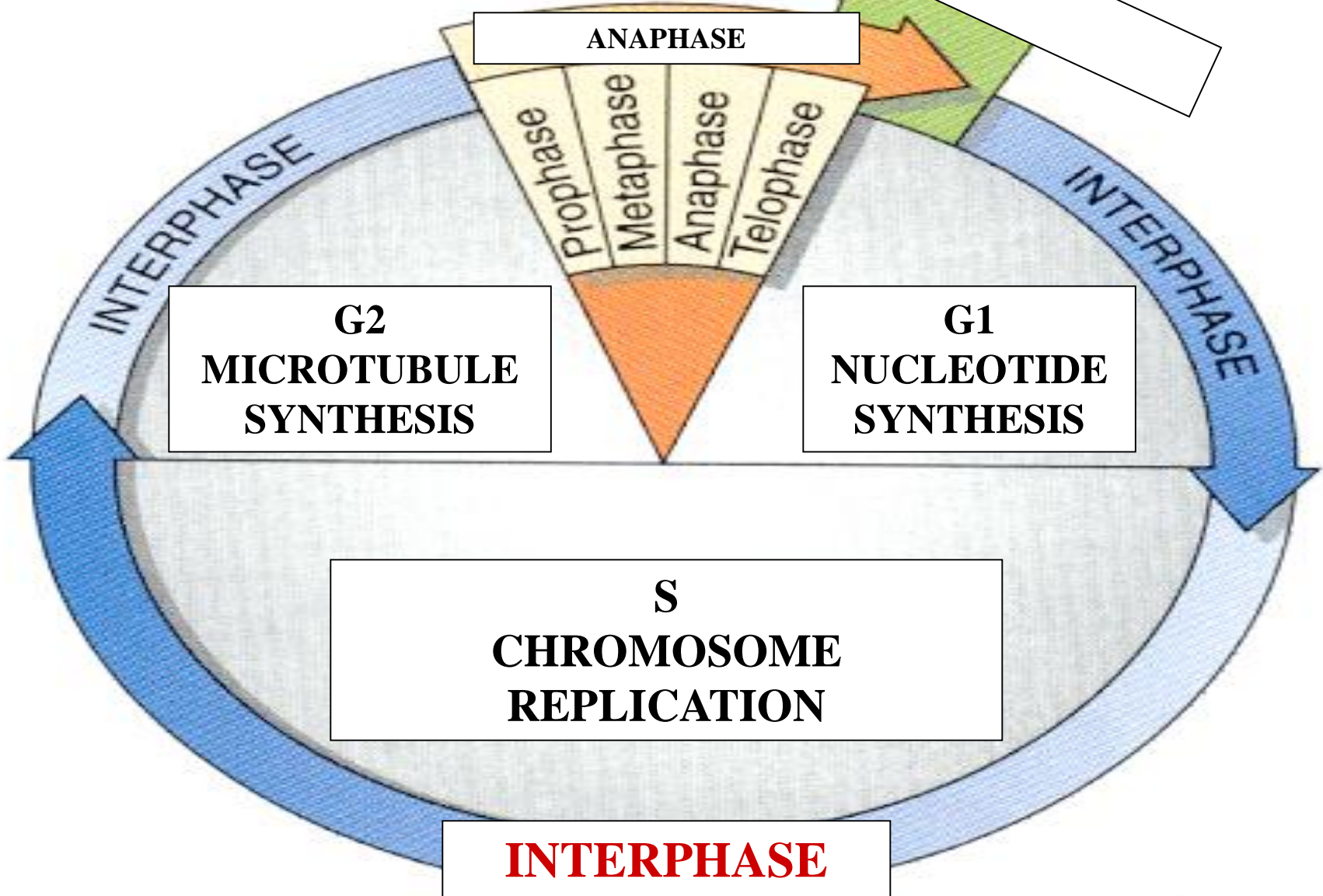
A



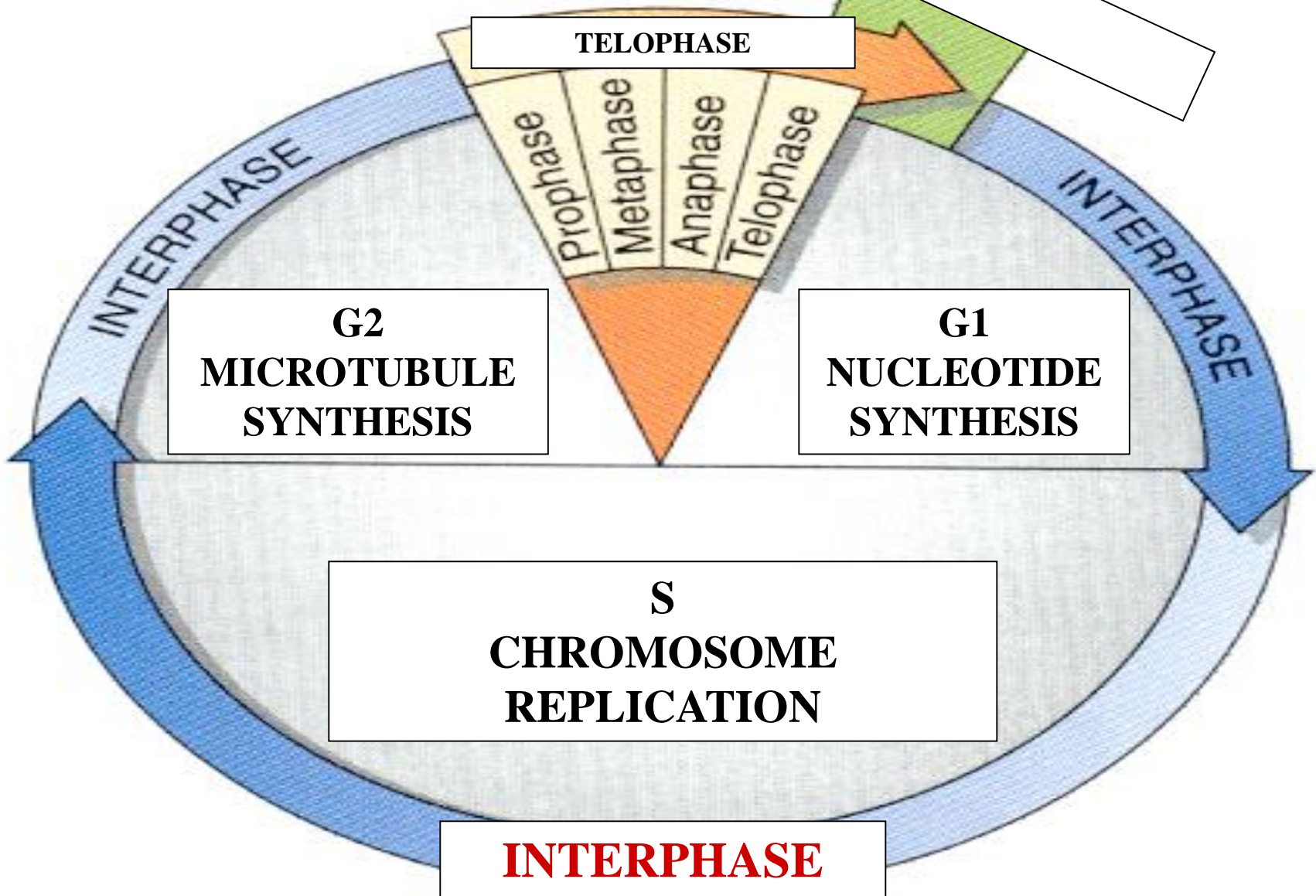


# SOMATIC CELL CYCLE

T



# SOMATIC CELL CYCLE





# **KARYOKINESIS**

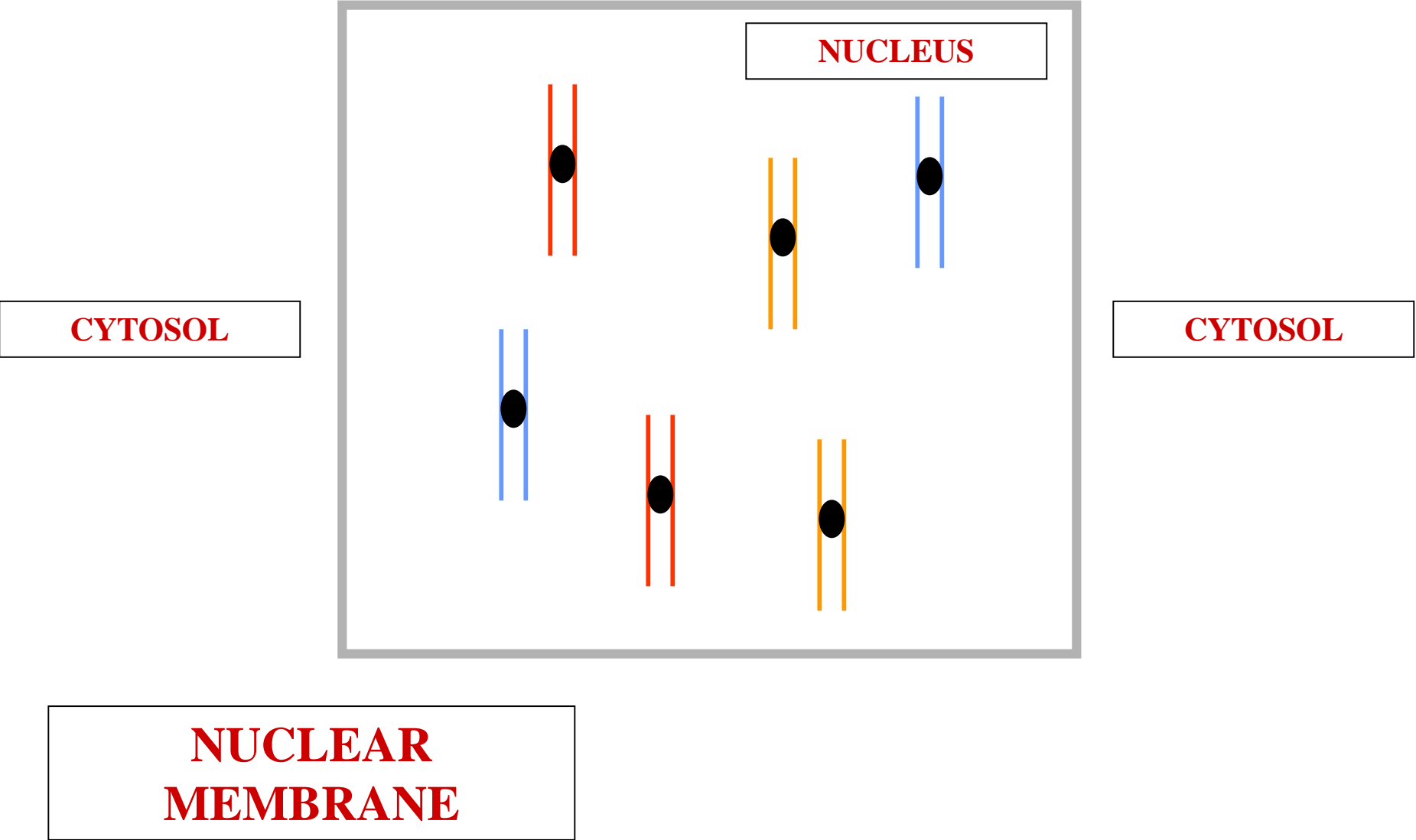
## **MITOSIS**

### **SPECIFICS**

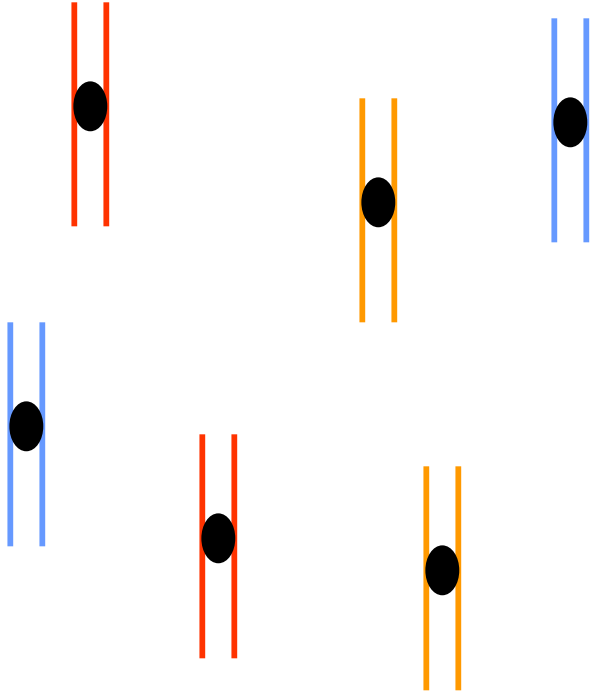


# PROPHASE

# PROPHASE

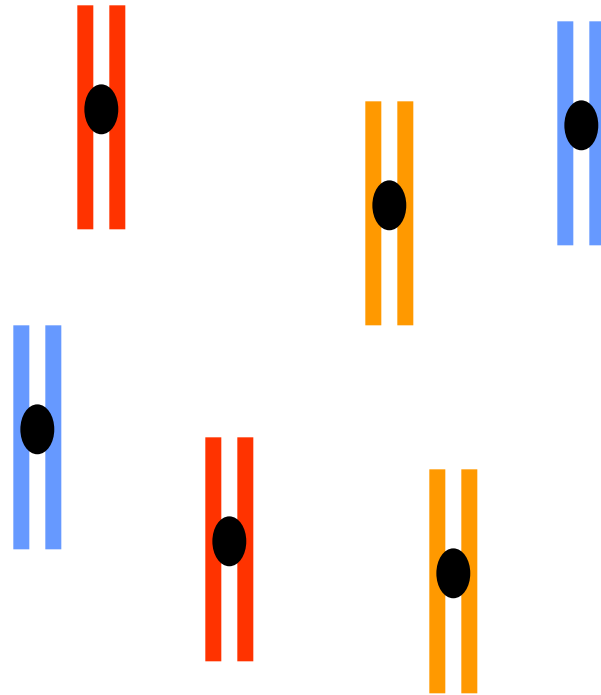


# PROPHASE

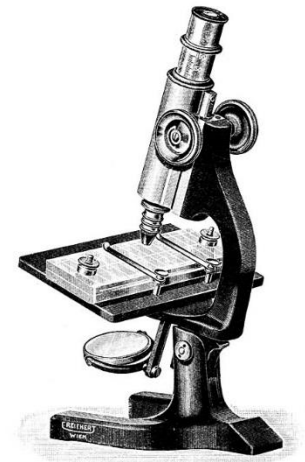


**NUCLEAR  
MEMBRANE  
DISSIPATES**

# PROPHASE



**CHROMOSOMES  
CONDENSE**

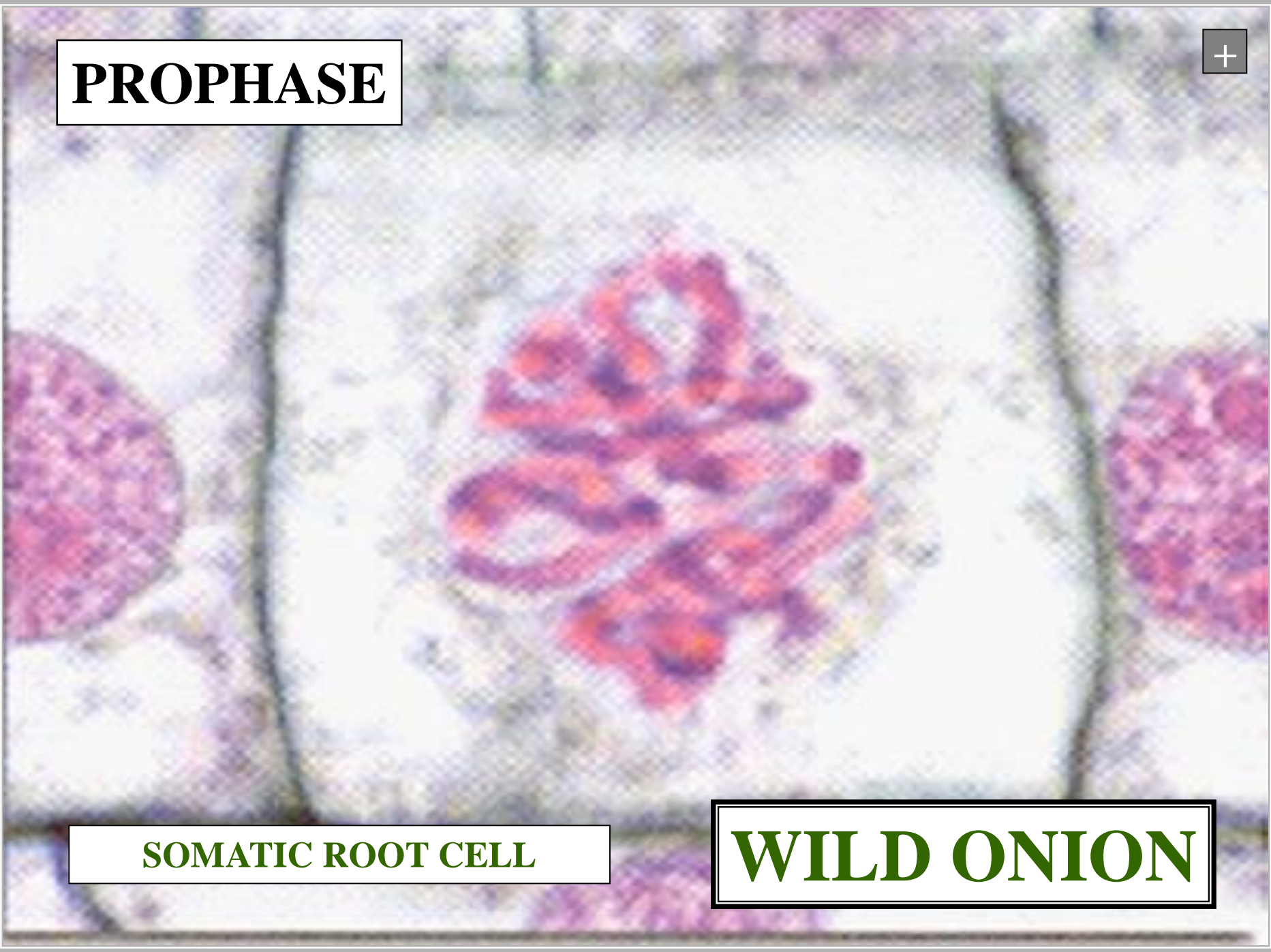


**PROPHASE**



**SOMATIC ROOT CELL**

**WILD ONION**





# PROPHASE

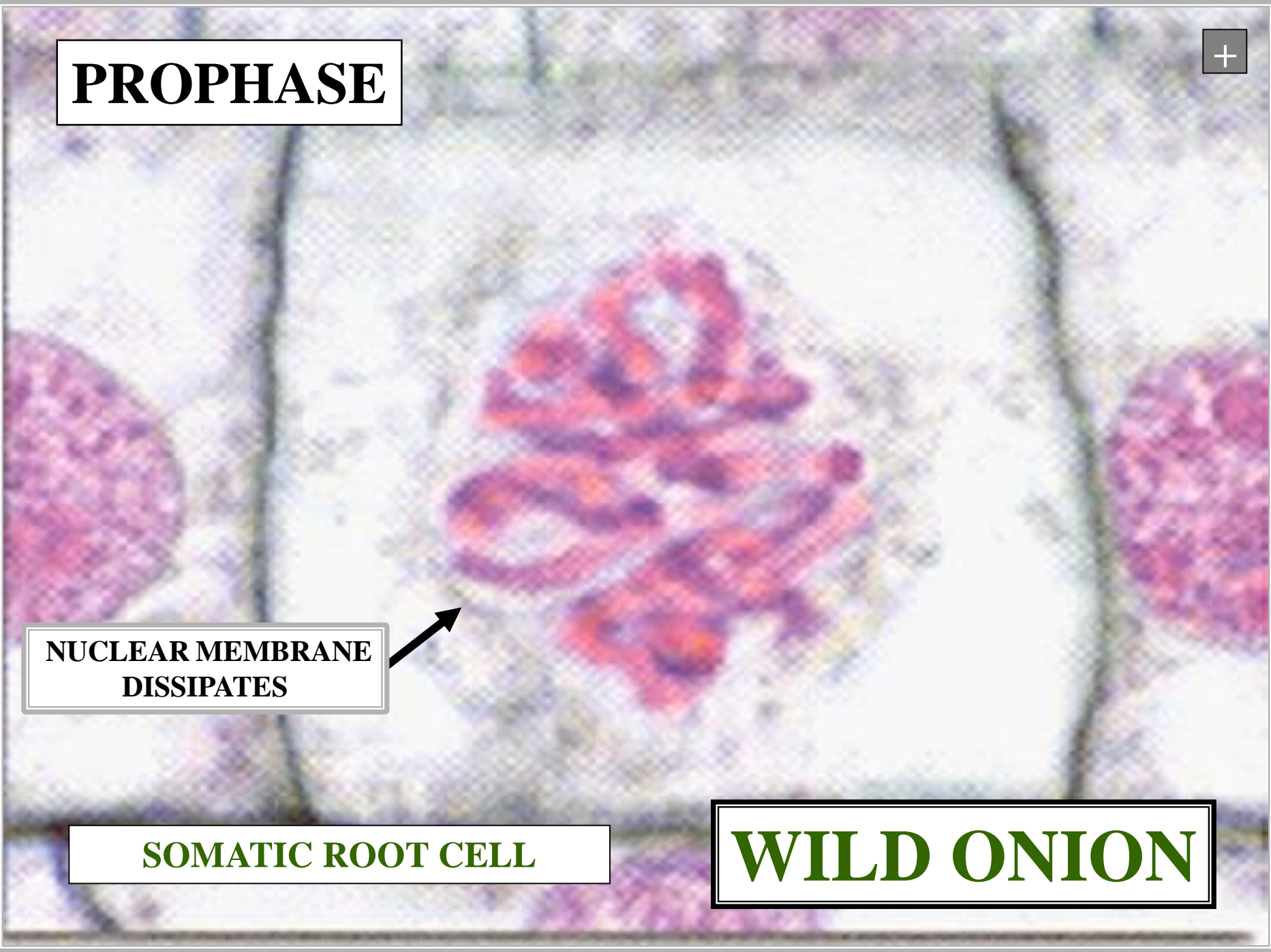


NUCLEAR MEMBRANE  
DISSIPATES



SOMATIC ROOT CELL

WILD ONION



# PROPHASE

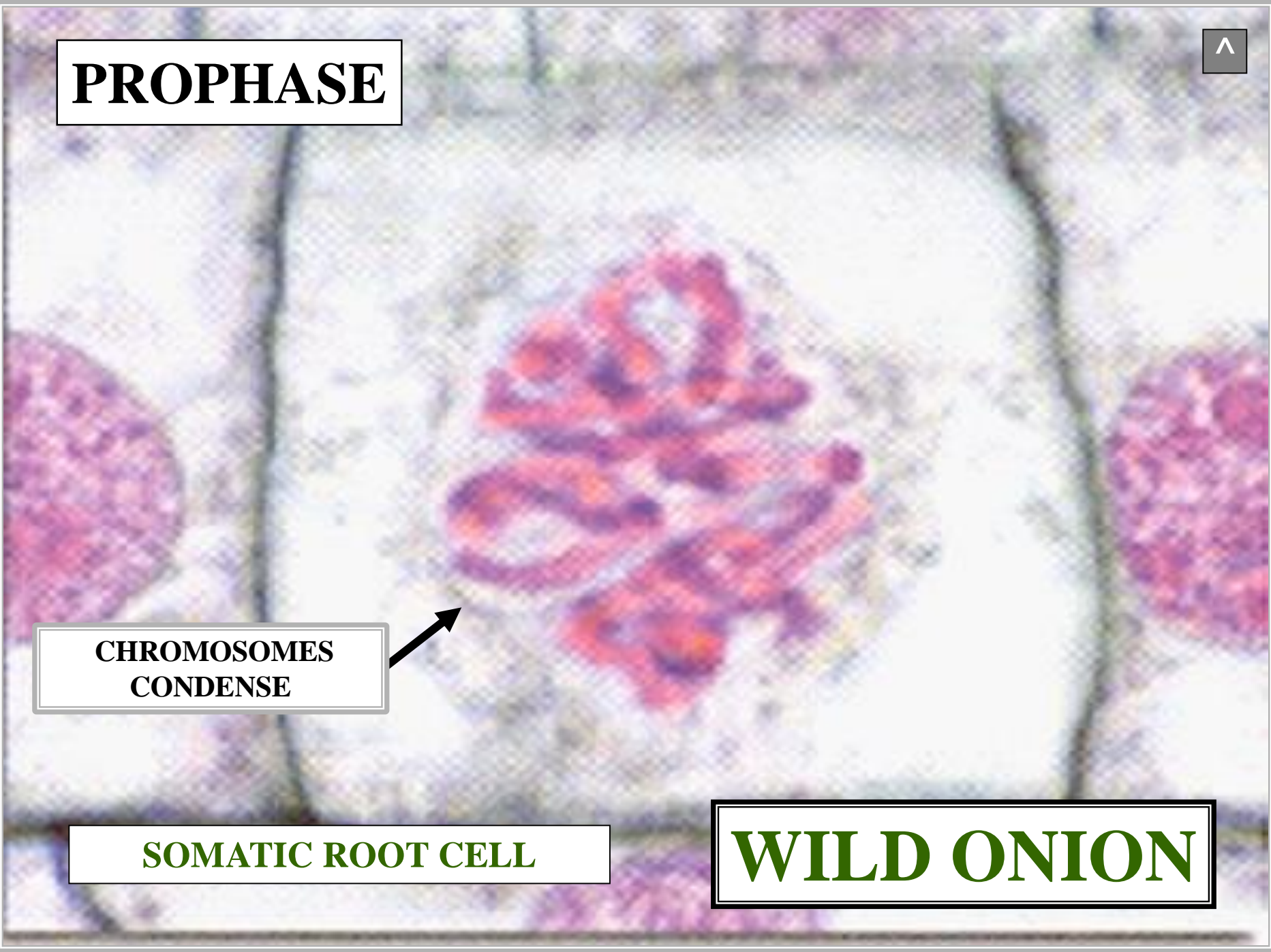


CHROMOSOMES  
CONDENSE

A black arrow pointing from the text box to the central cluster of condensed chromosomes.

SOMATIC ROOT CELL

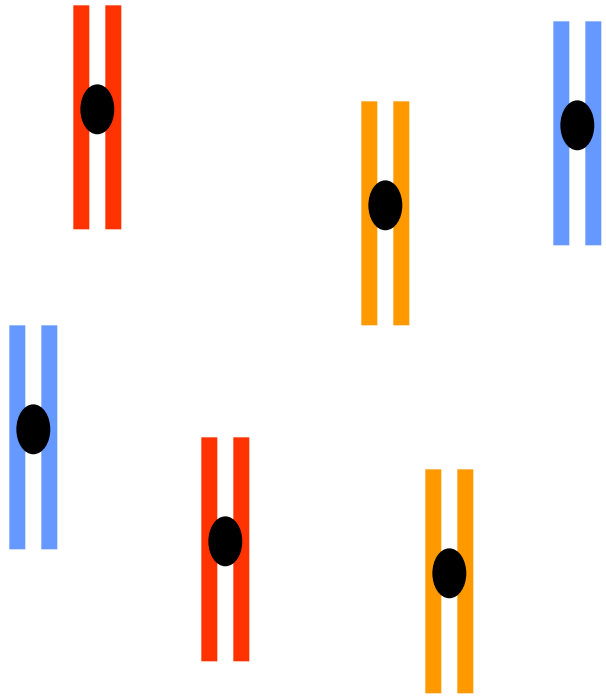
WILD ONION





# METAPHASE

# METAPHASE

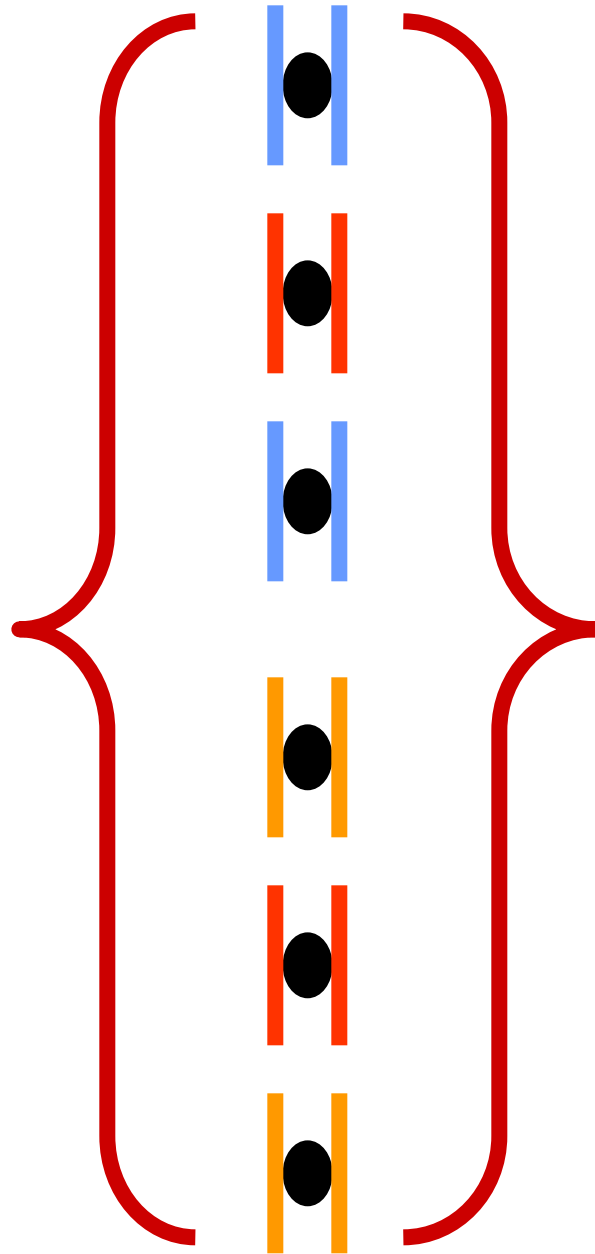


# METAPHASE



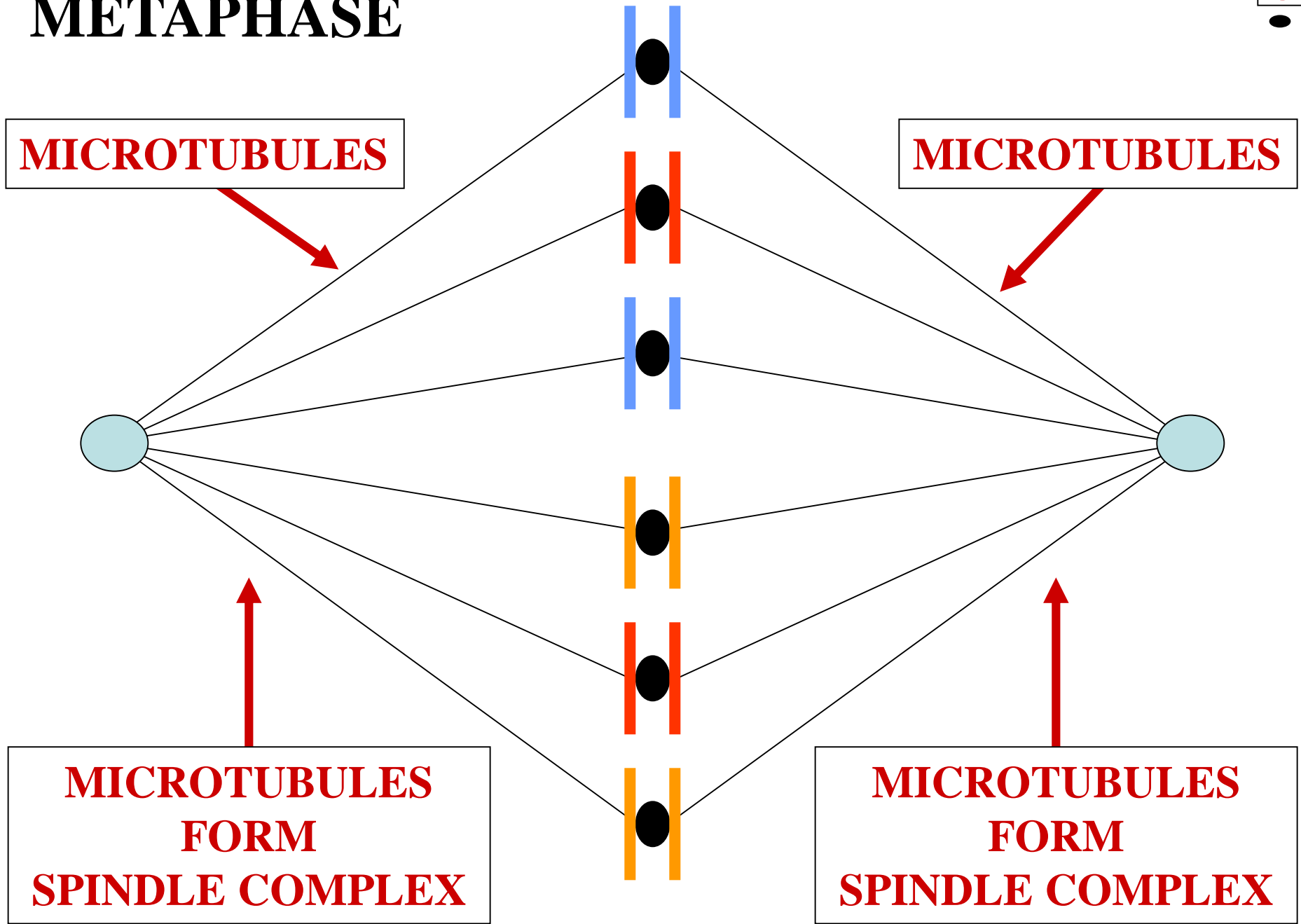
# METAPHASE

**EQUATORIAL  
PLANE**



**EQUATORIAL  
PLANE**

# METAPHASE



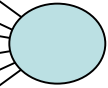
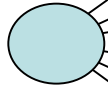
# METAPHASE

**MICROTUBULES**



**CENTROMERE**

**KINETOCHORE**



**MICROTUBULE  
SPINDLE COMPLEX**

**MICROTUBULE  
SPINDLE COMPLEX**







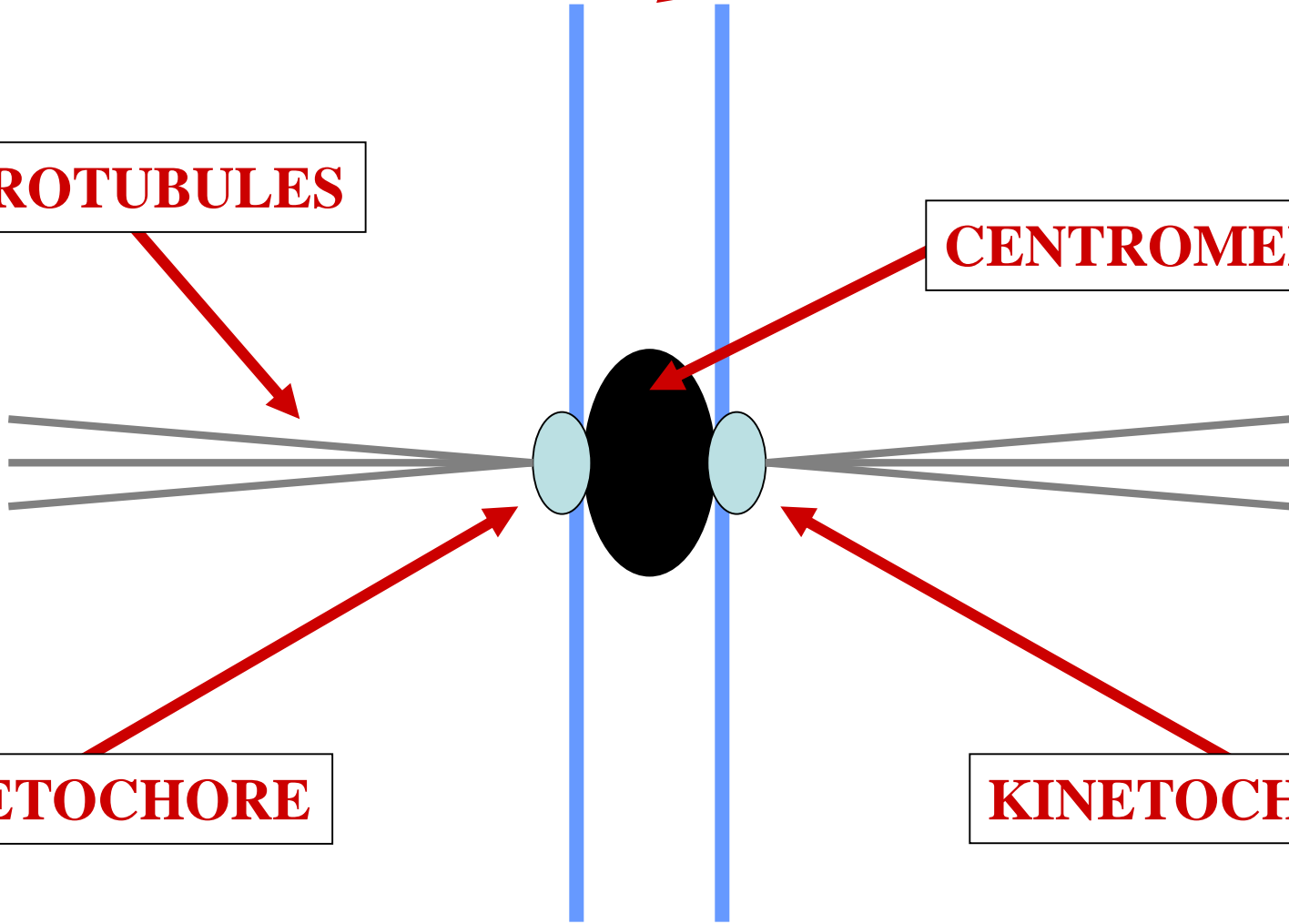
**CHROMATIDS**

**MICROTUBULES**

**CENTROMERE**

**KINETOCHORE**

**KINETOCHORE**



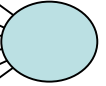
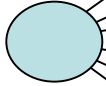
# METAPHASE



MSC

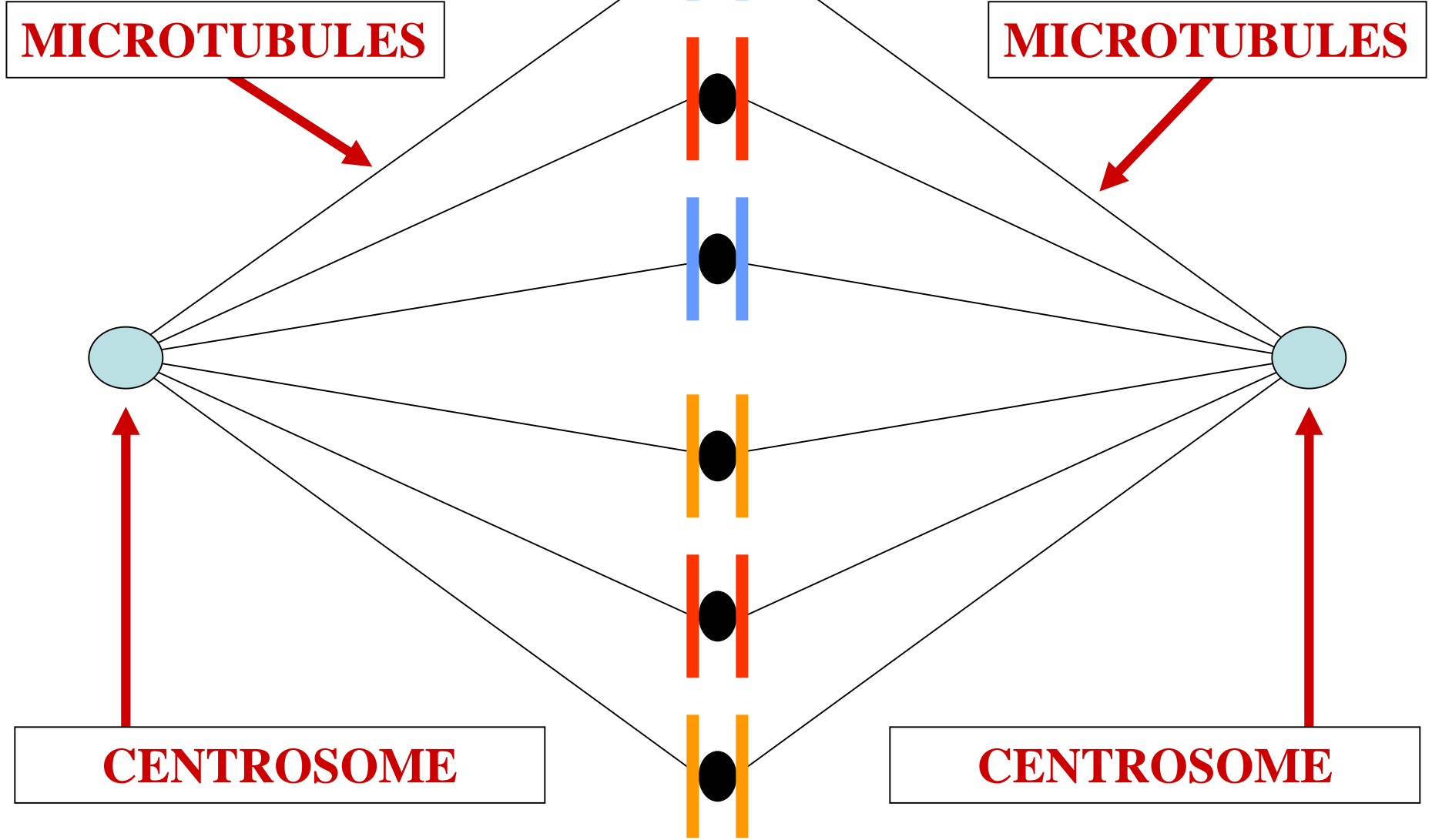
MICROTUBULES

MICROTUBULES



CENTROSOME

CENTROSOME

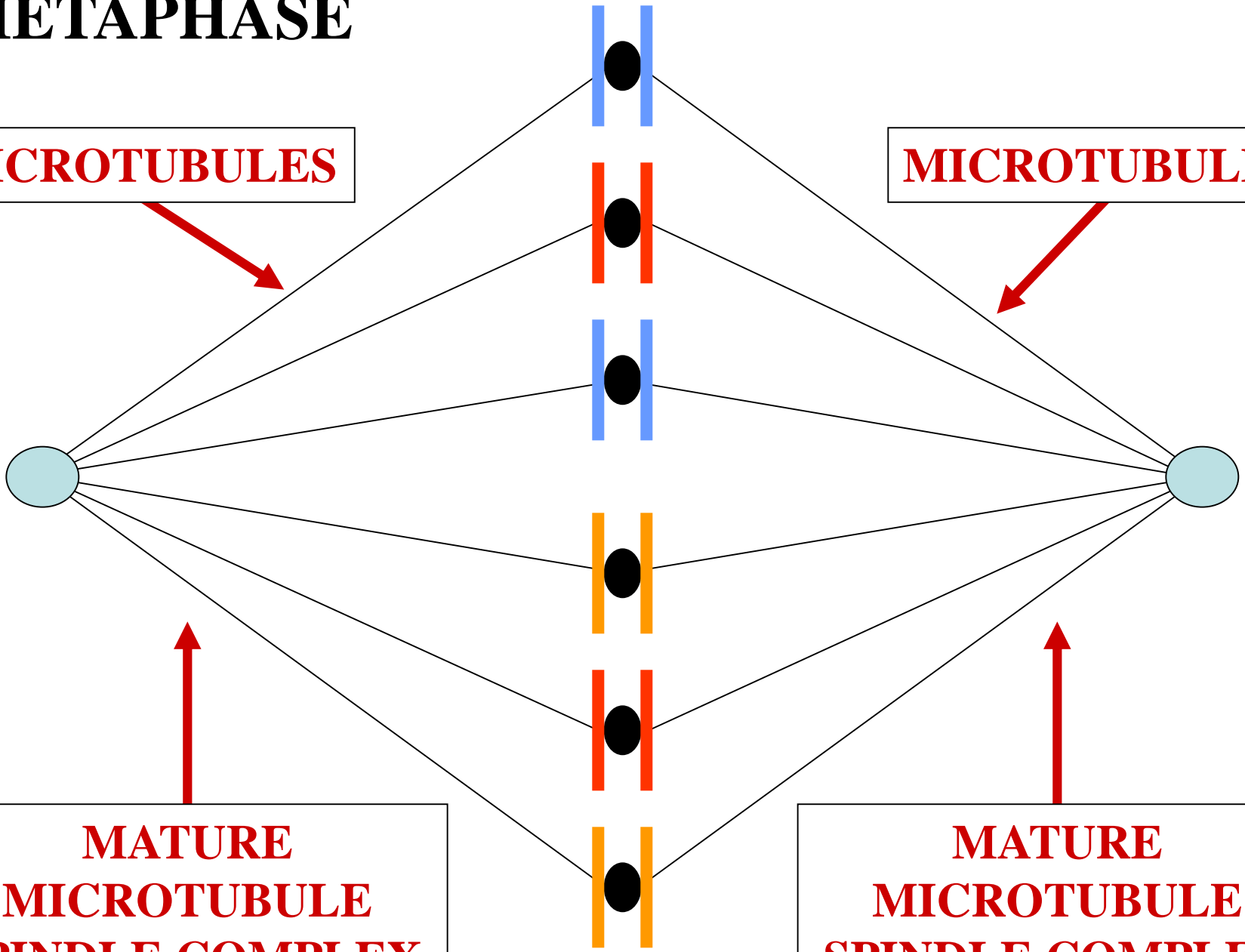


# METAPHASE



**MICROTUBULES**

**MICROTUBULES**



**MATURE  
MICROTUBULE  
SPINDLE COMPLEX**

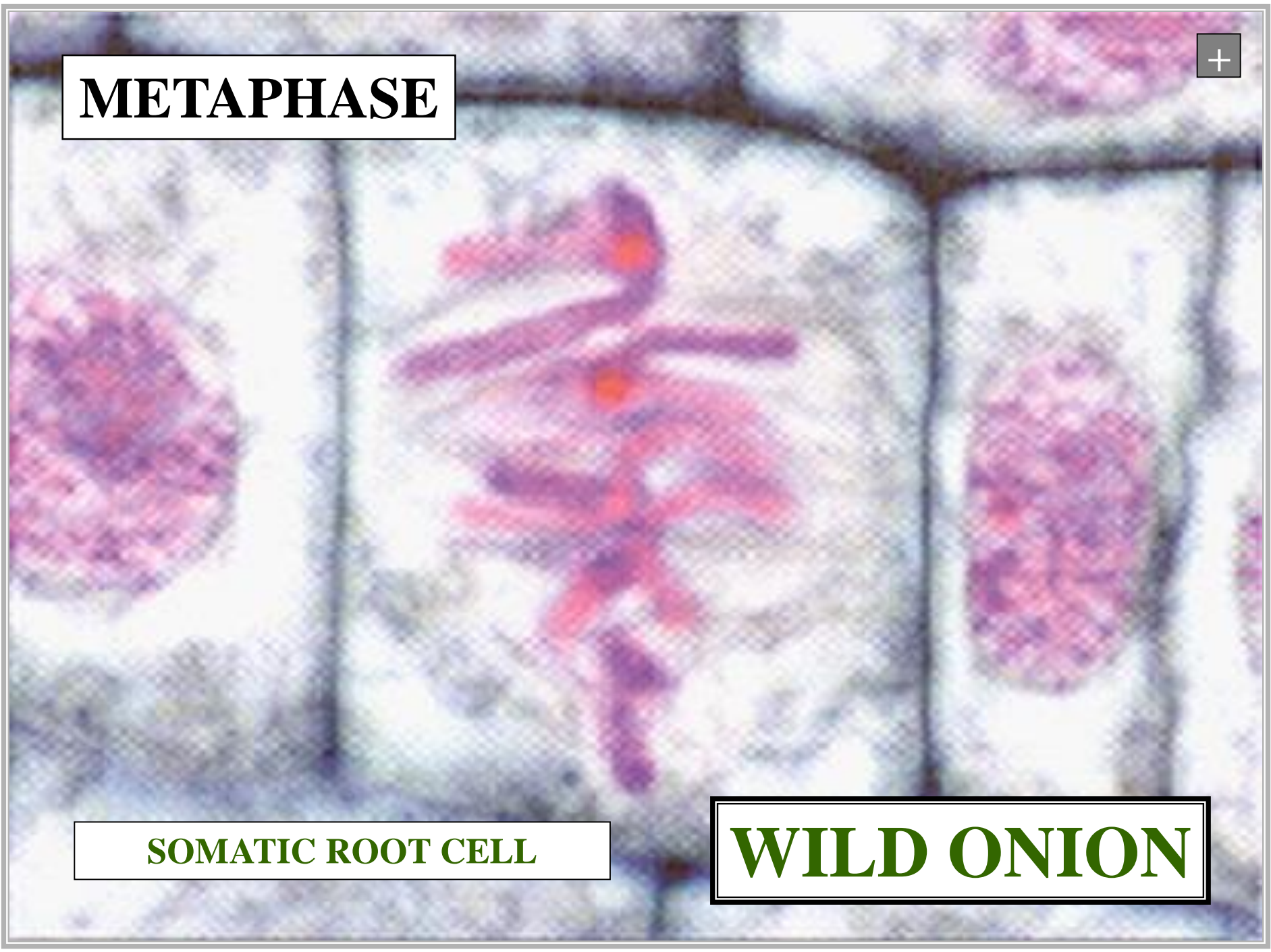
**MATURE  
MICROTUBULE  
SPINDLE COMPLEX**

**METAPHASE**



**SOMATIC ROOT CELL**

**WILD ONION**



# METAPHASE

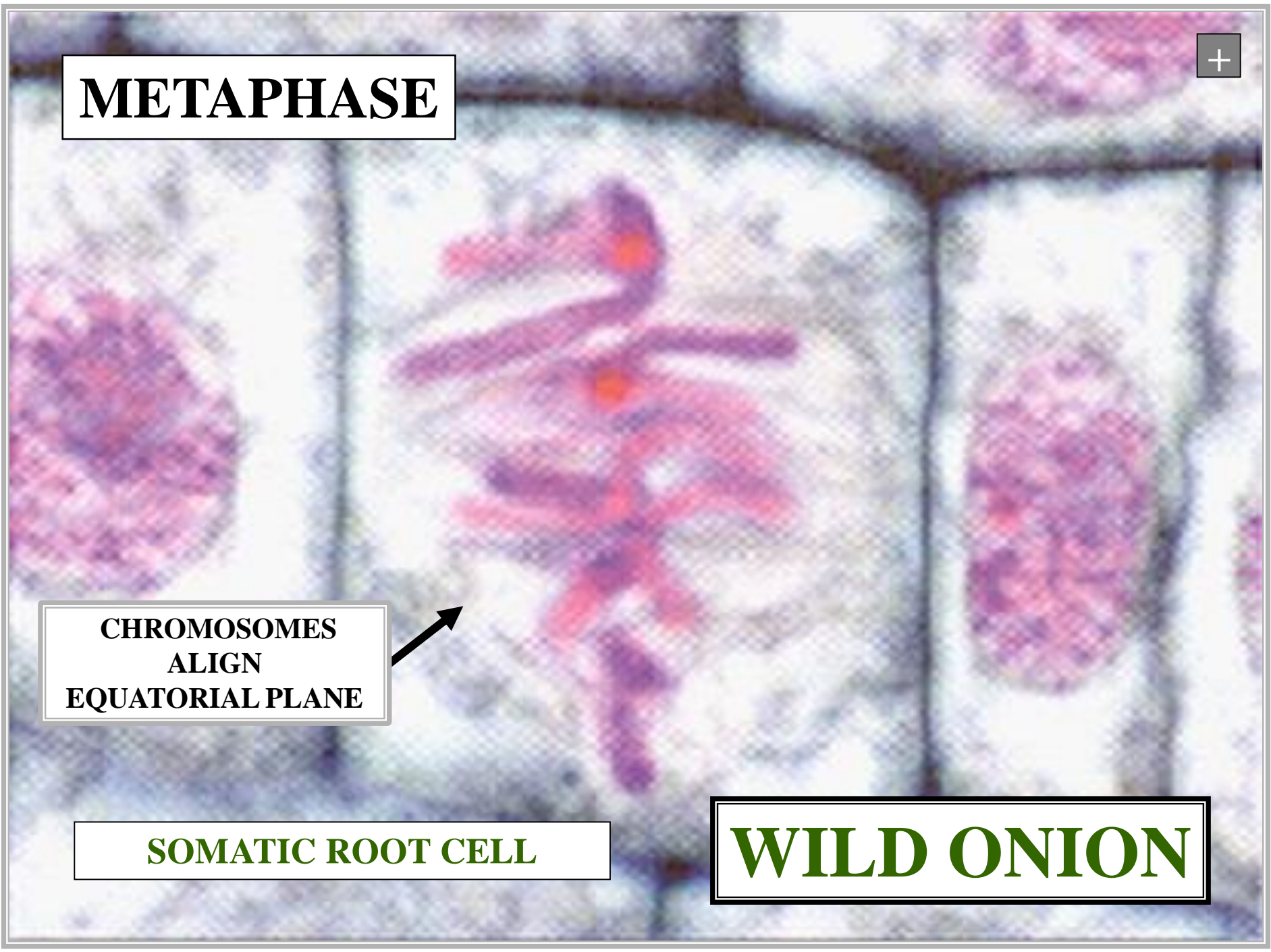


CHROMOSOMES  
ALIGN  
EQUATORIAL PLANE



SOMATIC ROOT CELL

WILD ONION



# METAPHASE

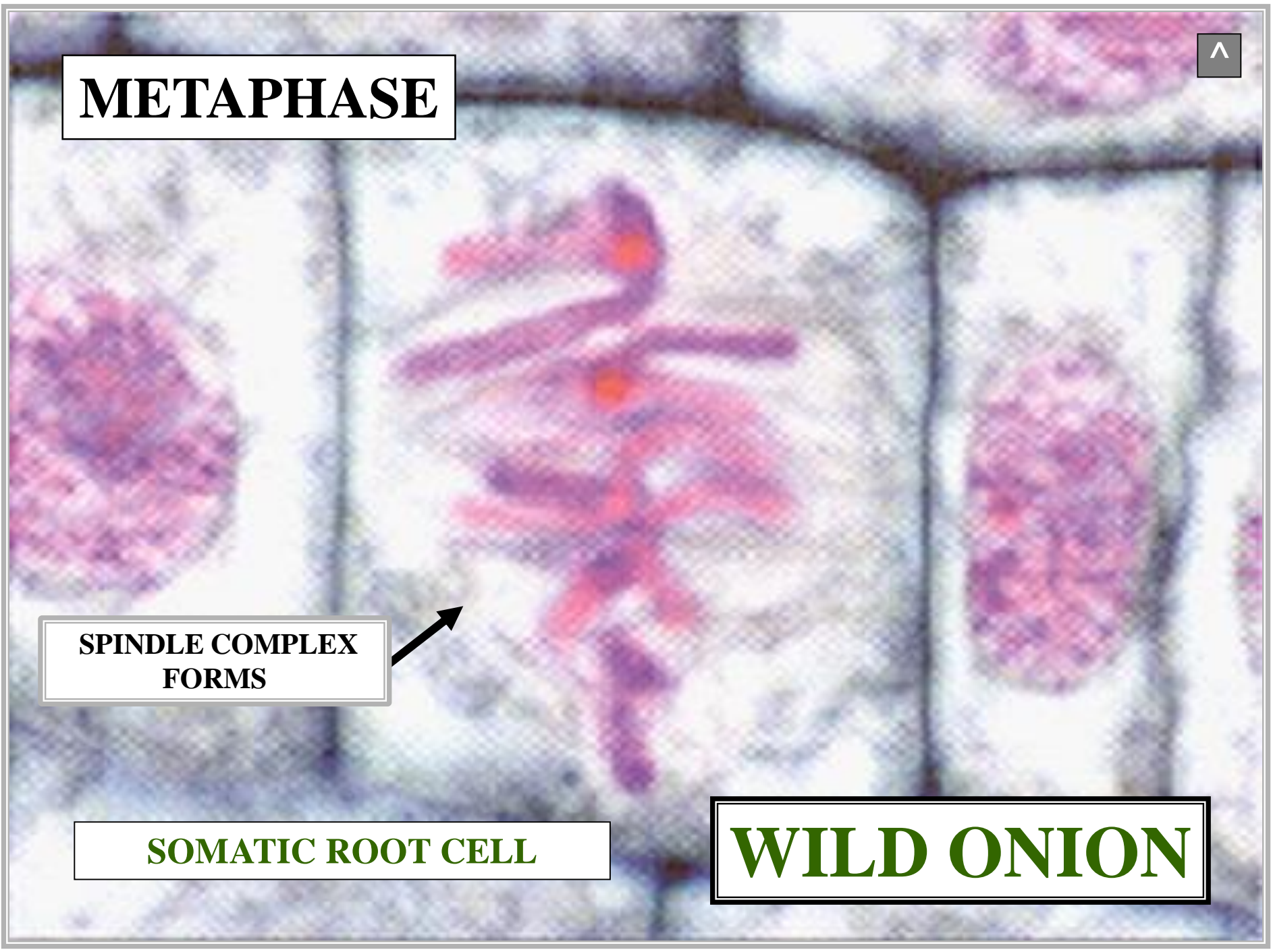


SPINDLE COMPLEX  
FORMS

A black arrow pointing from the text box to the spindle complex in the central cell.

SOMATIC ROOT CELL

WILD ONION

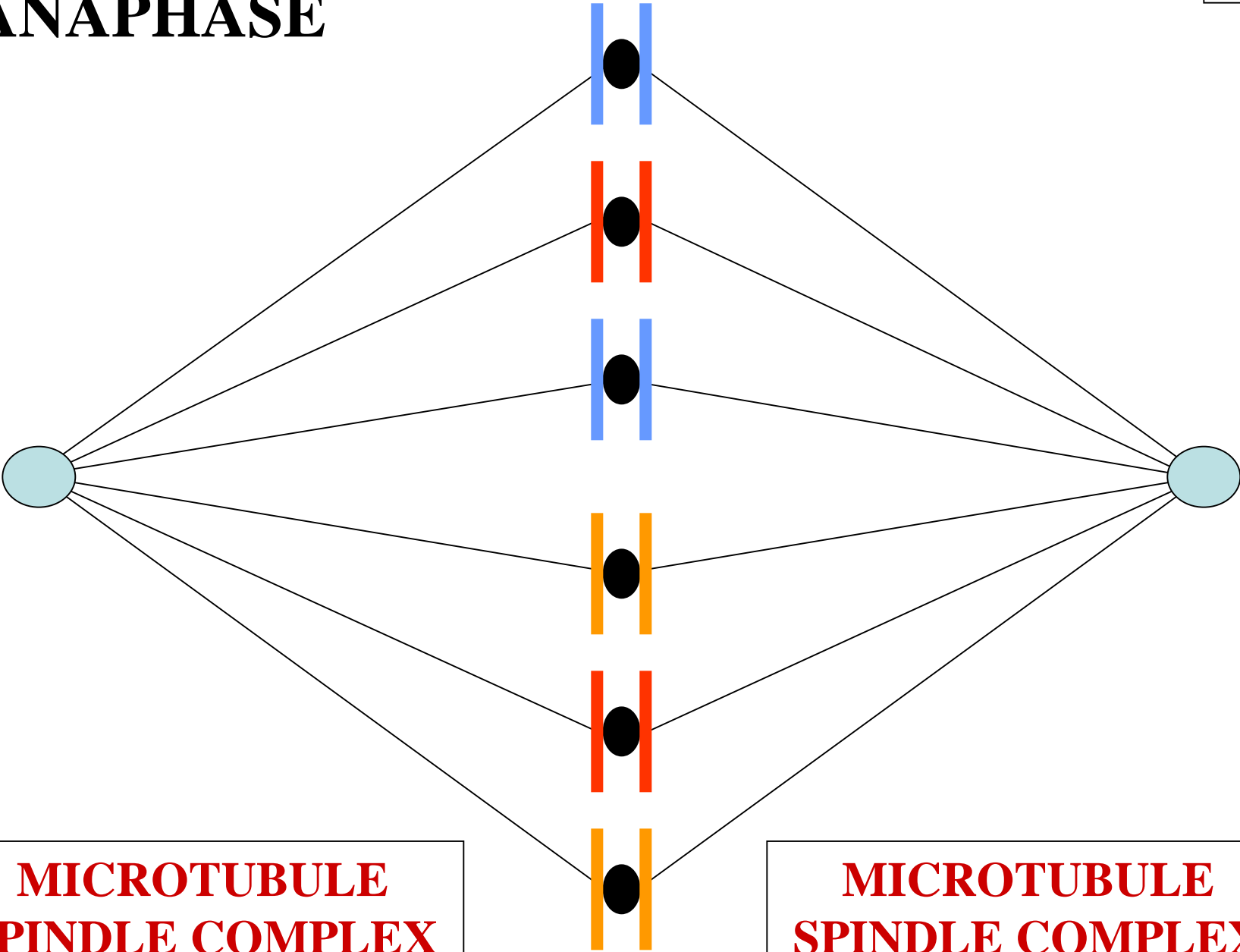




# ANAPHASE

# ANAPHASE

CNT

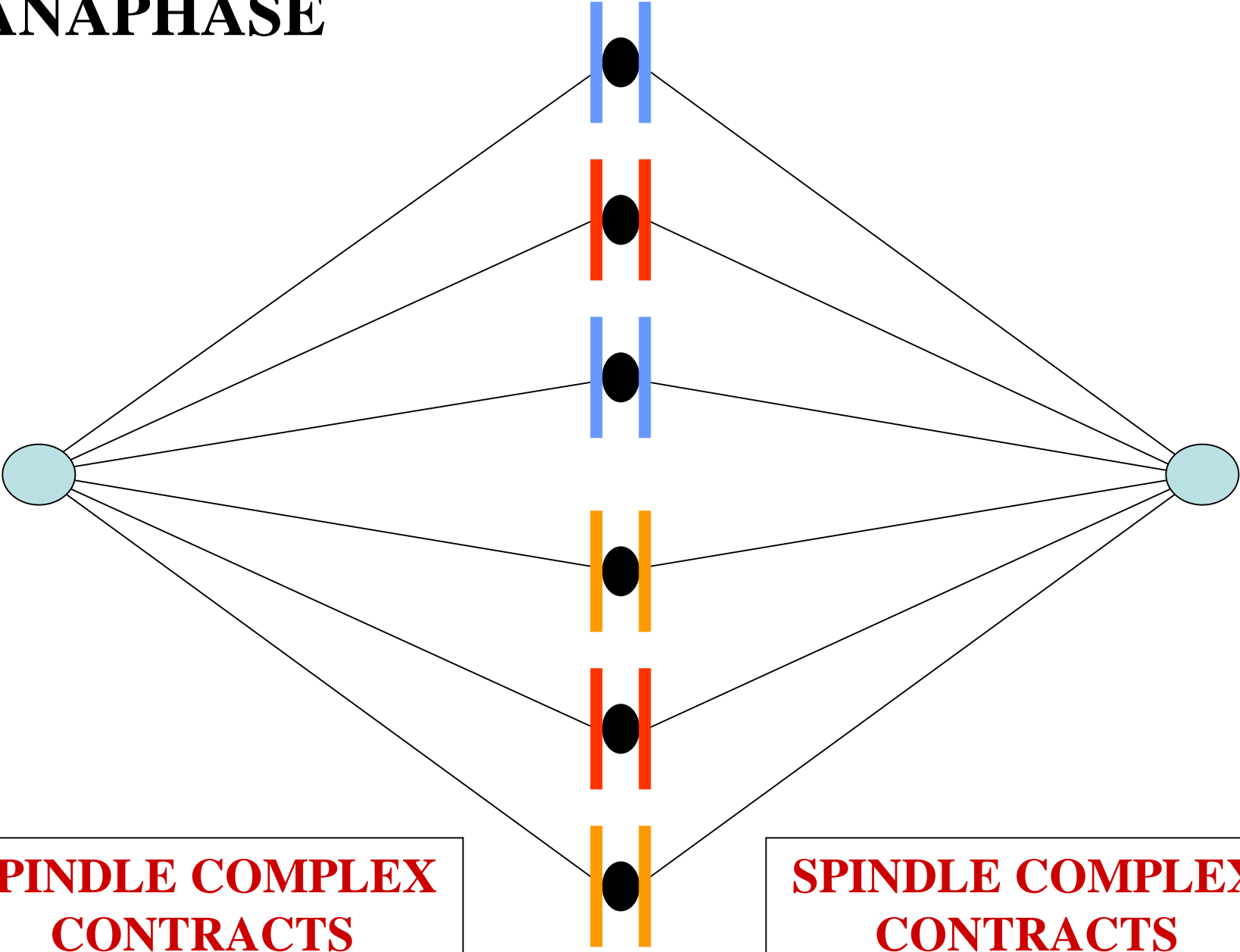


**MICROTUBULE  
SPINDLE COMPLEX**

**MICROTUBULE  
SPINDLE COMPLEX**



# ANAPHASE

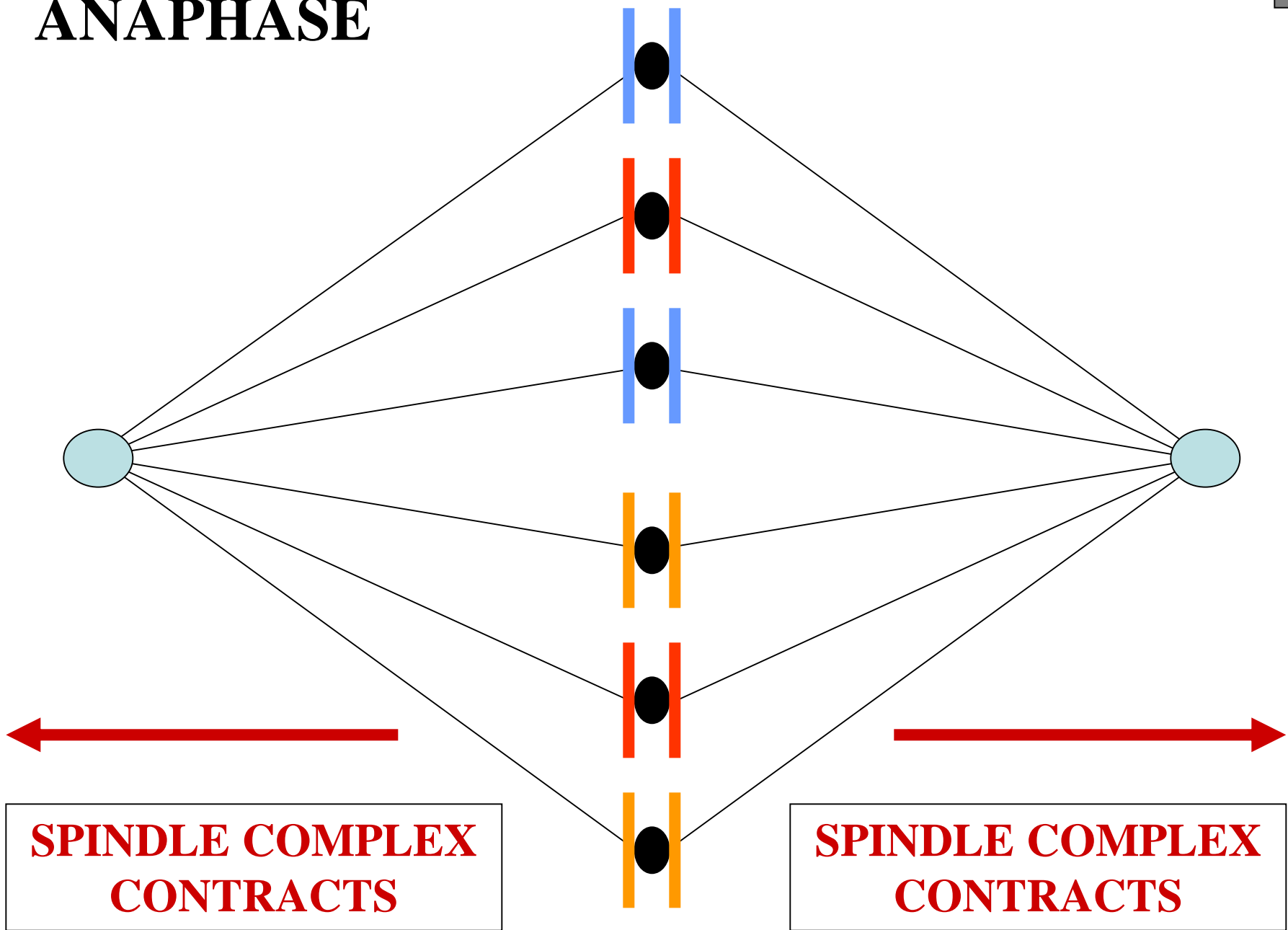


**SPINDLE COMPLEX  
CONTRACTS**

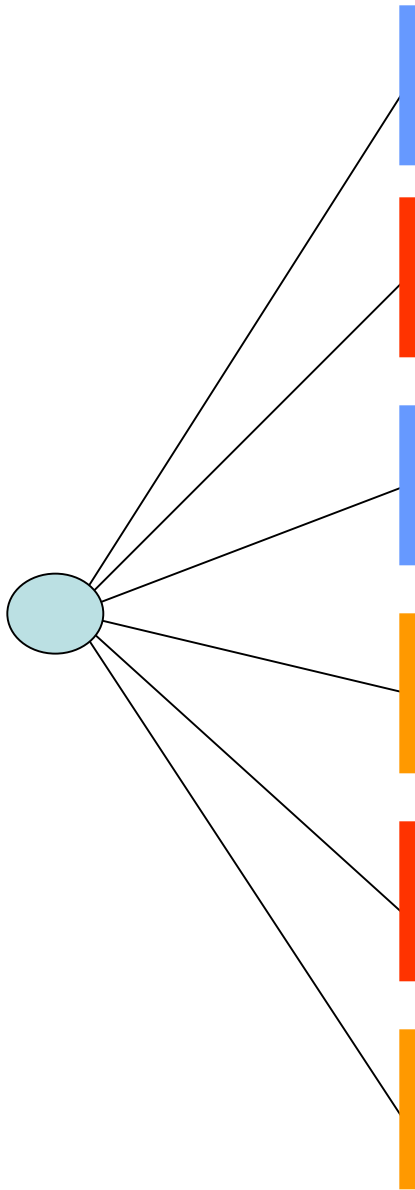
**SPINDLE COMPLEX  
CONTRACTS**



# ANAPHASE

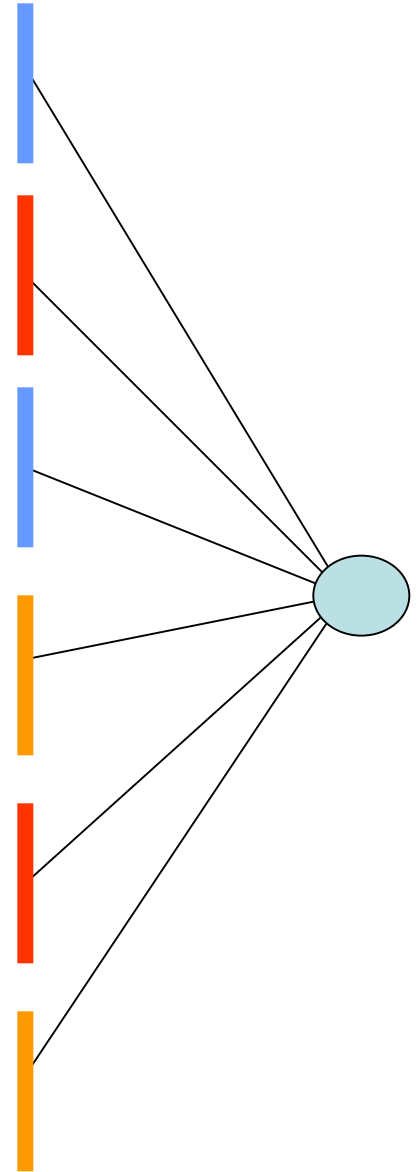


# ANAPHASE

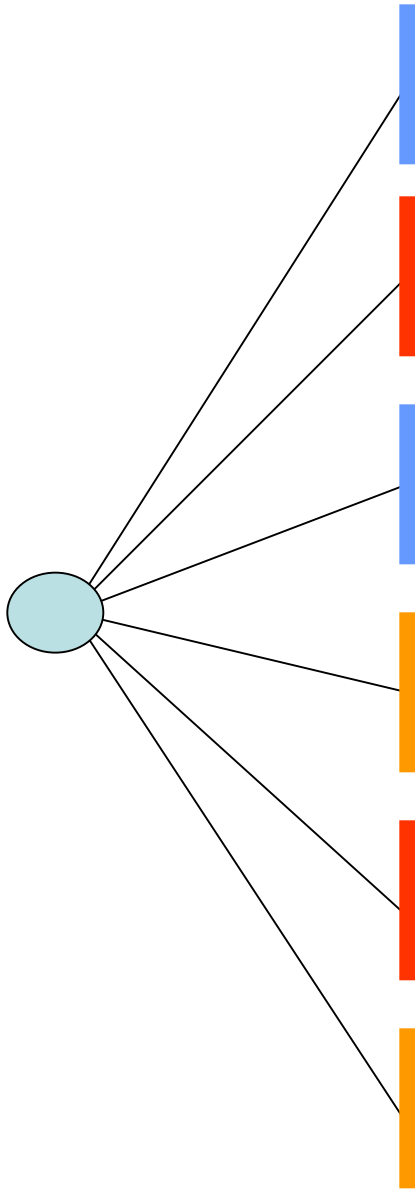


?

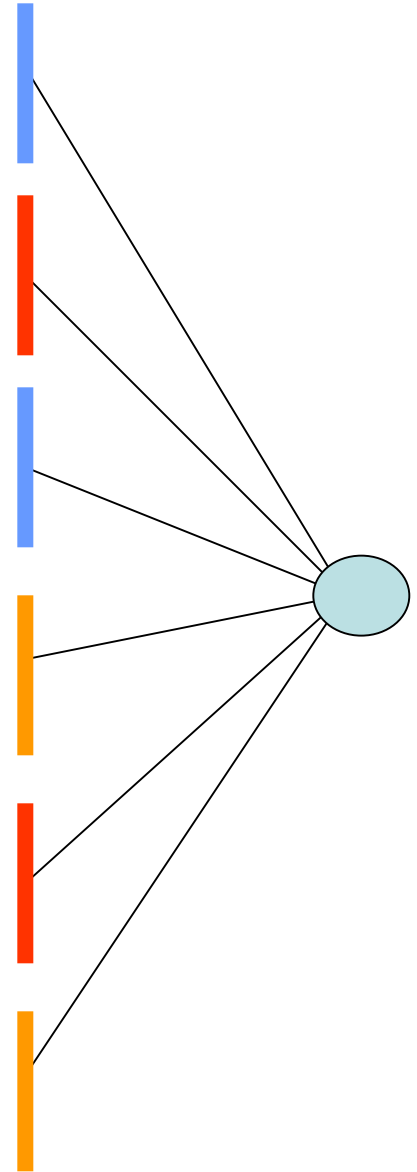
**BREAK-DOWN**



# ANAPHASE

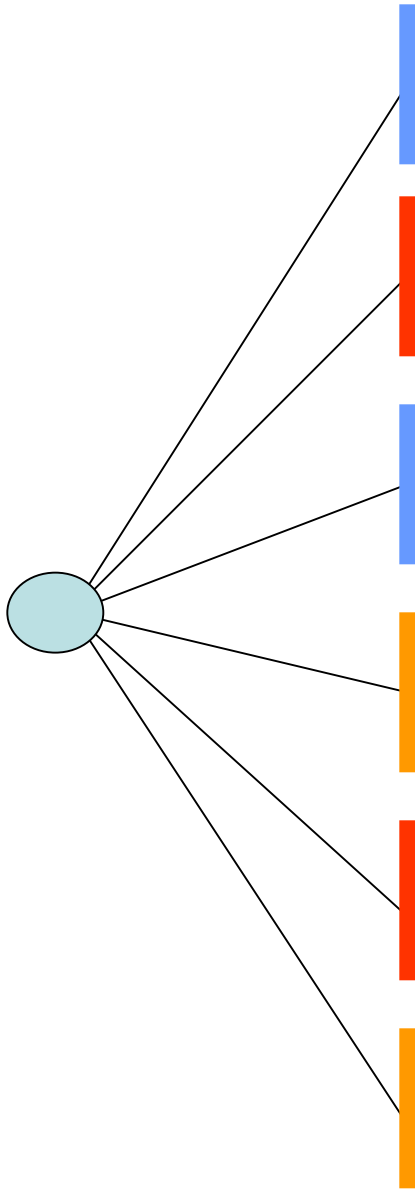


**CHROMOSOME  
CENTROMERES  
BREAK-DOWN**

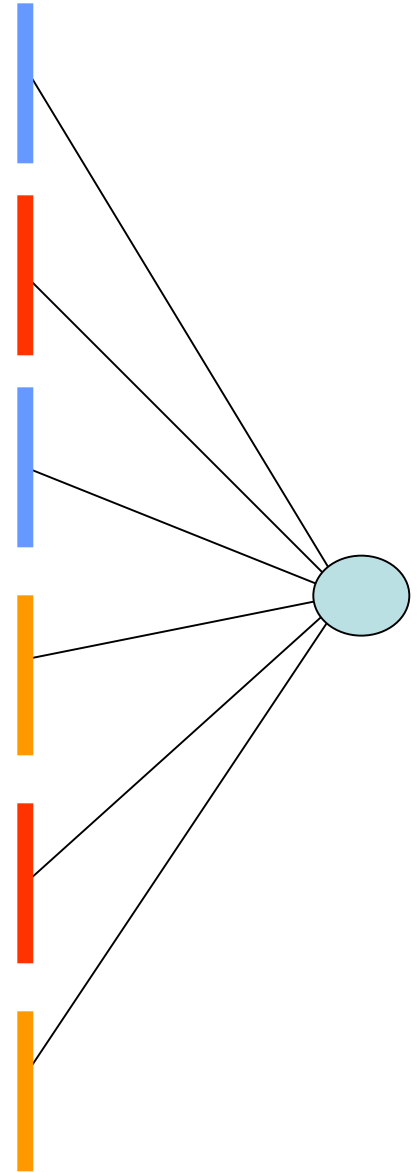


# ANAPHASE

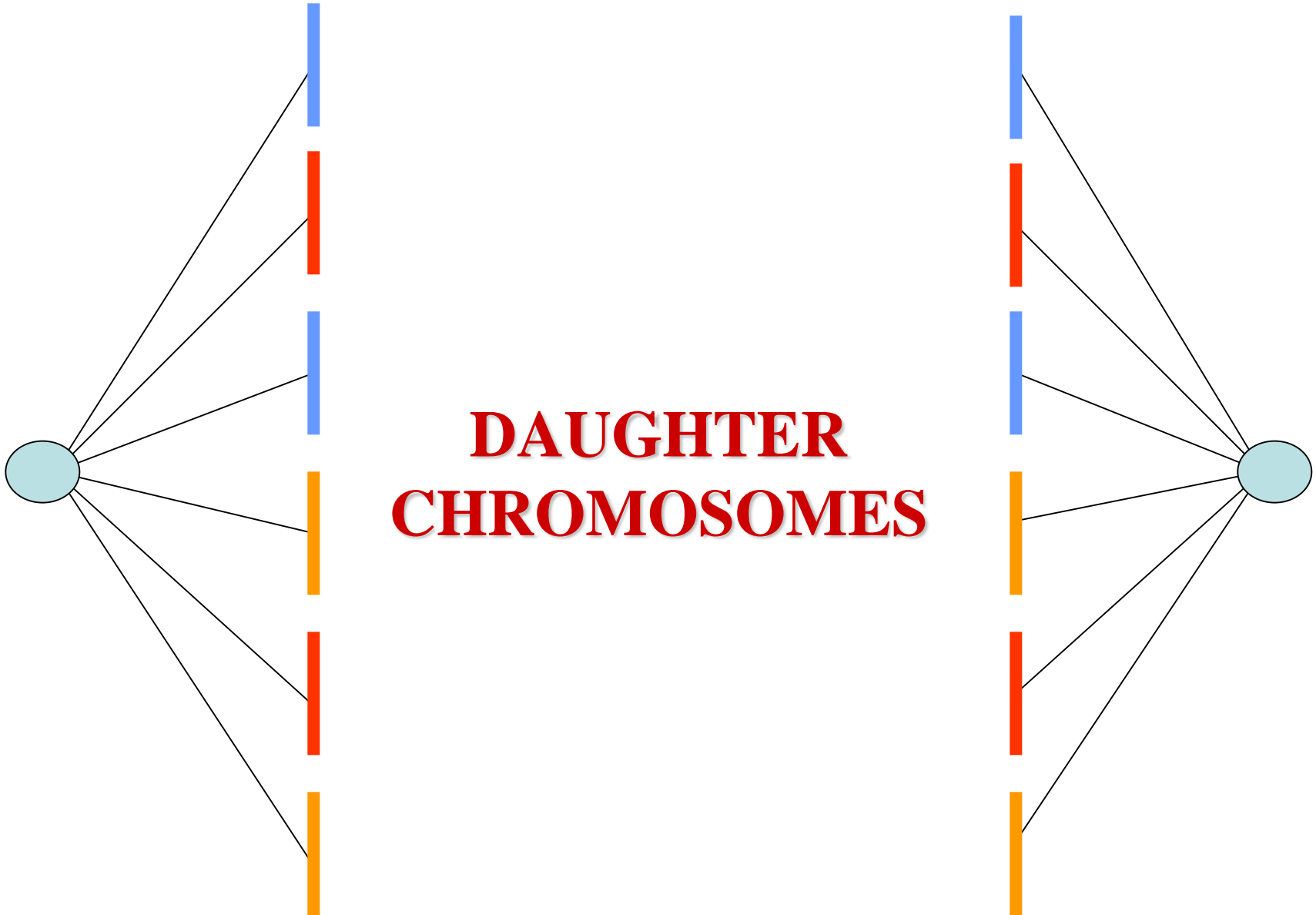
D



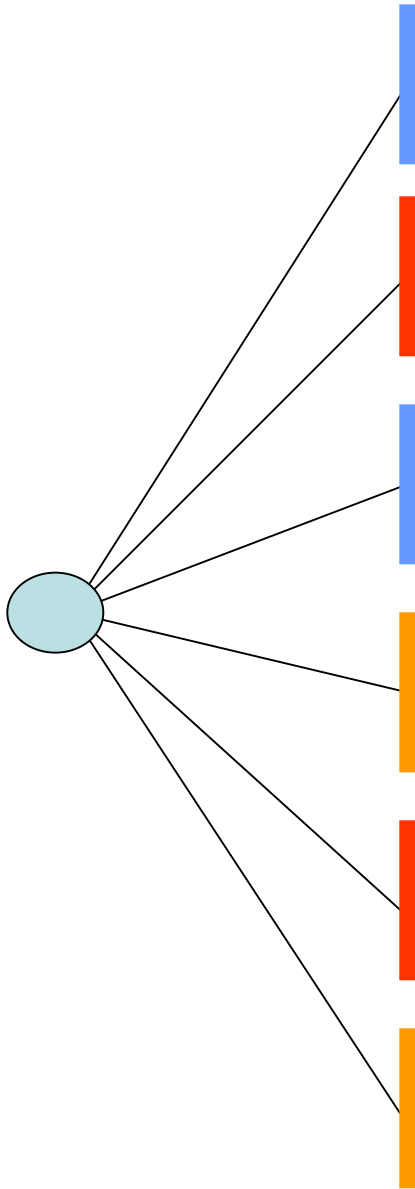
**CHROMOSOME  
CHROMATIDS  
SEPARATE**



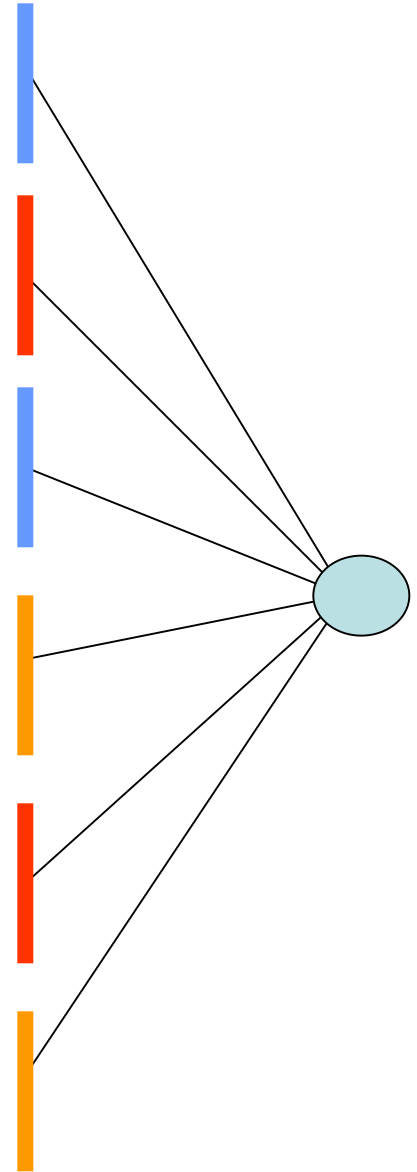
# ANAPHASE



# ANAPHASE



**DAUGHTER  
CHROMOSOMES  
MOVE  
OPPOSITE  
POLES**

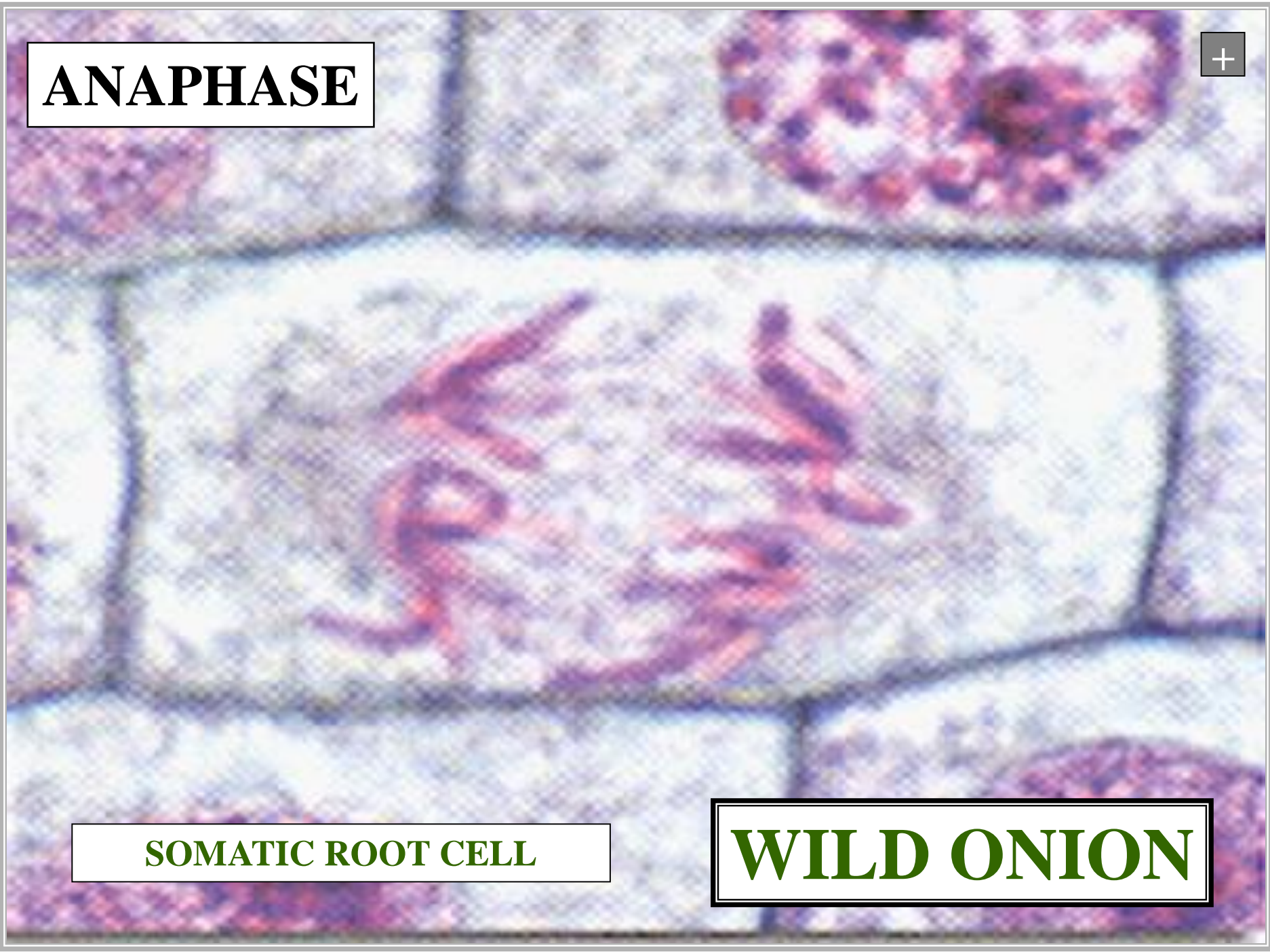


**ANAPHASE**



**SOMATIC ROOT CELL**

**WILD ONION**





# ANAPHASE

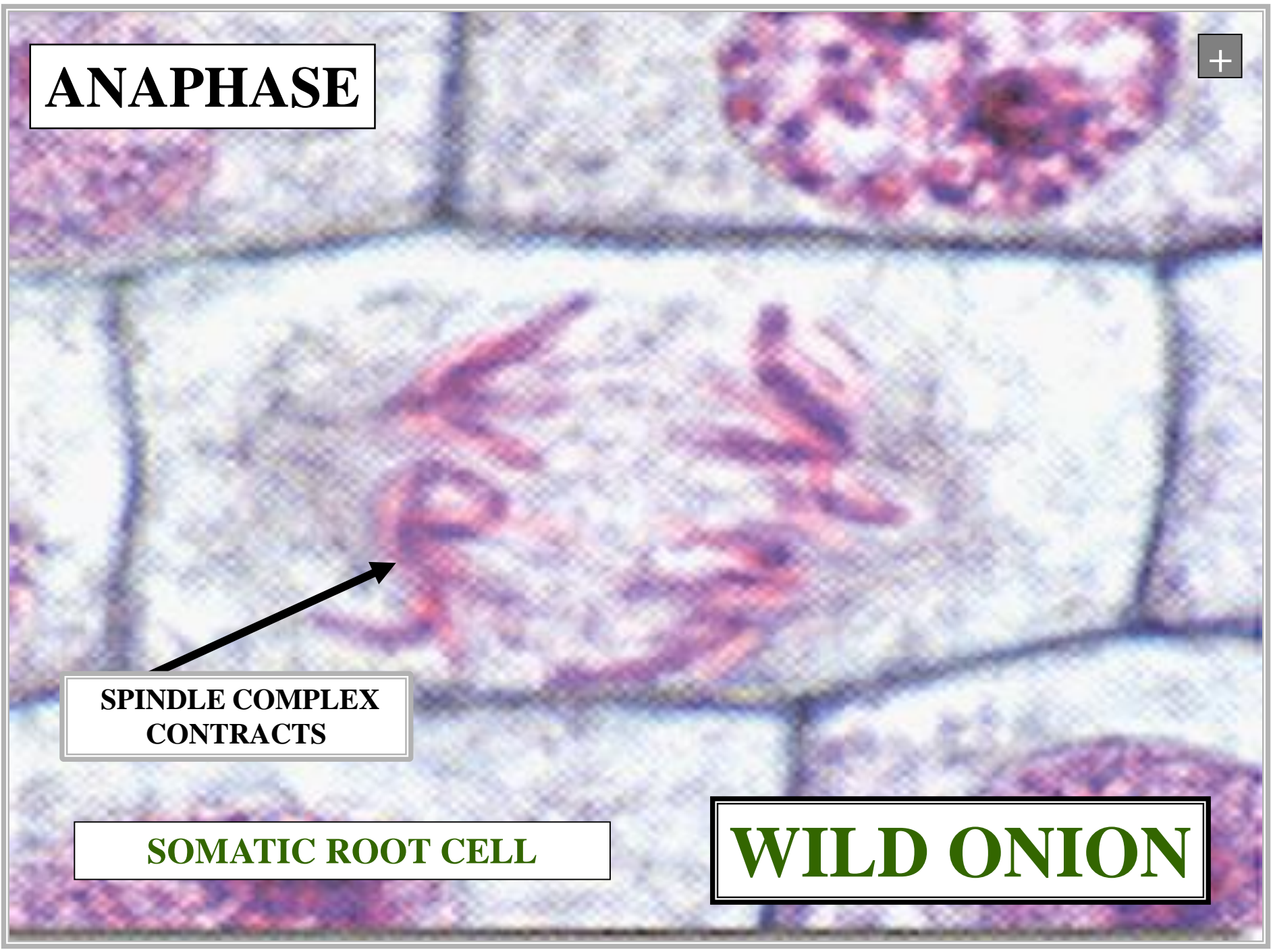


SPINDLE COMPLEX  
CONTRACTS



SOMATIC ROOT CELL

WILD ONION



# ANAPHASE

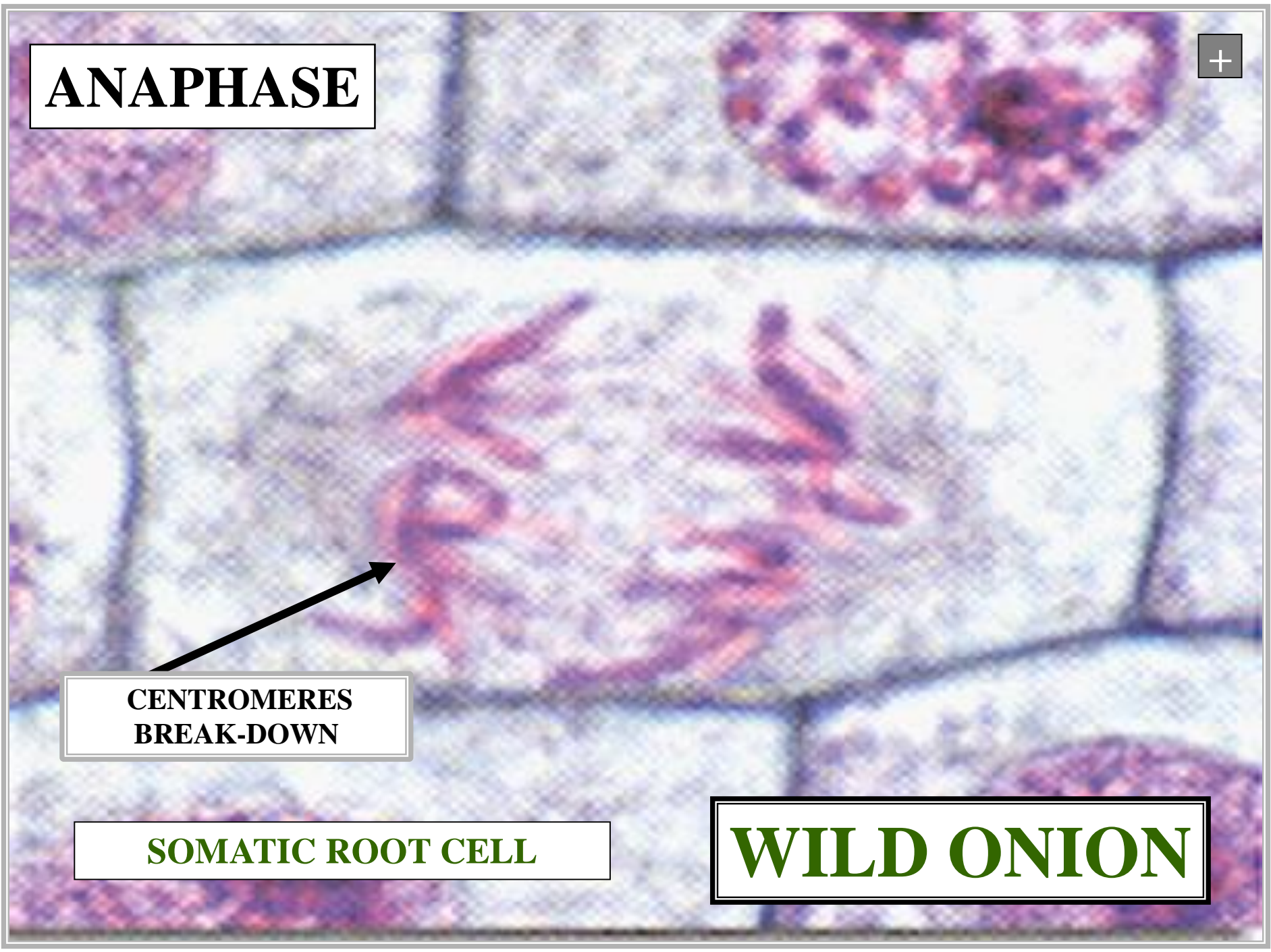


**CENTROMERES  
BREAK-DOWN**



**SOMATIC ROOT CELL**

**WILD ONION**



# ANAPHASE



CHROMATIDS  
SEPARATE

SOMATIC ROOT CELL

WILD ONION

# ANAPHASE



CHROMATIDS  
BECOME  
CHROMOSOMES

SOMATIC ROOT CELL

WILD ONION

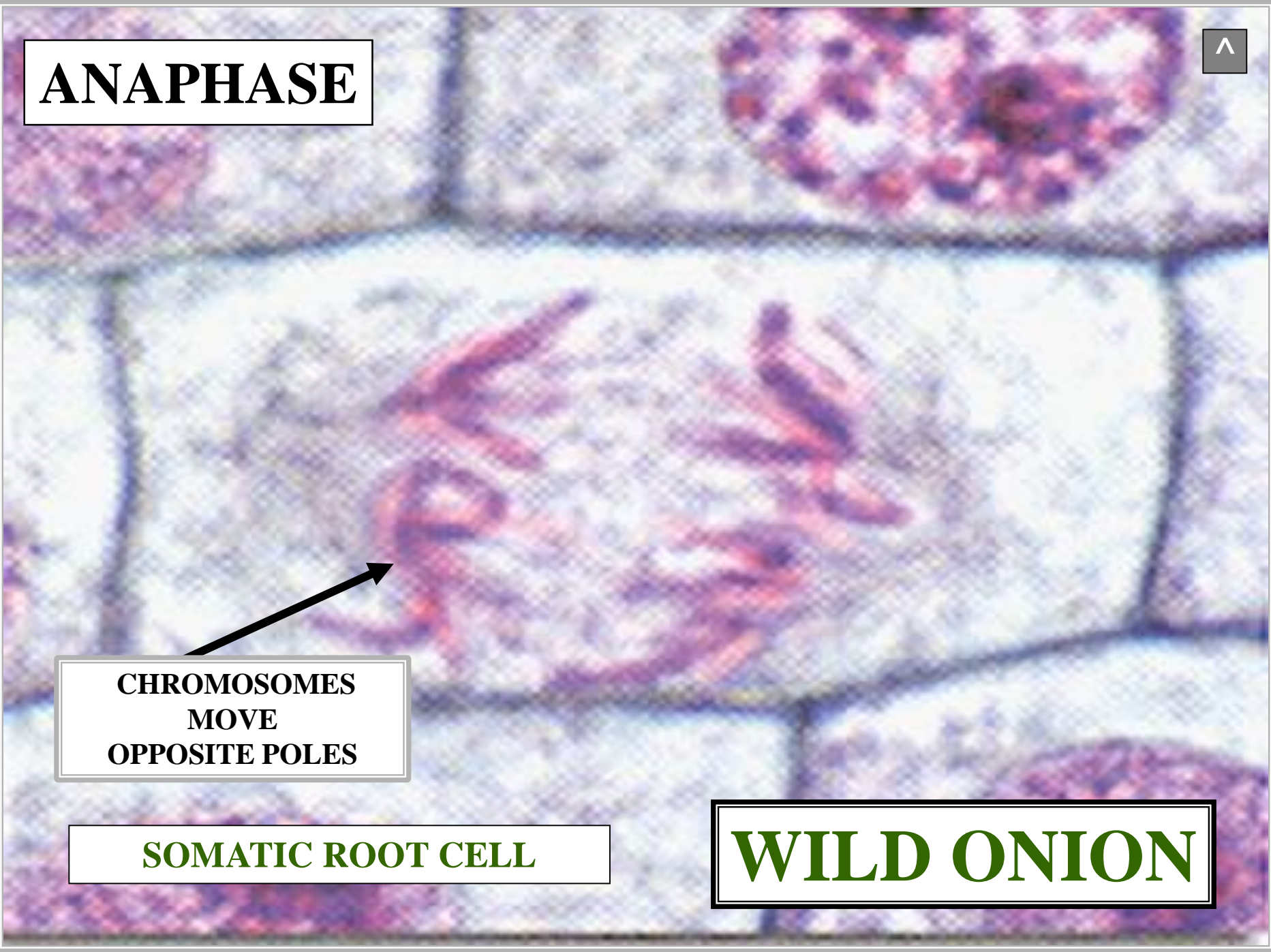
# ANAPHASE



CHROMOSOMES  
MOVE  
OPPOSITE POLES

SOMATIC ROOT CELL

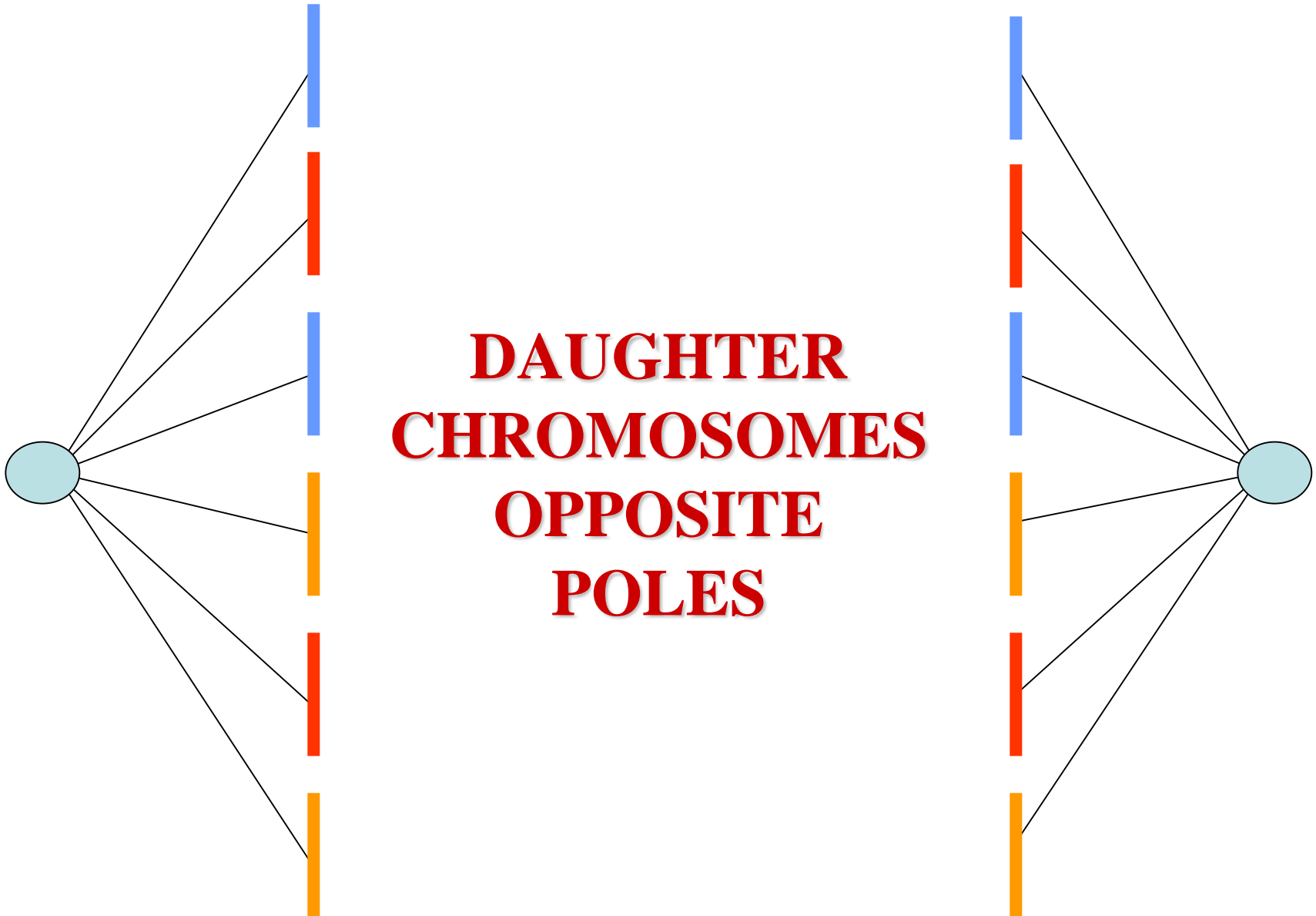
WILD ONION





# TELOPHASE

# TELOPHASE

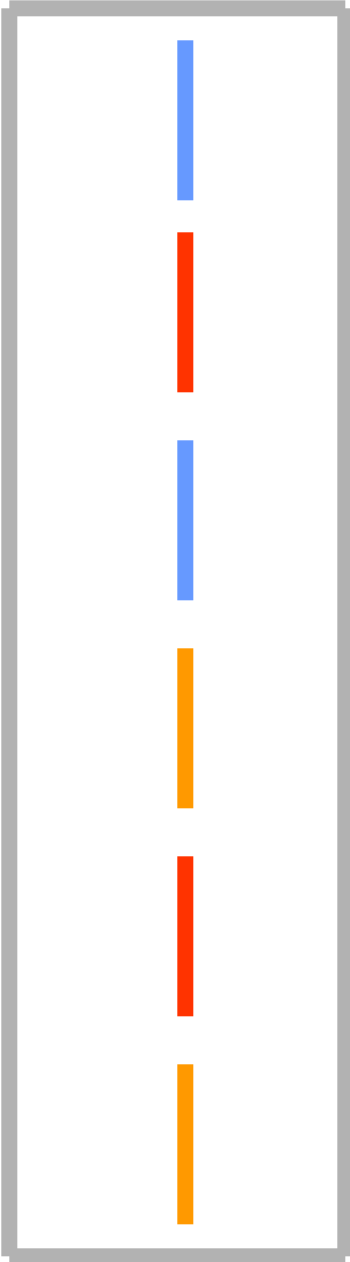


# TELOPHASE

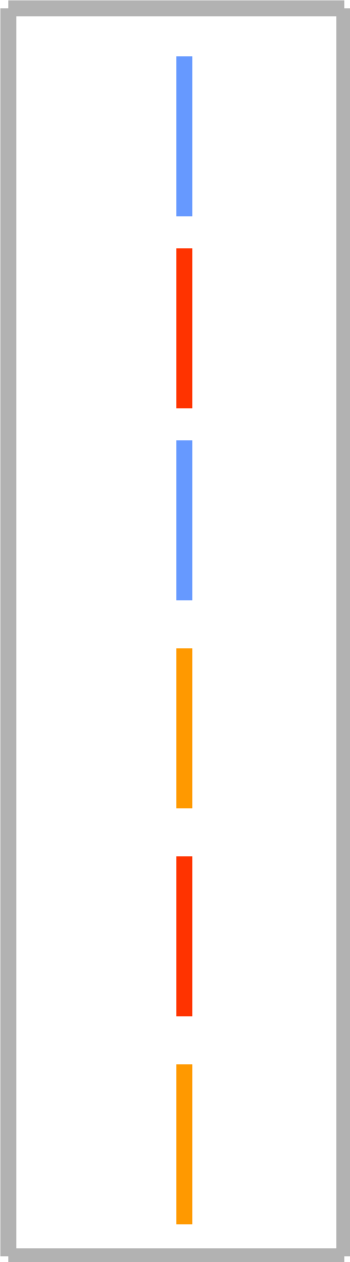
**SPINDLE  
COMPLEX  
DISSIPATES**



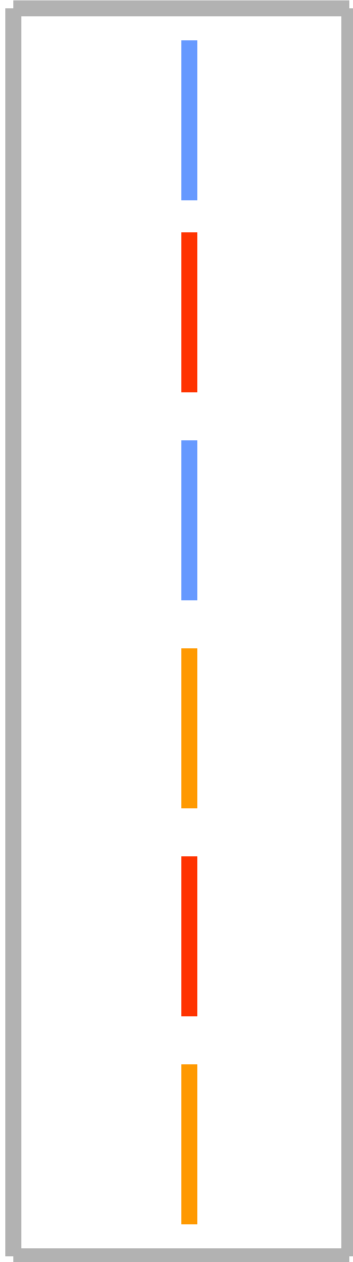
# TELOPHASE



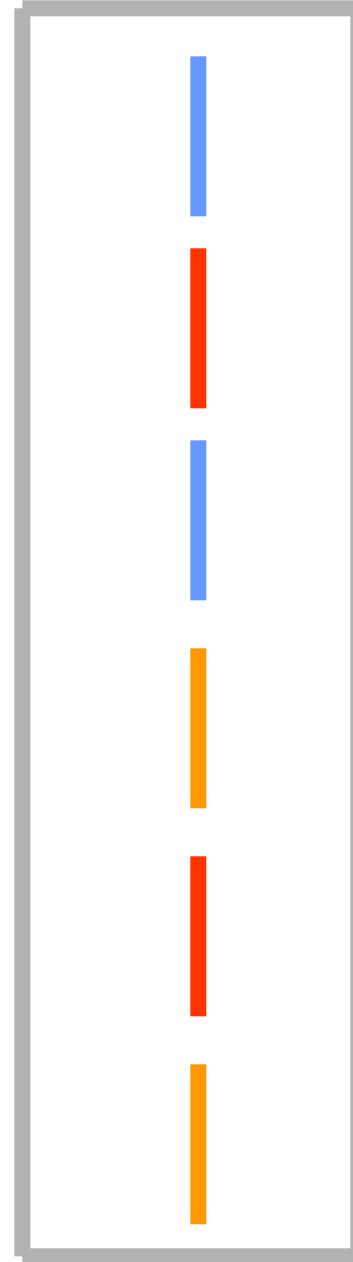
**NUCLEAR  
MEMBRANE  
FORMS**



# TELOPHASE



**TWO  
DAUGHTER  
NUCLEI**

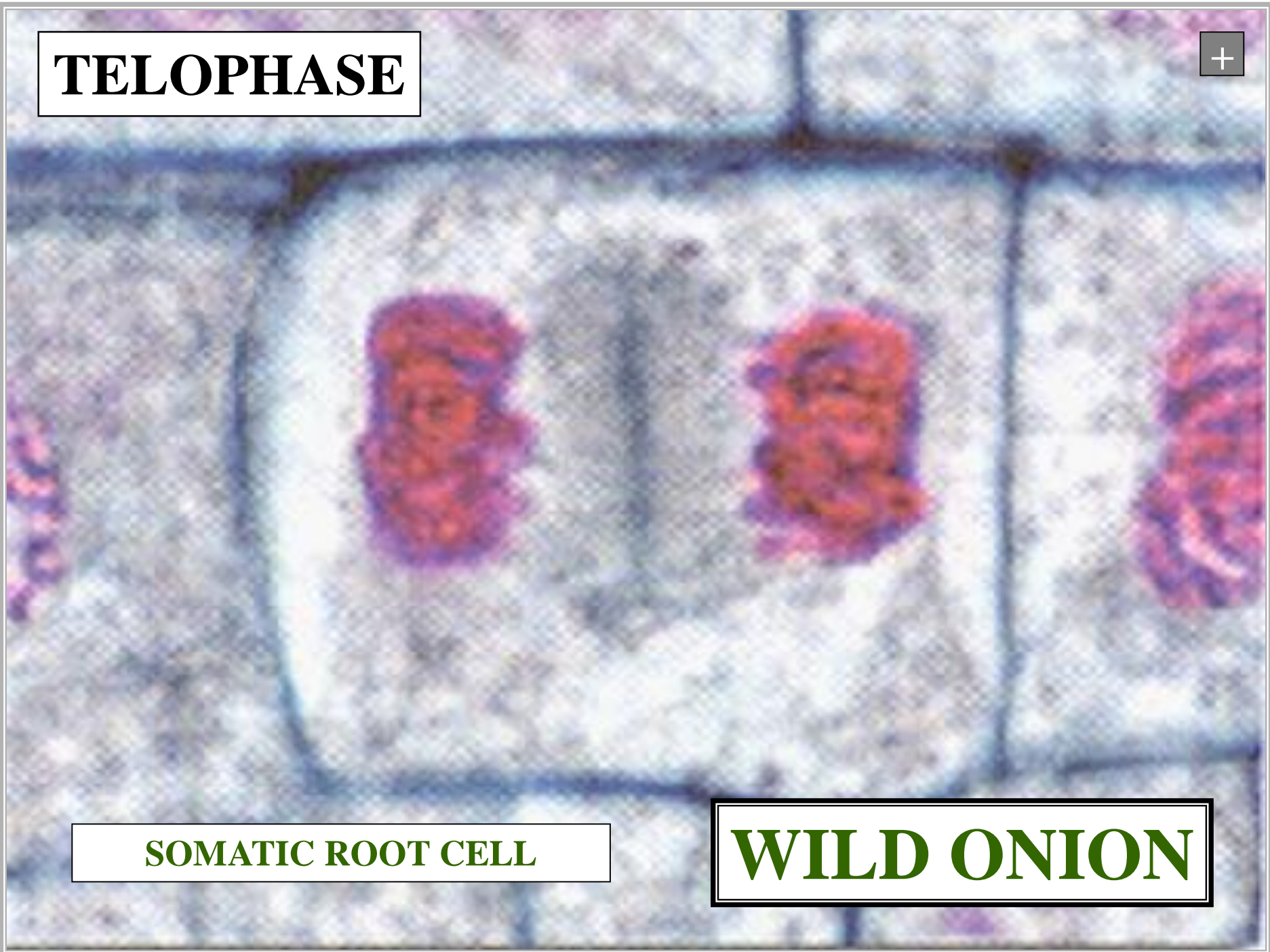


# TELOPHASE

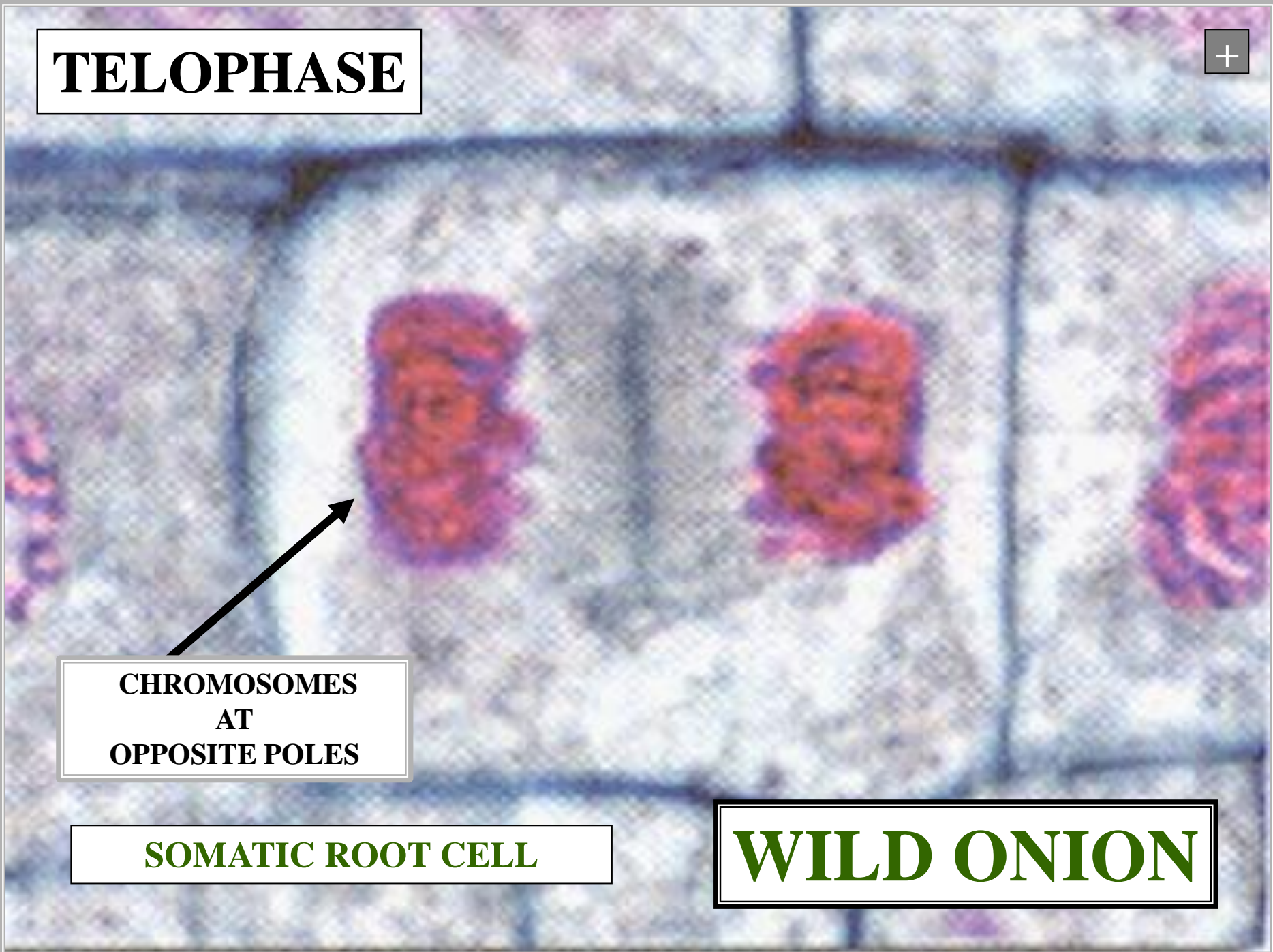


SOMATIC ROOT CELL

WILD ONION



# TELOPHASE

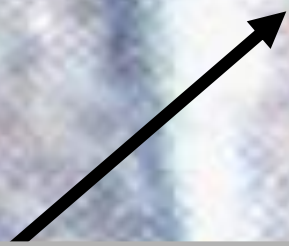


CHROMOSOMES  
AT  
OPPOSITE POLES

SOMATIC ROOT CELL

WILD ONION

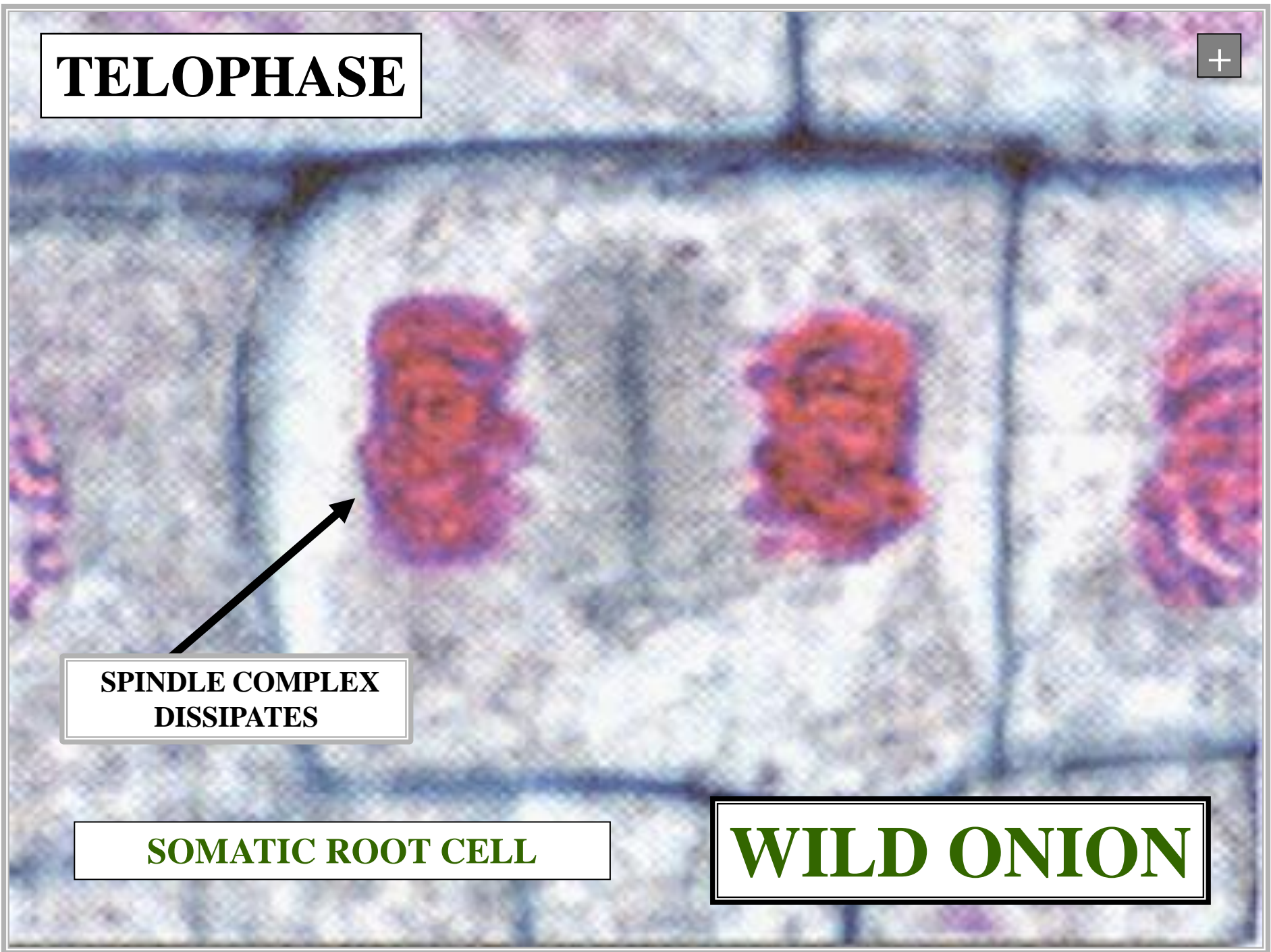
# TELOPHASE



SPINDLE COMPLEX  
DISSIPATES

SOMATIC ROOT CELL

WILD ONION



# TELOPHASE



NUCLEAR  
MEMBRANE  
FORMS ABOUT  
CHROMOSOMES

SOMATIC ROOT CELL

WILD ONION

# TELOPHASE

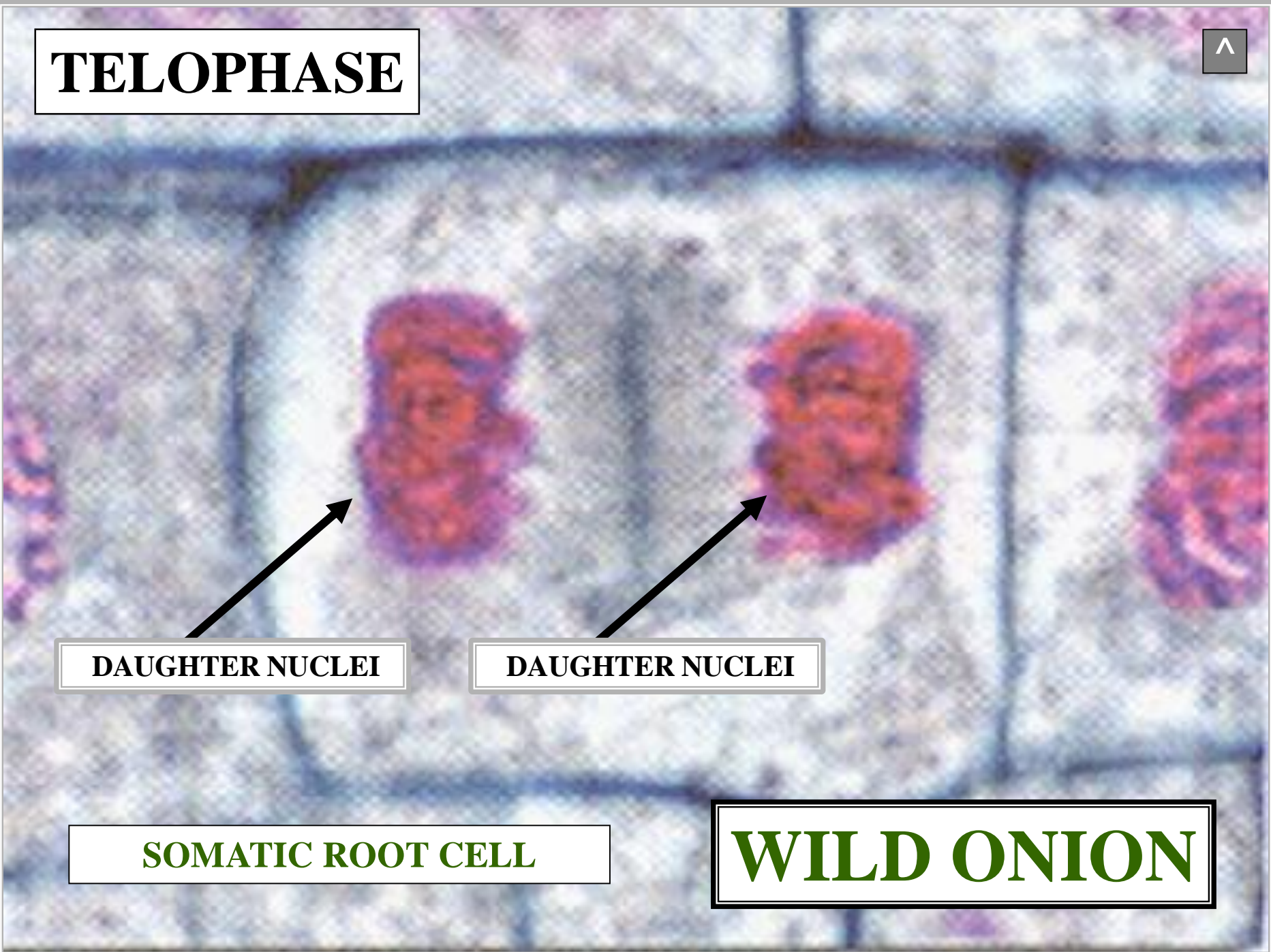


DAUGHTER NUCLEI

DAUGHTER NUCLEI

SOMATIC ROOT CELL

WILD ONION



# CYTOKINESIS STAGE



# CYTOKINESIS



# **CYTOKINESIS STAGE**

**CYTOSOL DIVISION**

# **CYTOKINESIS STAGE**

# CYTOKINESIS

## TYPES

# **CYTOKINESIS TYPES**

**CELL PLATE FORMATION**

# **CYTOKINESIS TYPES**