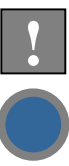




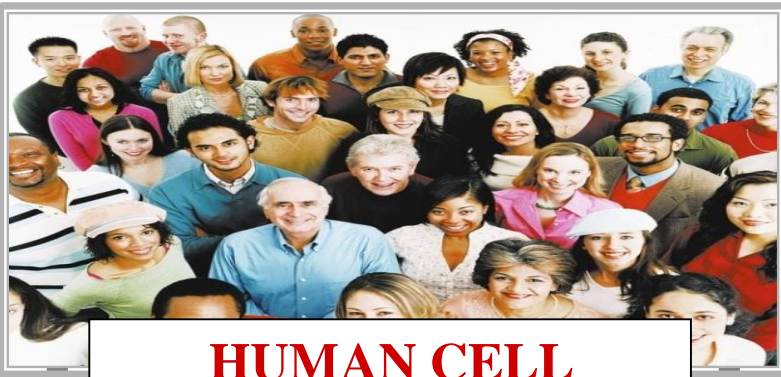
ANIMAL DIVERSITY



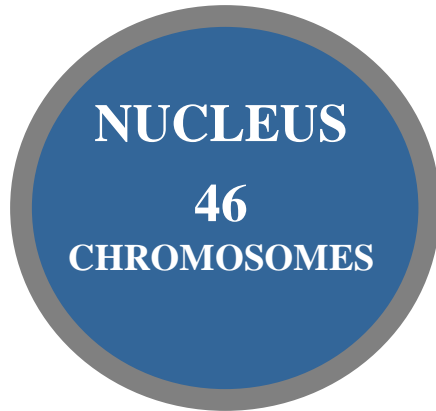


HUMAN DIVERSITY





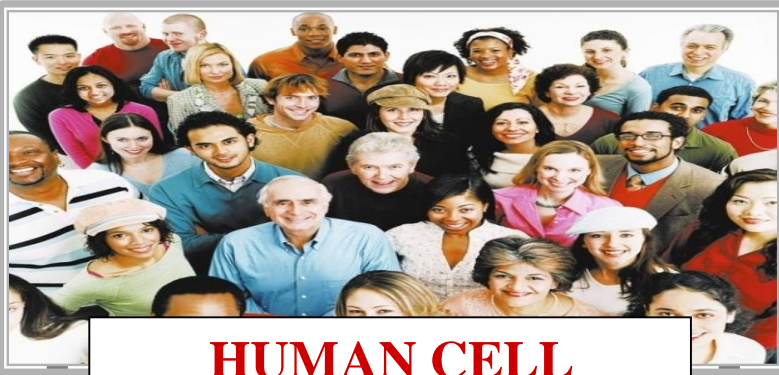
HUMAN CELL



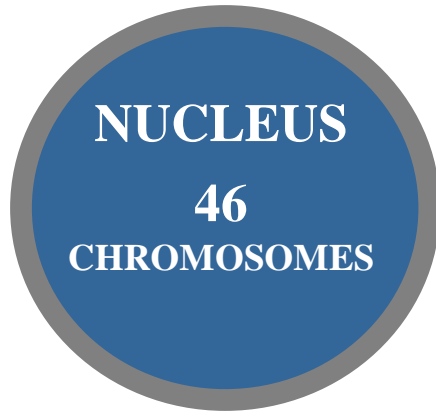
SOMATIC CELL

**SOMATIC CELL
DOES NOT
UNDERGO
MEIOSIS**





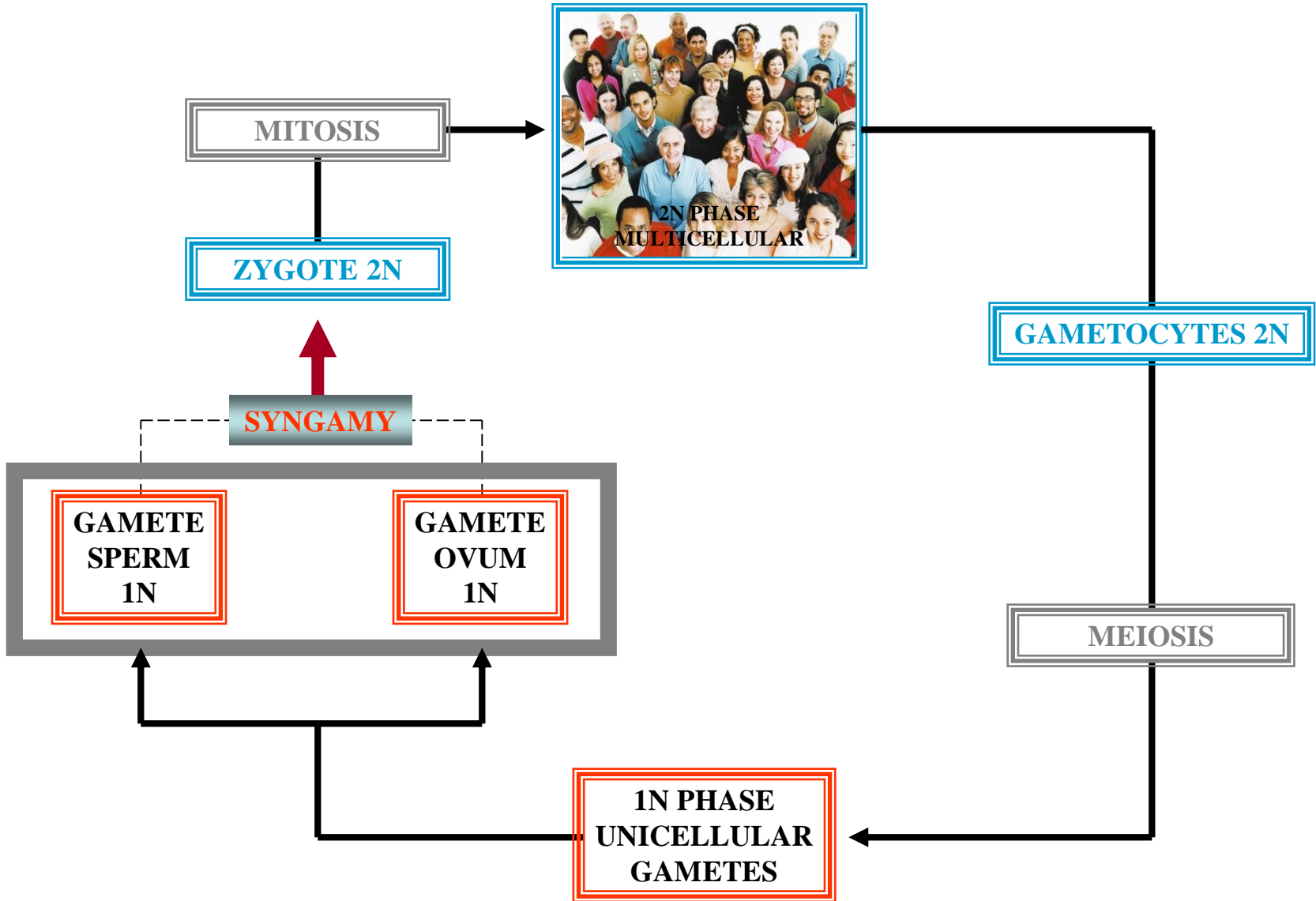
HUMAN CELL

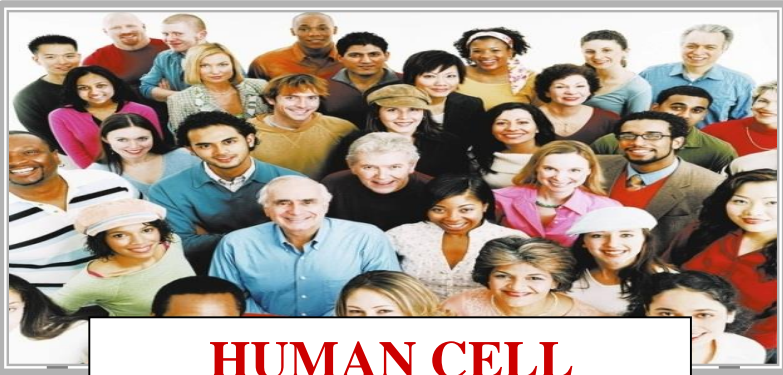


SOMATIC CELL

**SOMATIC CELL
DOES NOT DERIVE
REPRODUCTIVE
CELLS**

HUMAN LIFE CYCLE

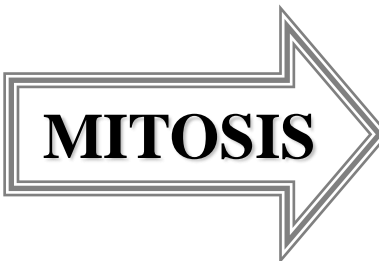




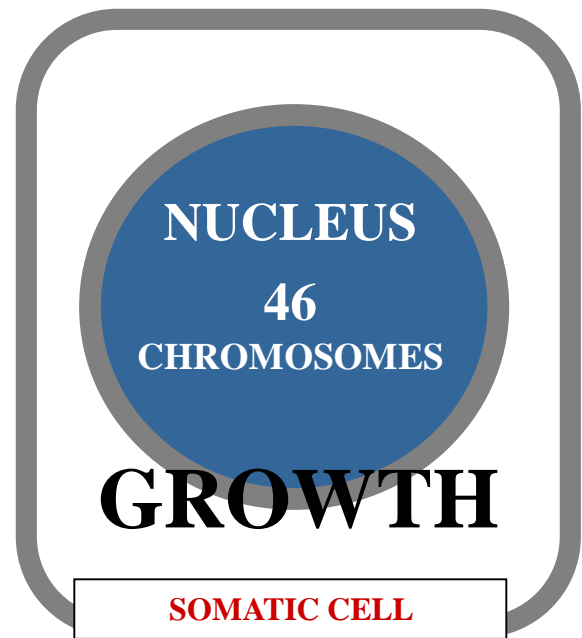
HUMAN CELL

NUCLEUS
46
CHROMOSOMES

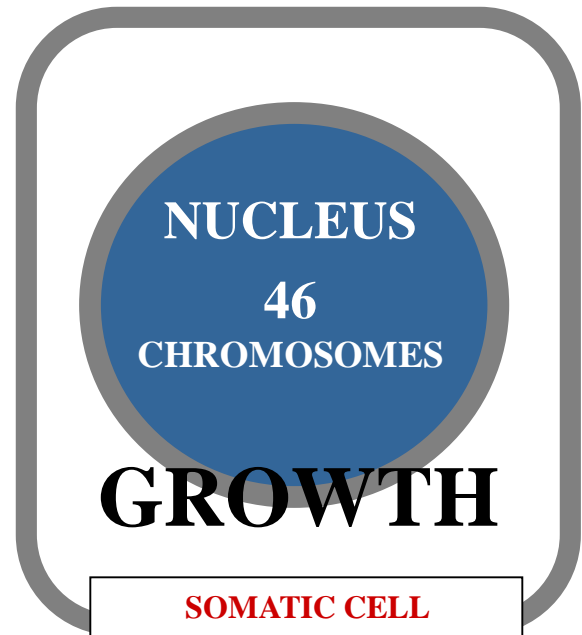
SOMATIC CELL



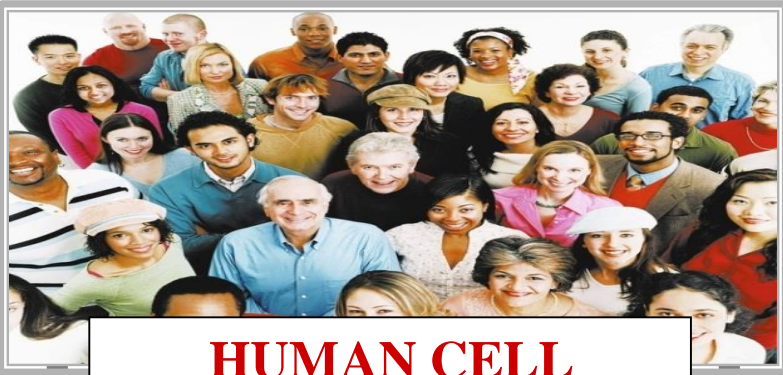
MITOSIS



SOMATIC CELL



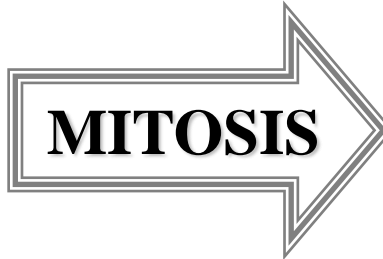
SOMATIC CELL



HUMAN CELL

NUCLEUS
46
CHROMOSOMES

SOMATIC CELL



MITOSIS

MAINTENANCE

SOMATIC CELL

NUCLEUS
46
CHROMOSOMES

MAINTENANCE

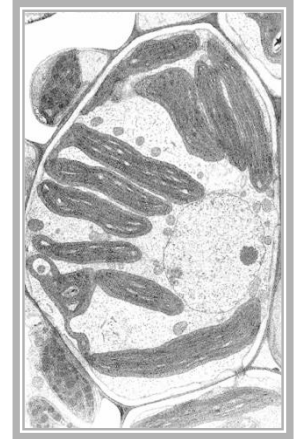
NUCLEUS
46
CHROMOSOMES

SOMATIC CELL





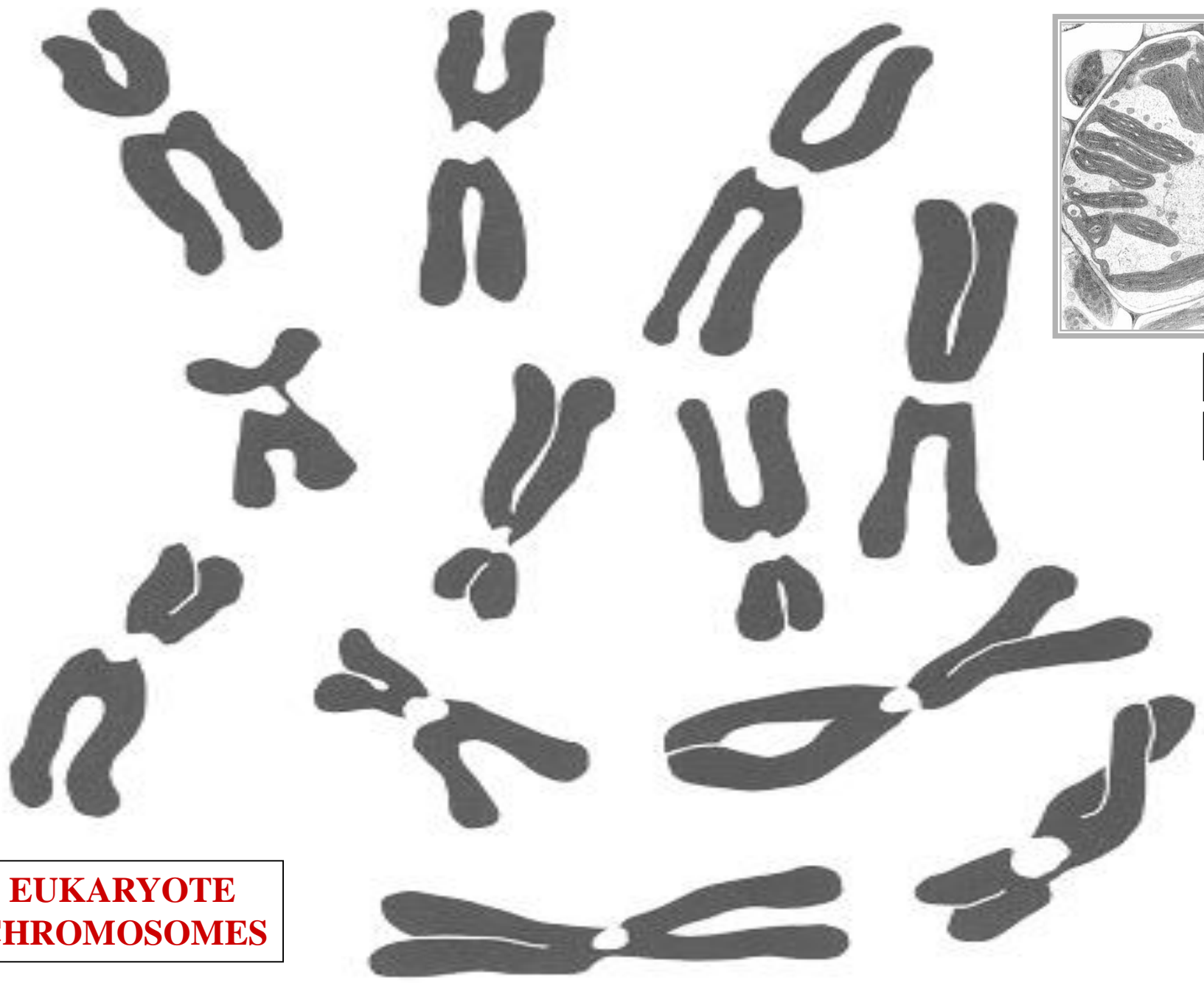
EUKARYOTE CHROMOSOMES

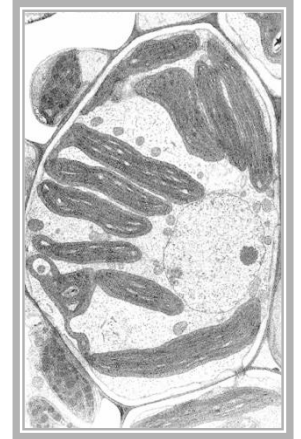


L

+

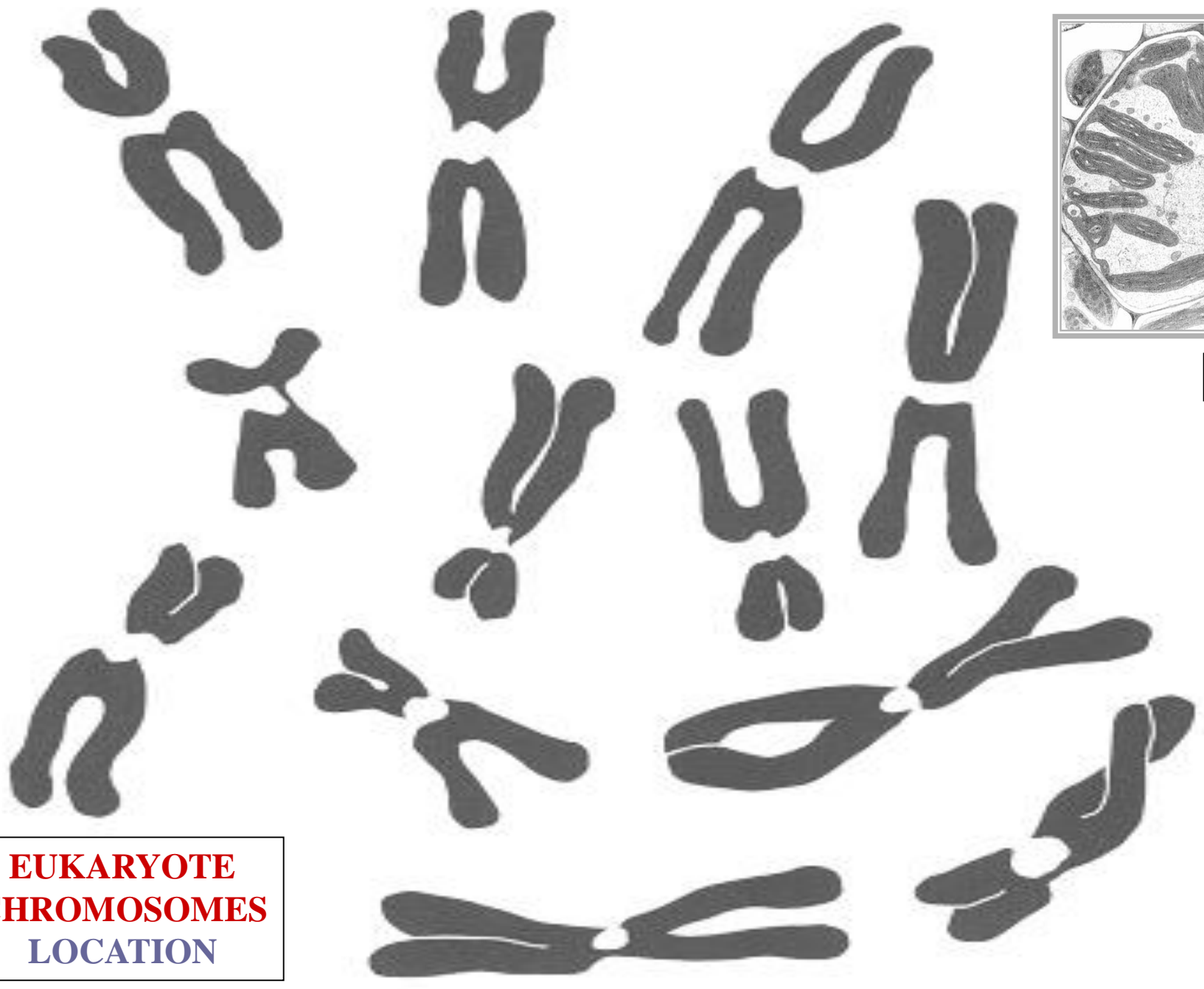
**EUKARYOTE
CHROMOSOMES**

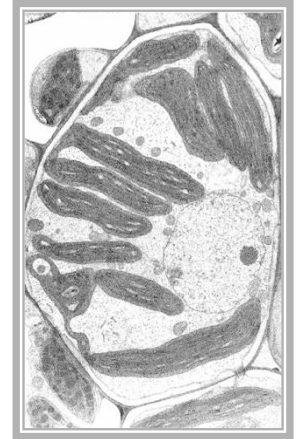




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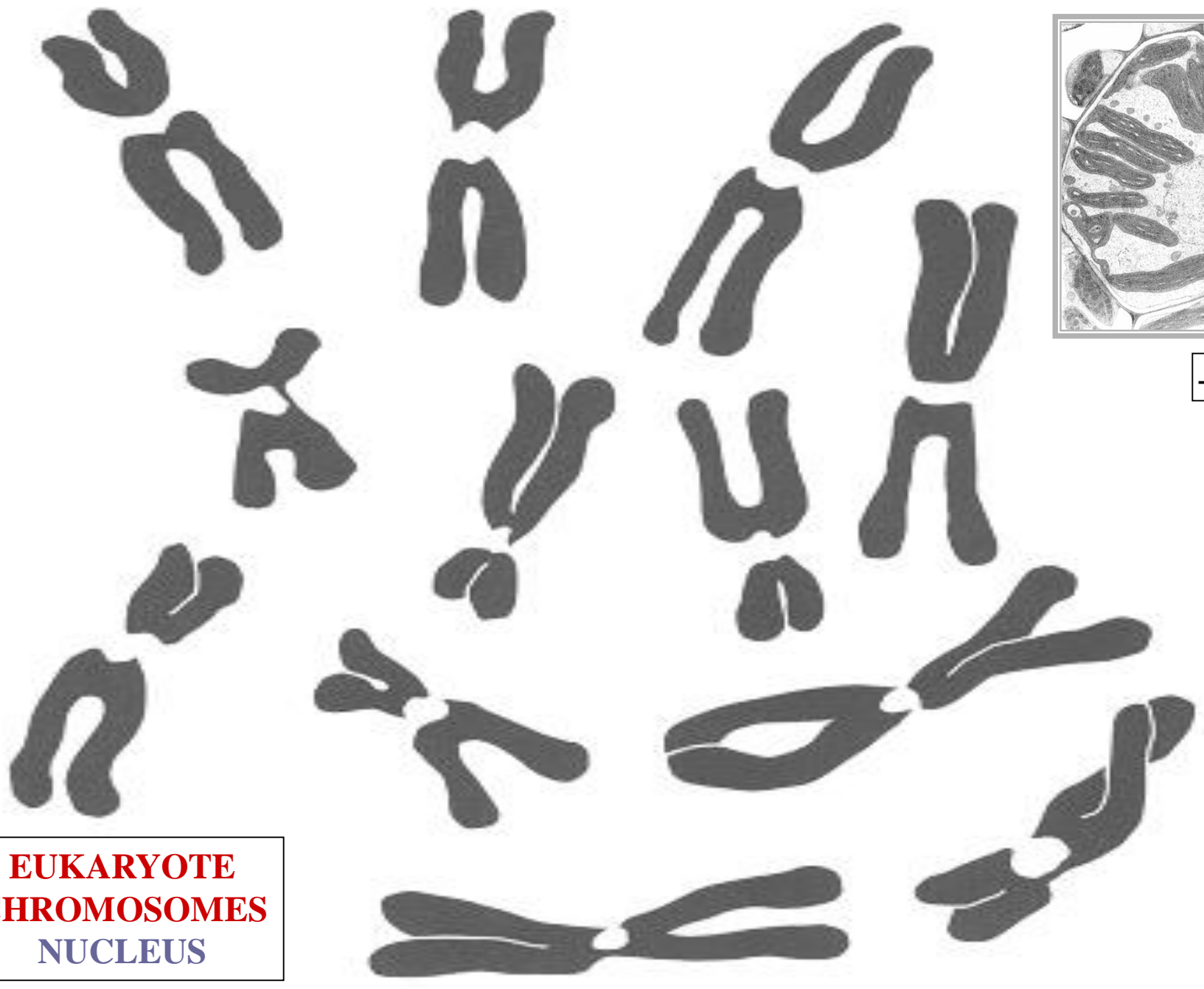
**EUKARYOTE
CHROMOSOMES
LOCATION**

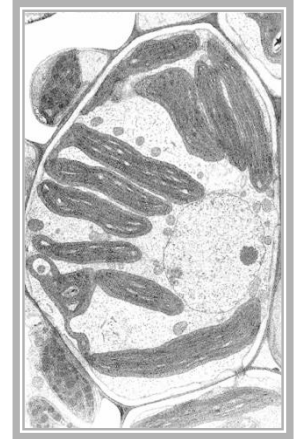




+1

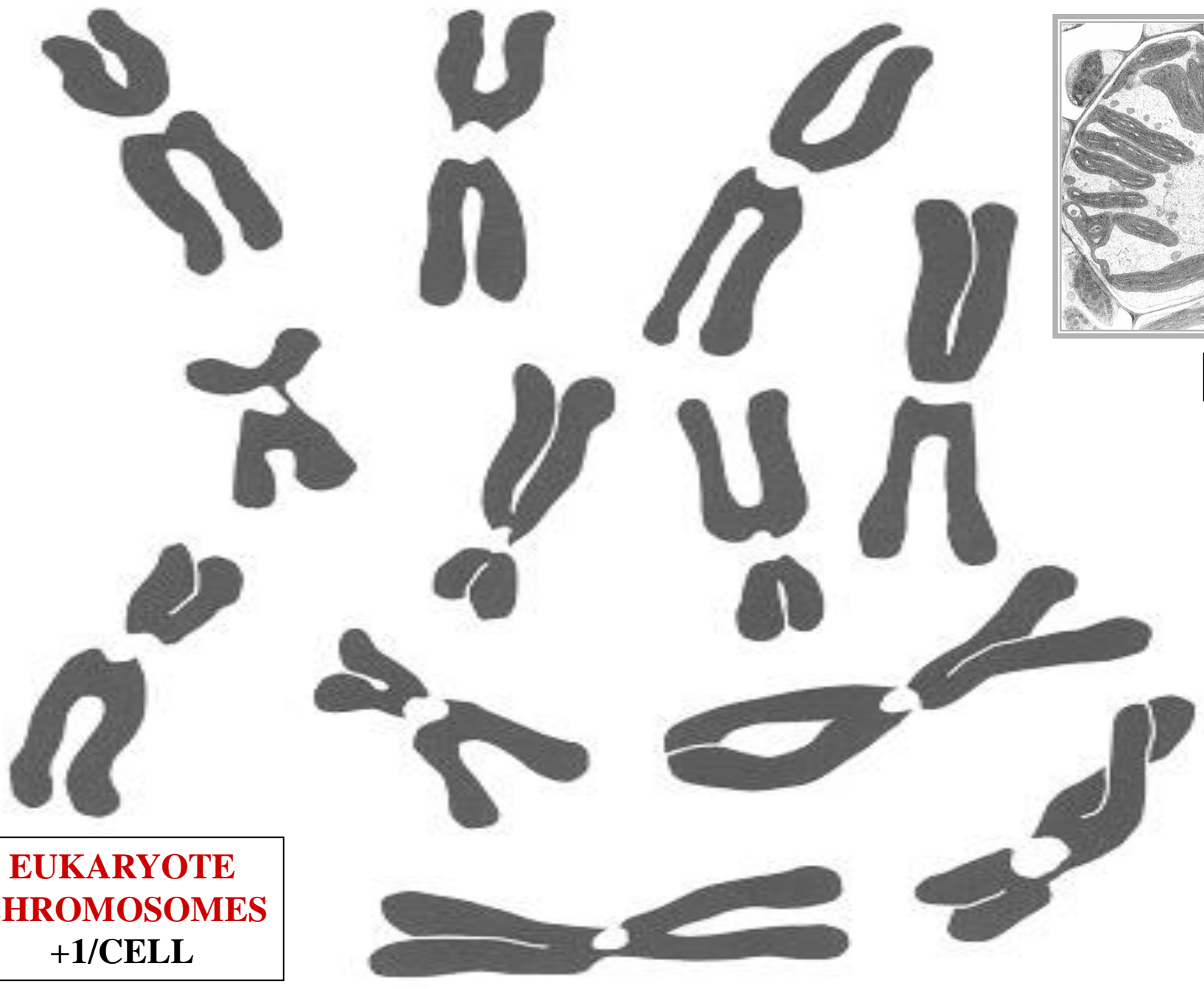
EUKARYOTE
CHROMOSOMES
NUCLEUS

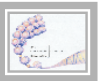
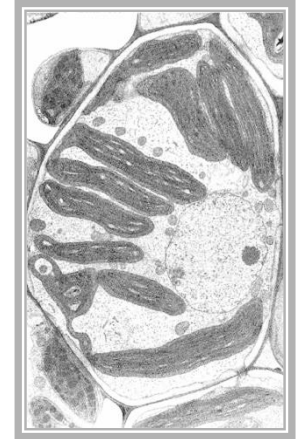




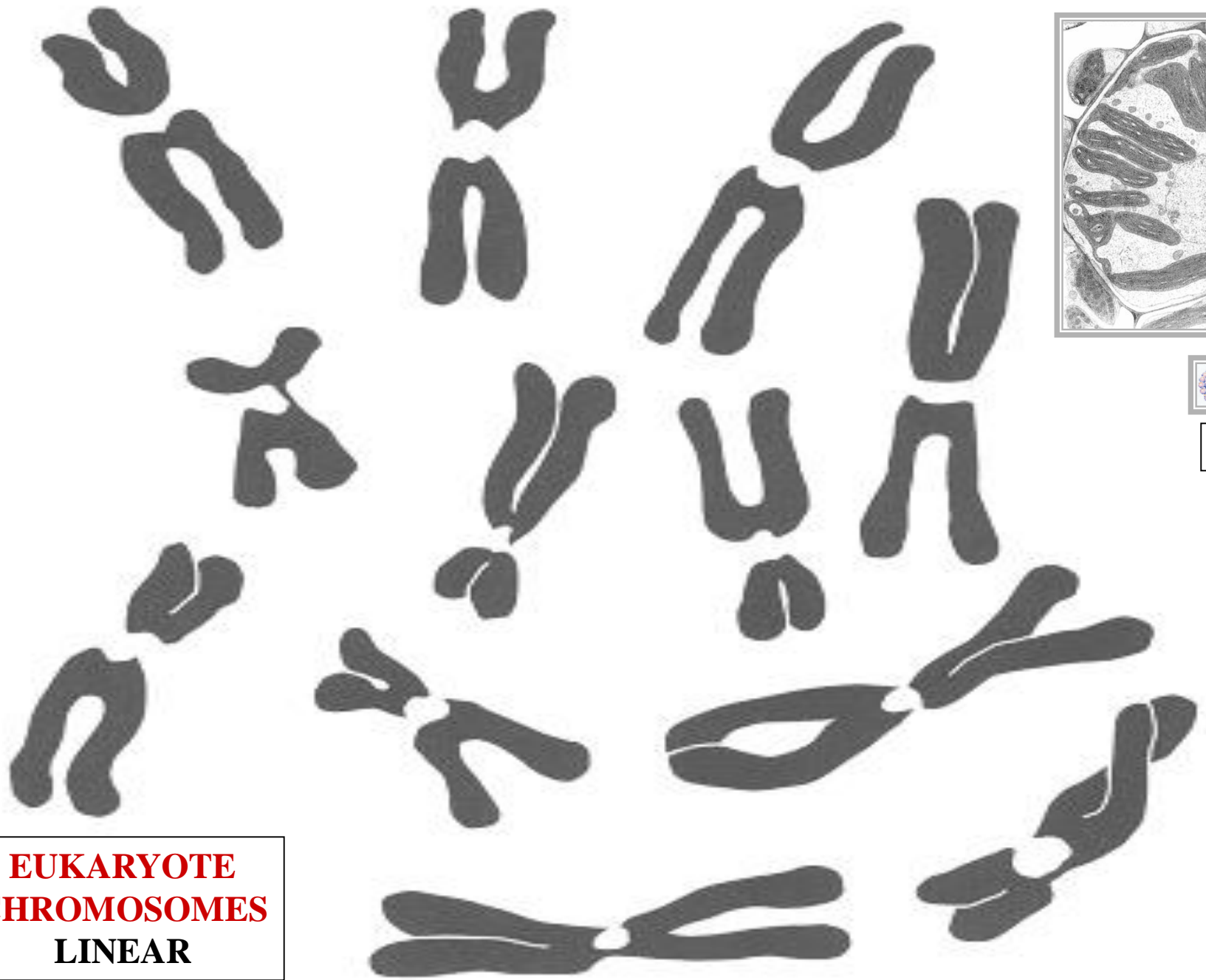
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**EUKARYOTE
CHROMOSOMES
+1/CELL**





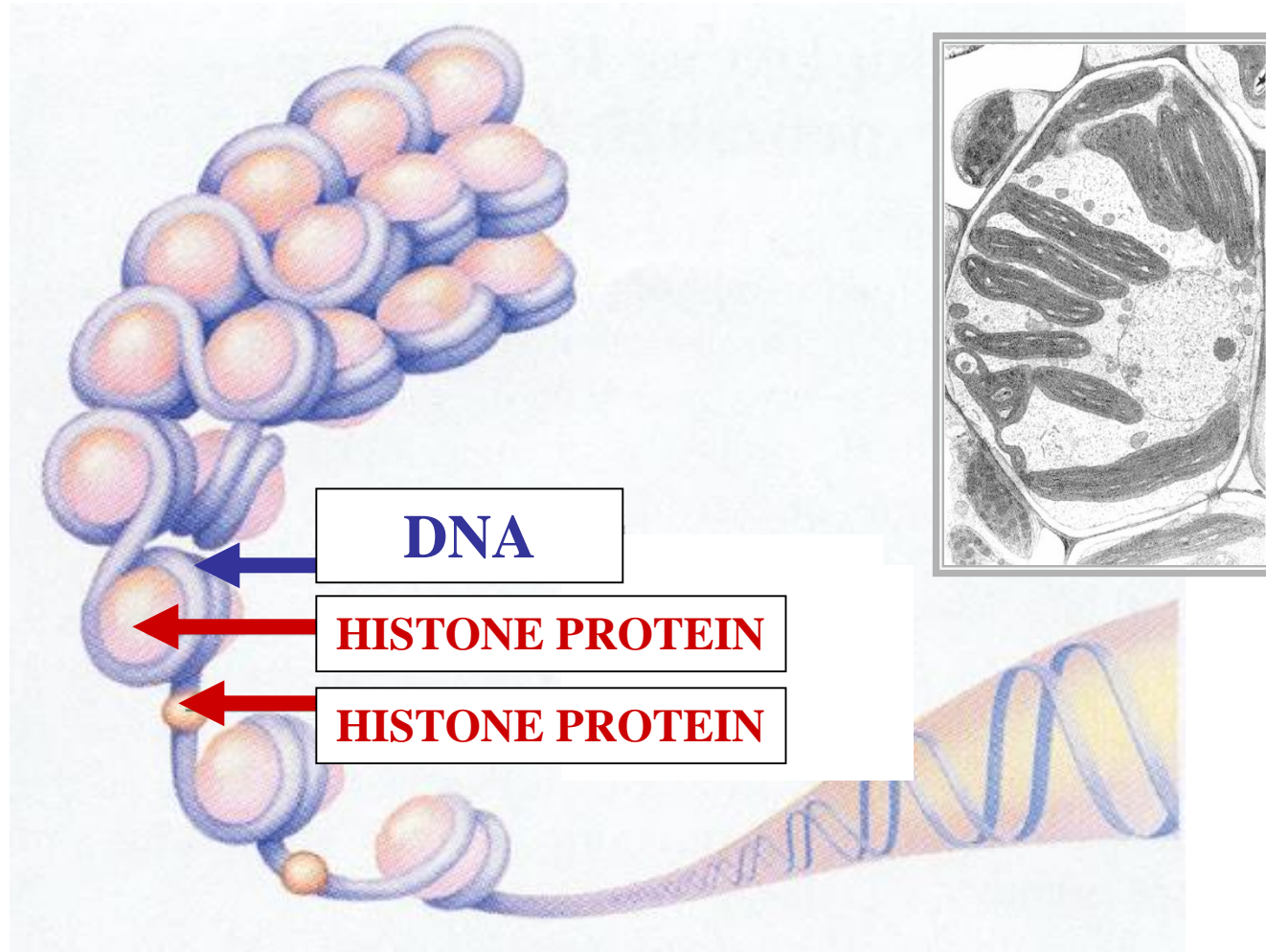
**EUKARYOTE
CHROMOSOMES
LINEAR**



EUKARYOTE CHROMOSOME

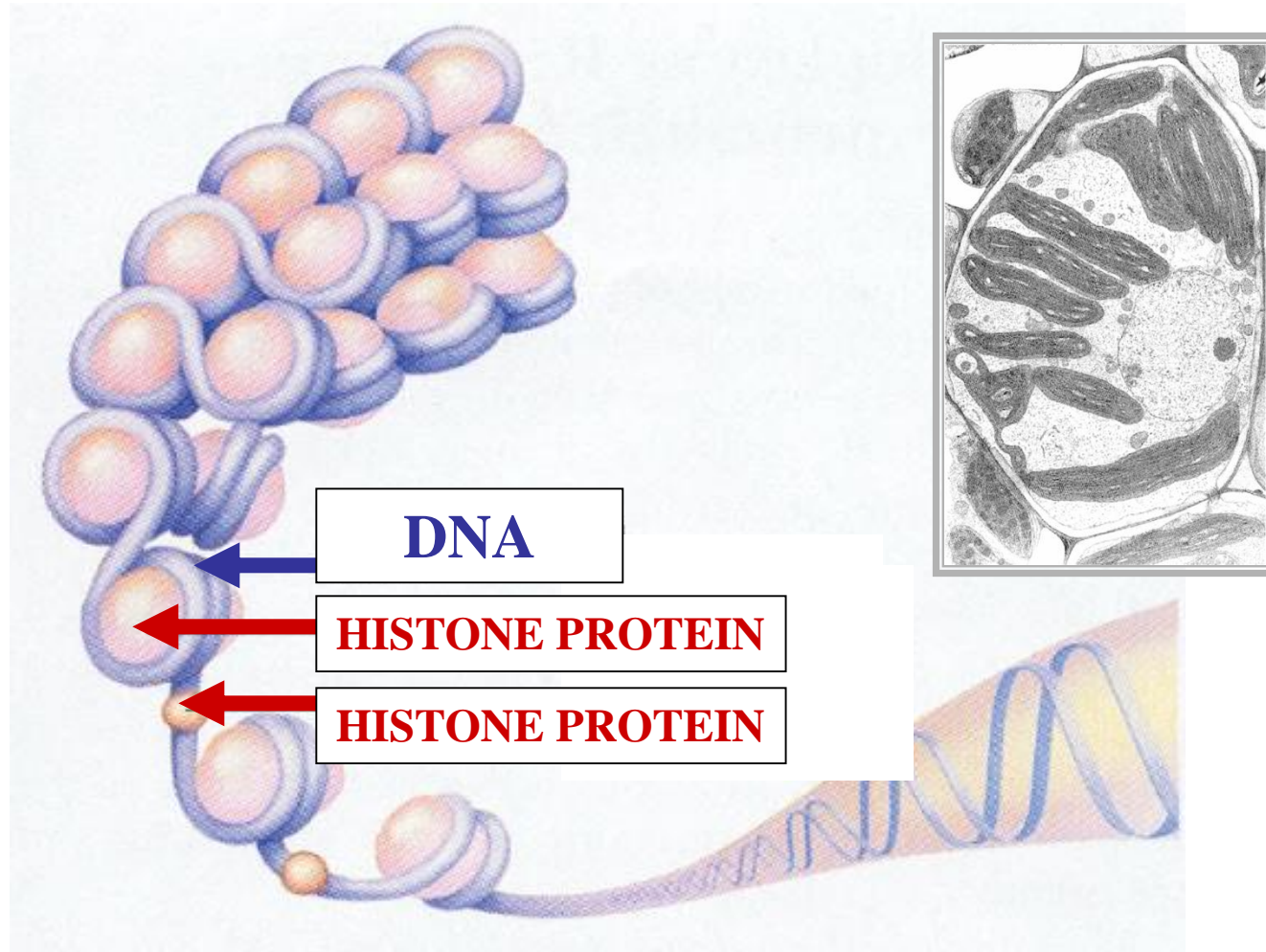
HP

PR



EUKARYOTE CHROMOSOME:

EUKARYOTE CHROMOSOME

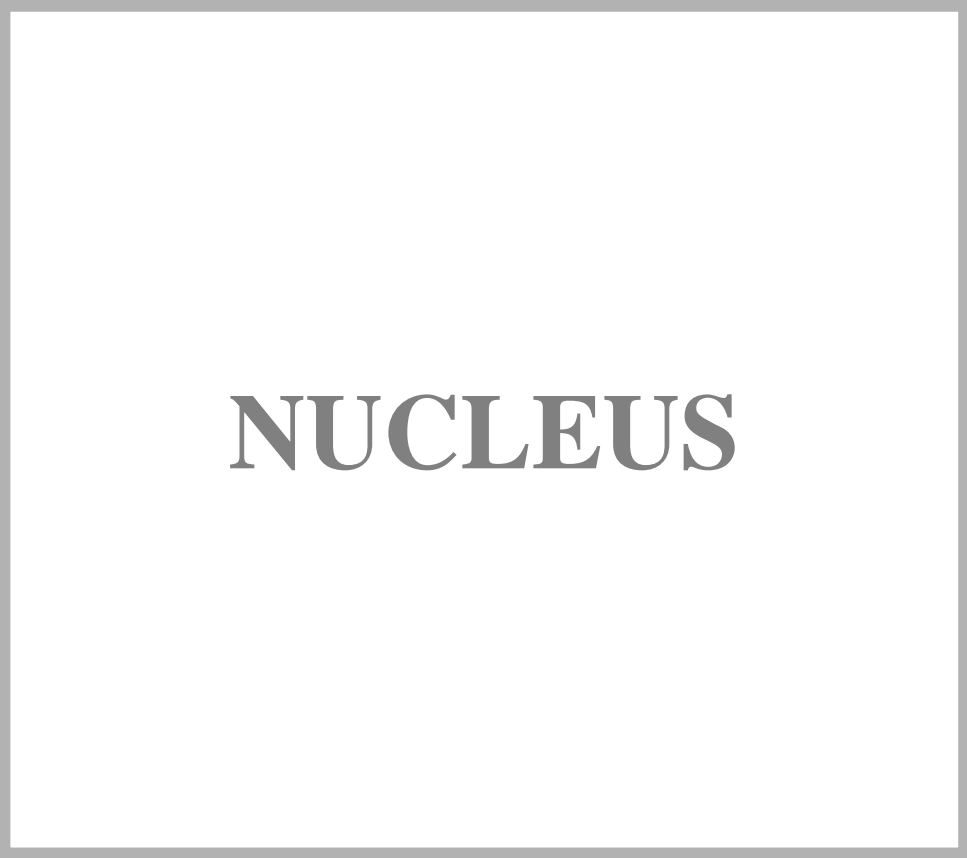
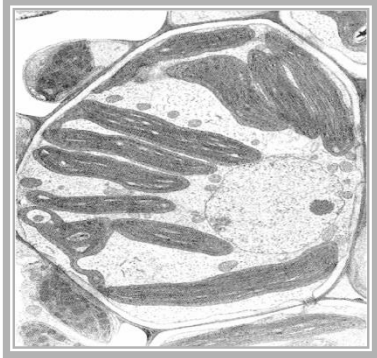


EUKARYOTE CHROMOSOME: HISTONE PROTEINS PRESENT



EUKARYOTE CHROMOSOME TERMS

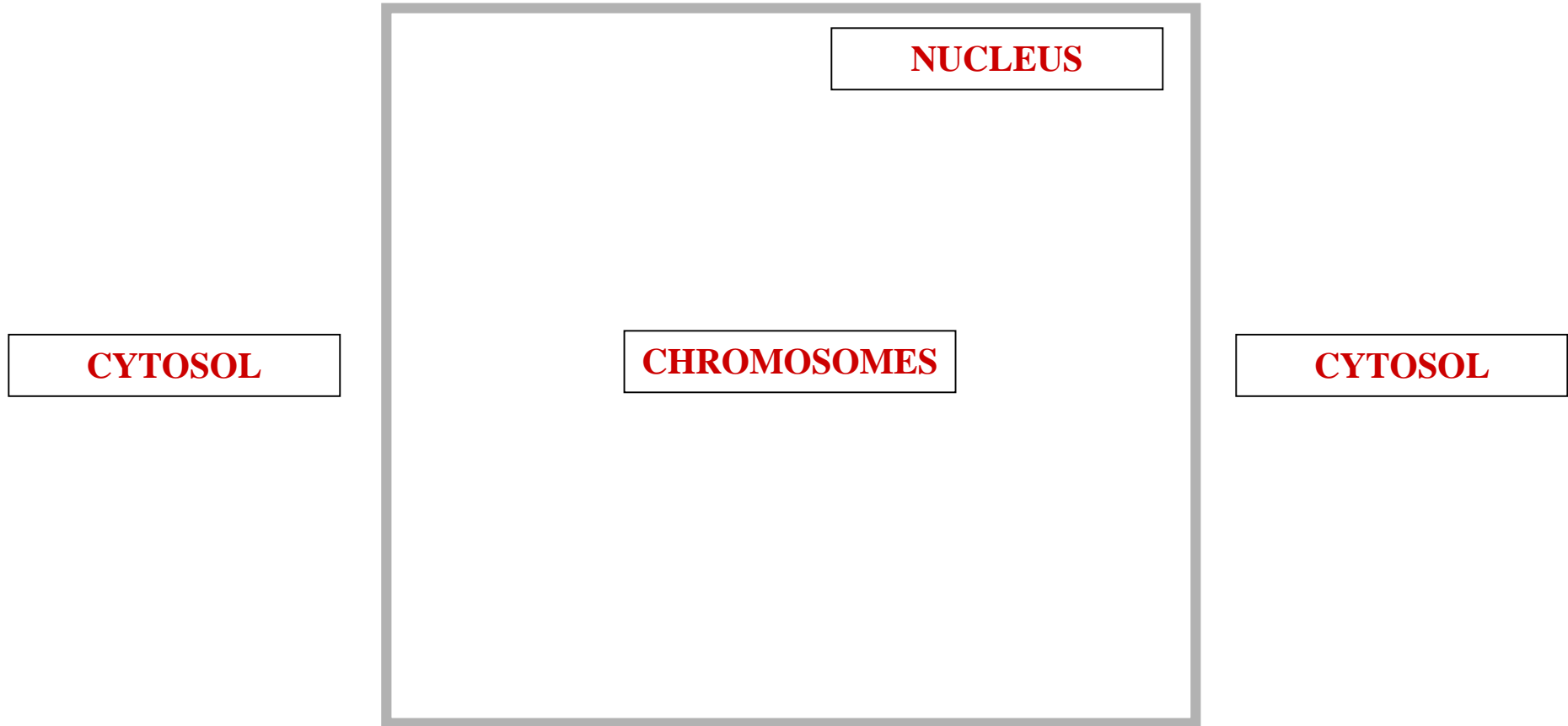
SOMATIC CELL



NUCLEUS

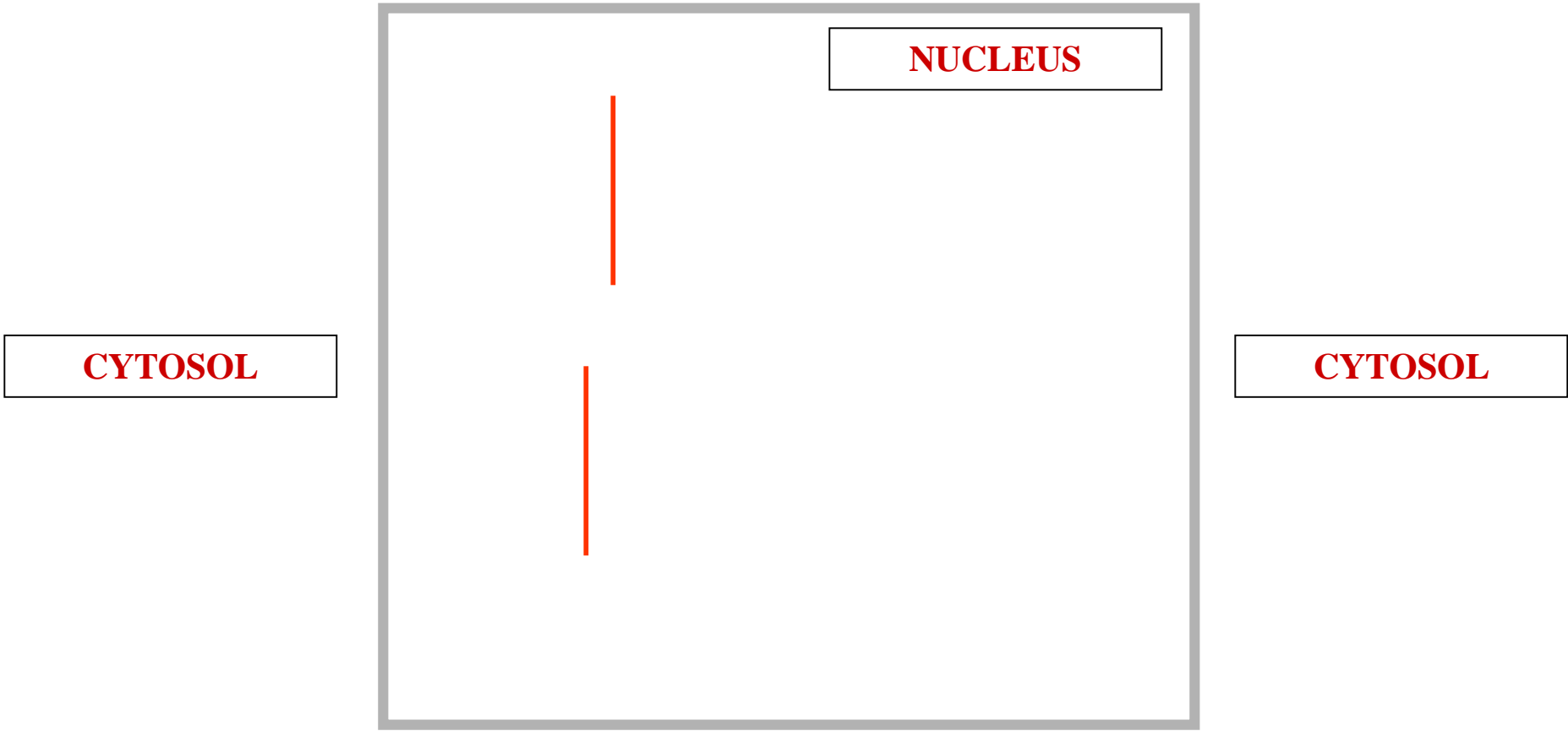
CYTOSOL

SOMATIC CELL



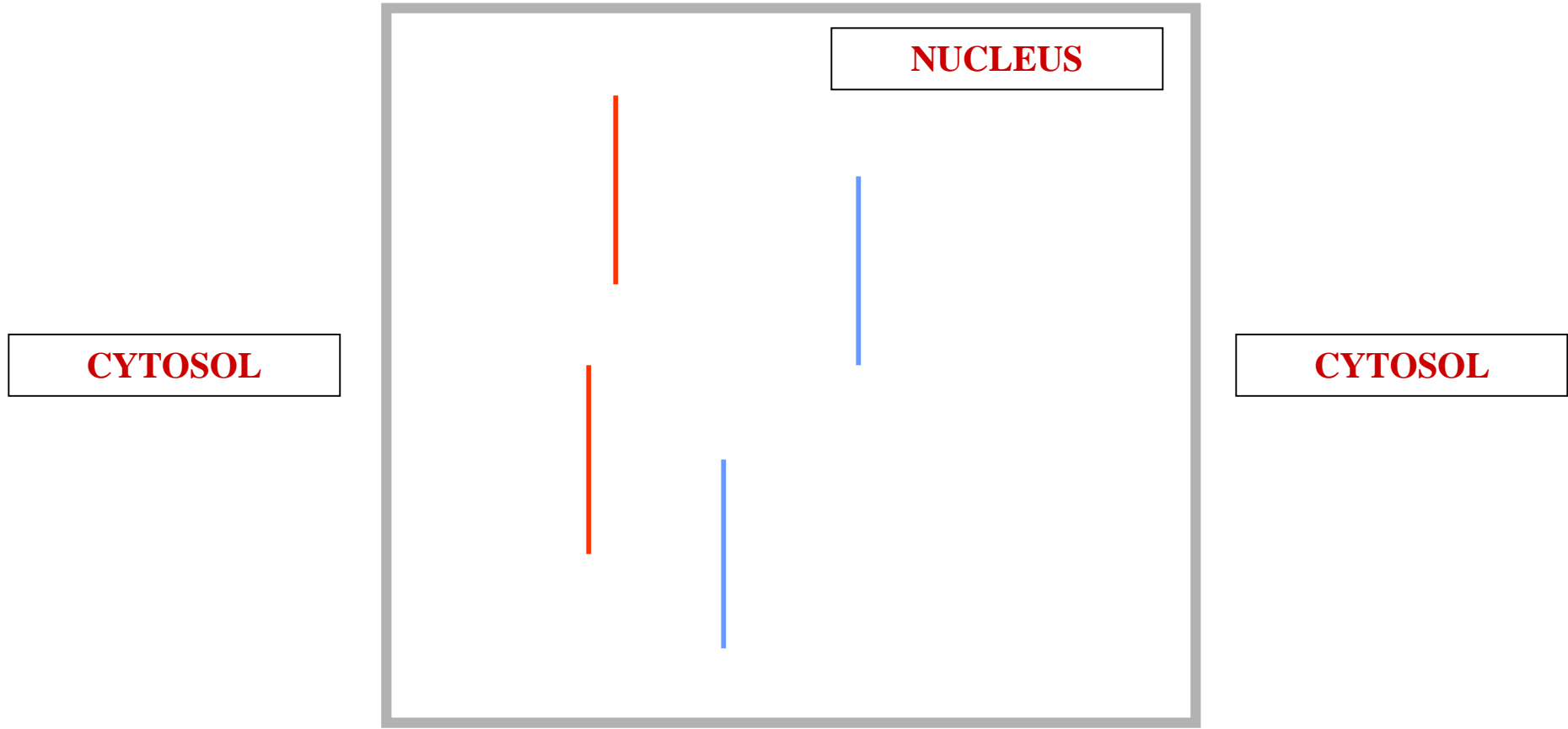
CHROMOSOMES

SOMATIC CELL



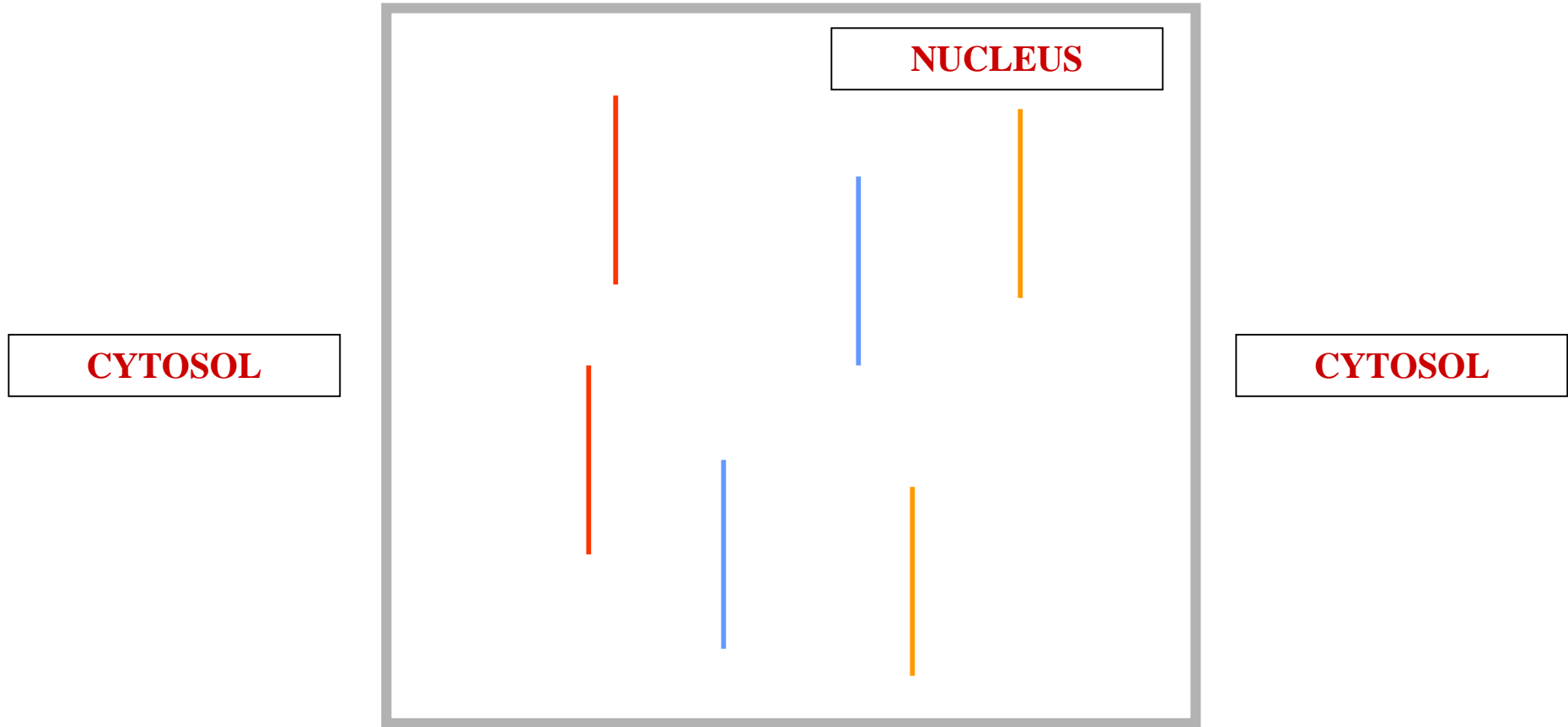
2 CHROMOSOMES

SOMATIC CELL



4 CHROMOSOMES

SOMATIC CELL



6 CHROMOSOMES

HOMOLOGOUS CHROMOSOMES



HOMOLOGOUS CHROMOSOMES

2 CHROMOSOMES

HOMOLOGOUS CHROMOSOMES



HOMOLOGOUS CHROMOSOMES

2 CHROMOSOMES

1 MATERNAL CHROMOSOME

HOMOLOGOUS CHROMOSOMES



HOMOLOGOUS CHROMOSOMES

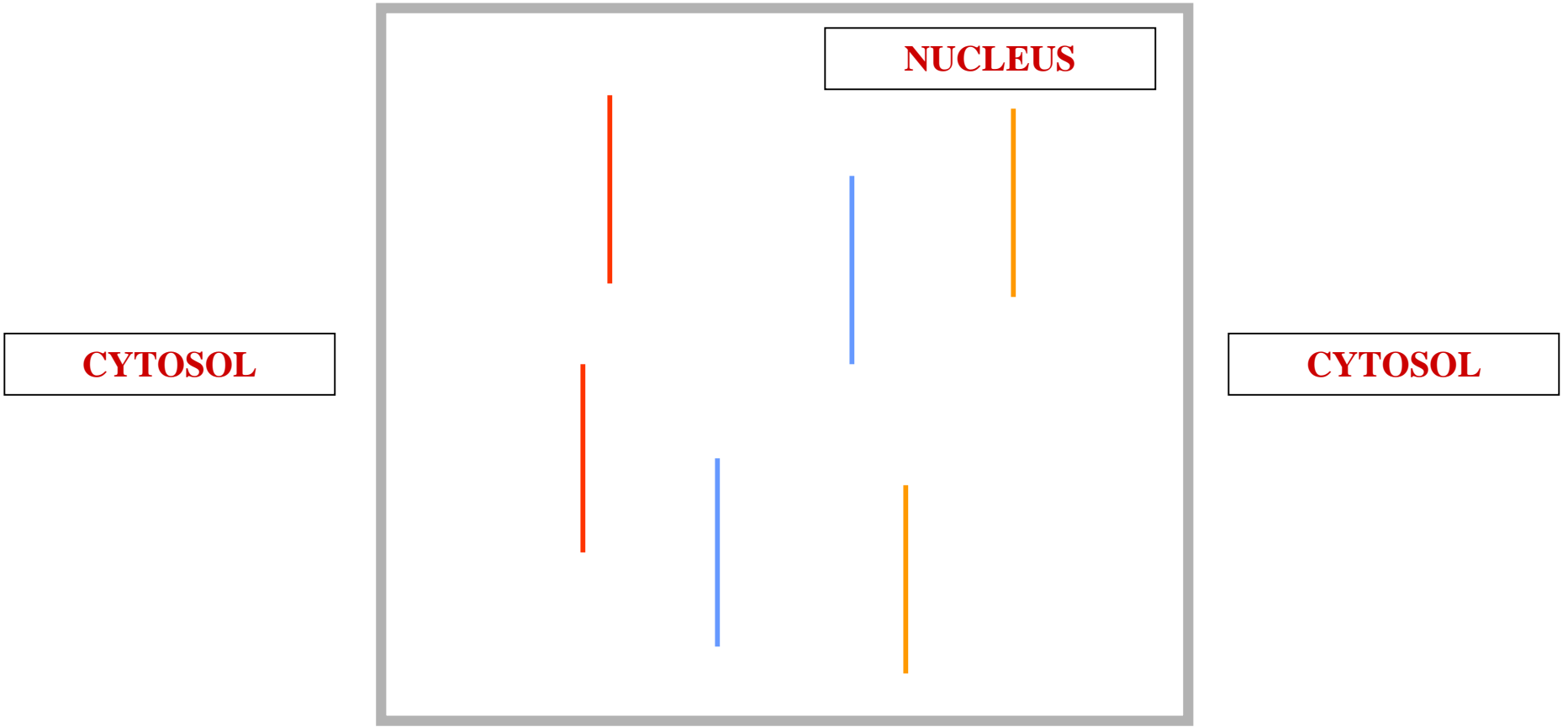
2 CHROMOSOMES

1 MATERNAL CHROMOSOME

1 PATERNAL CHROMOSOME

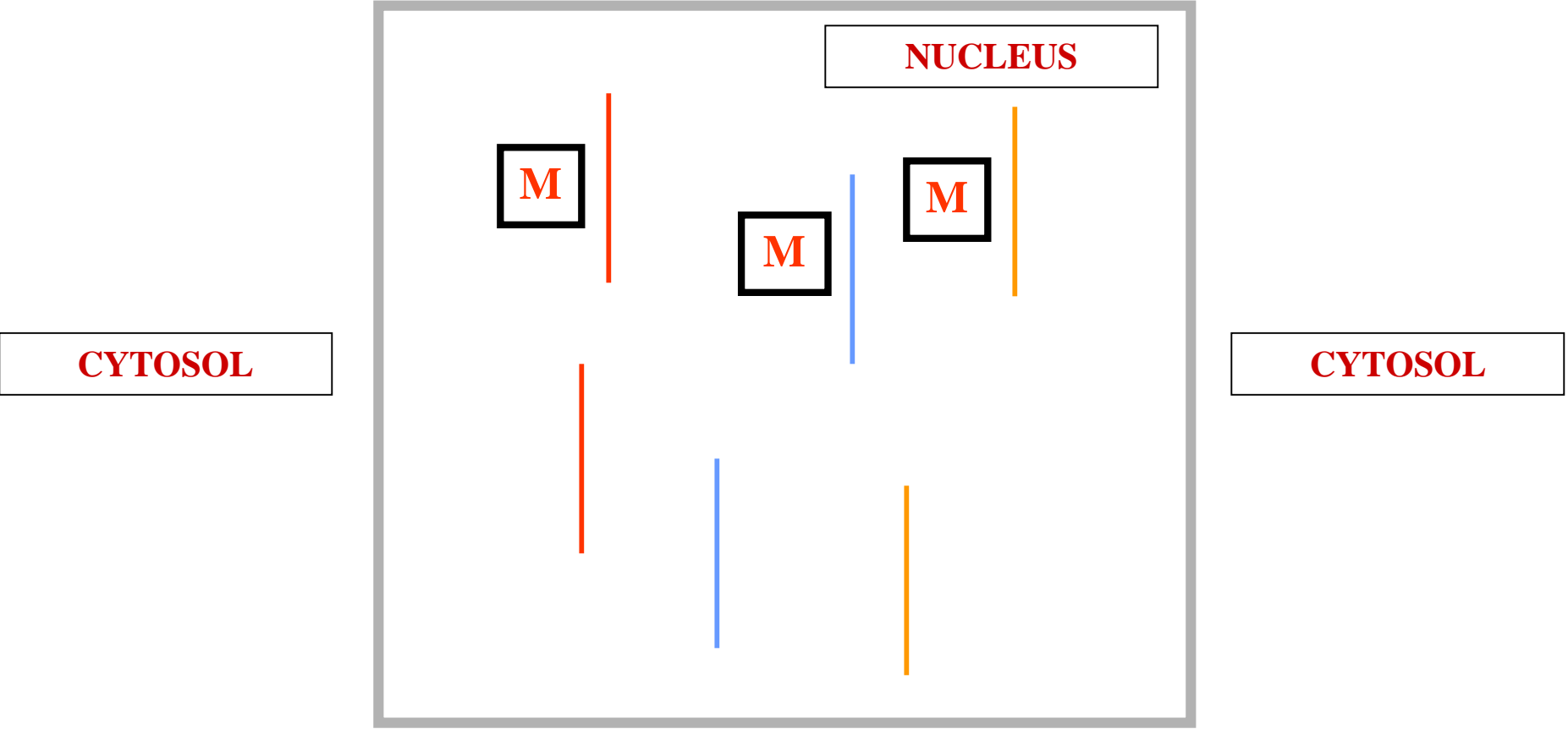
HOMOLOGOUS CHROMOSOMES

HOMOLOGOUS CHROMOSOMES



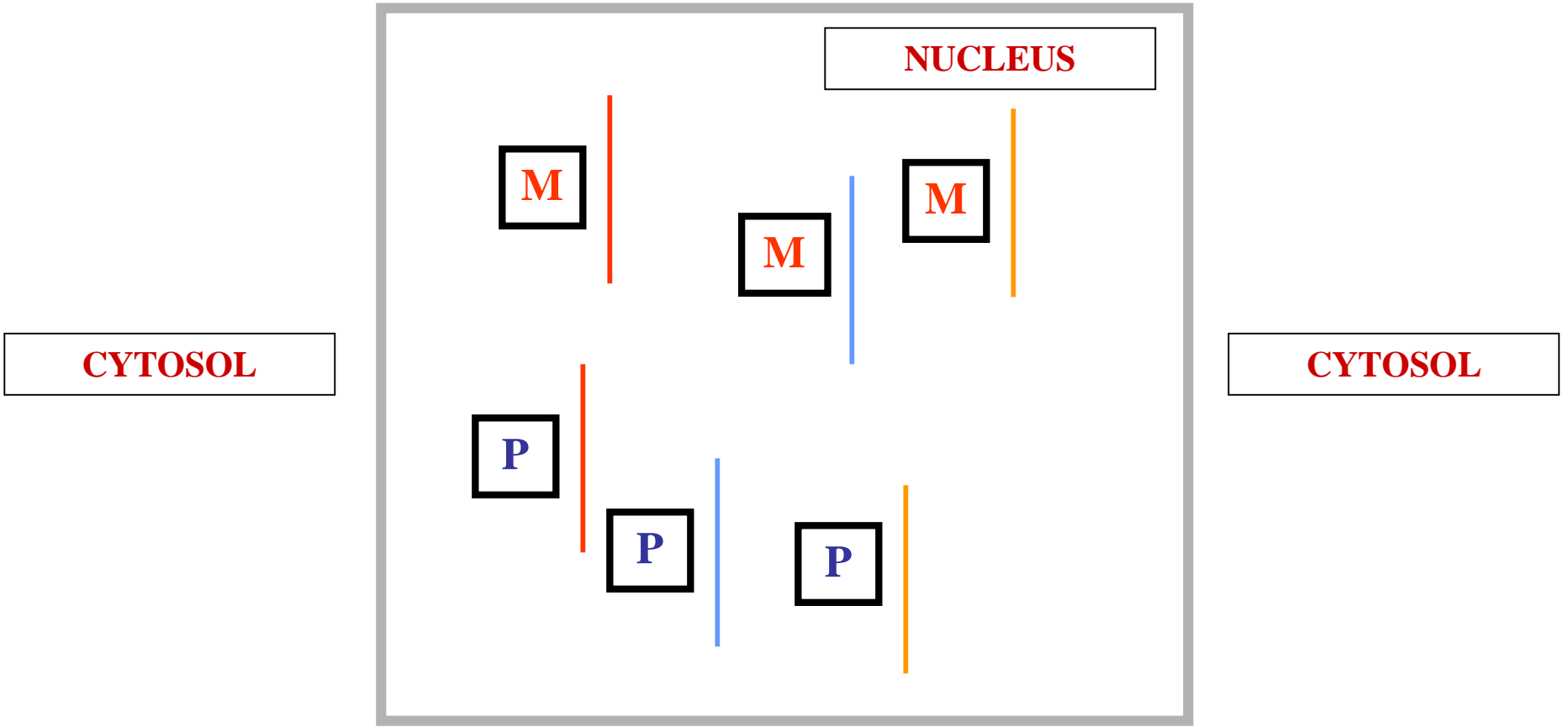
6 CHROMOSOMES

HOMOLOGOUS CHROMOSOMES



M = MATERNAL CHROMOSOME

HOMOLOGOUS CHROMOSOMES

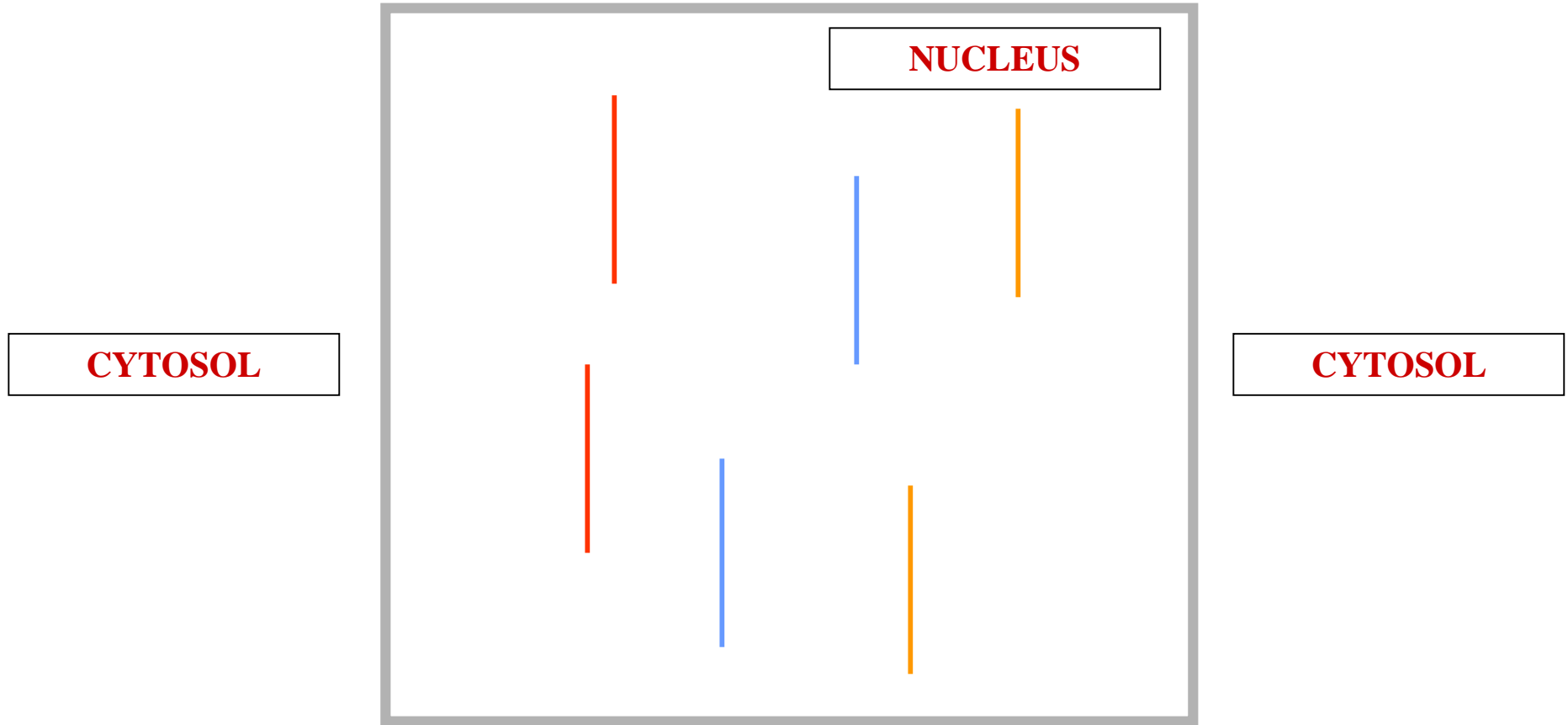


M = MATERNAL CHROMOSOME

P = PATERNAL CHROMOSOME

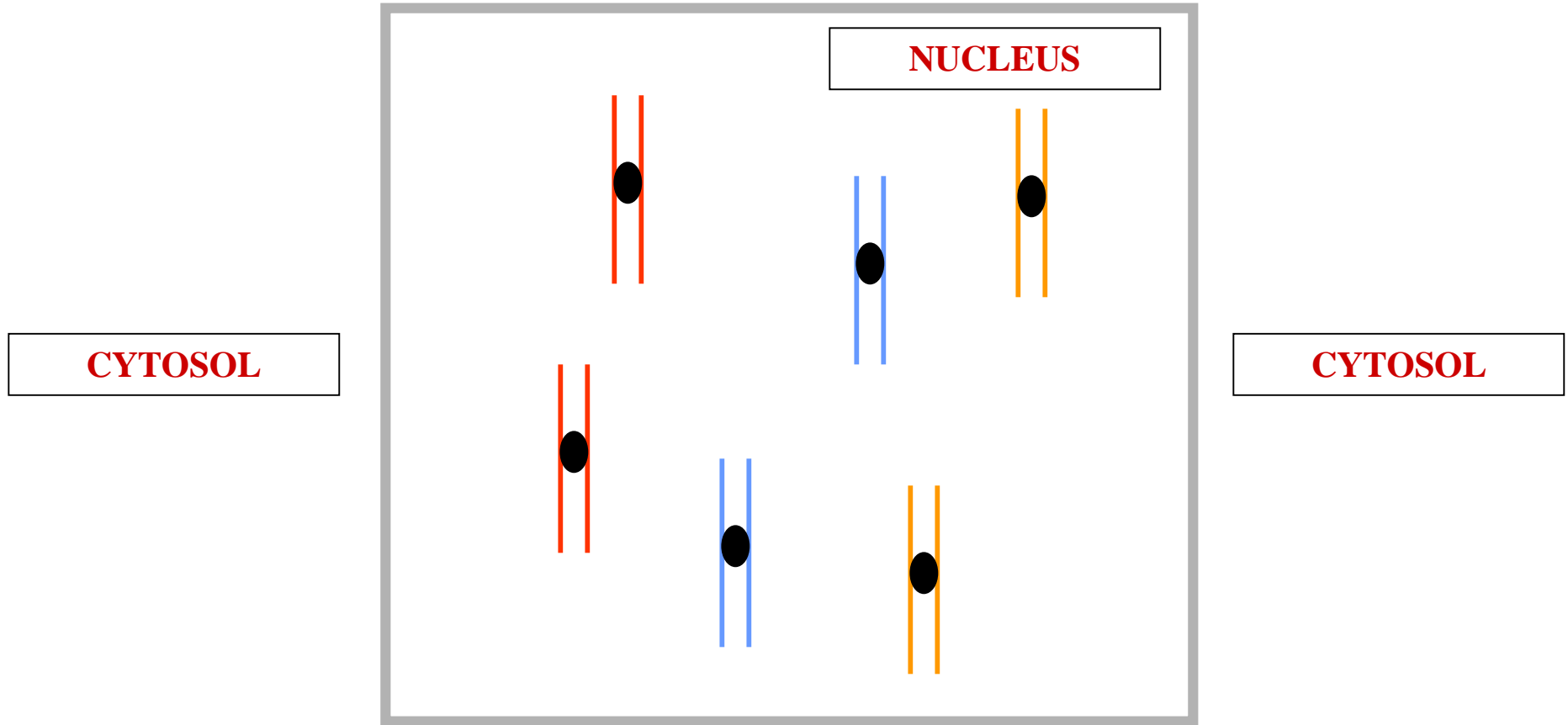
HOMOLOGOUS CHROMOSOMES

R

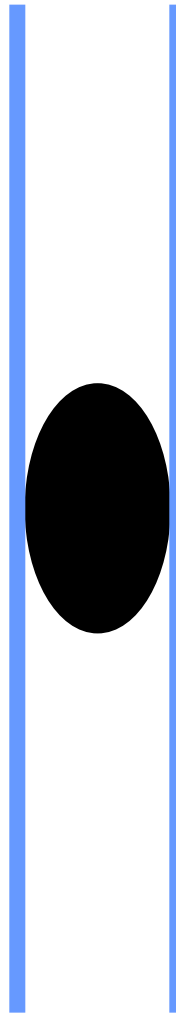


REPLICATION

HOMOLOGOUS CHROMOSOMES



POST REPLICATION



REPLICATED CHROMOSOME

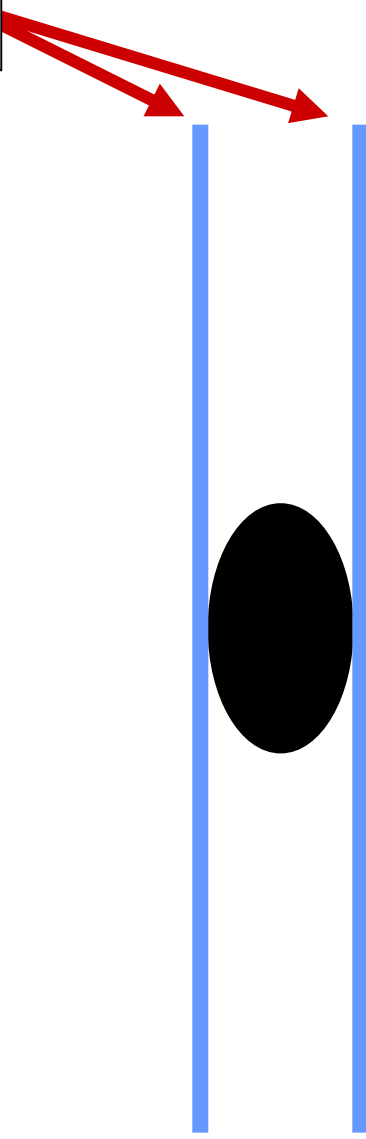
CHROMATIDS

CHROMATIDS

2 PER REPLICATED
CHROMOSOME

CHROMATIDS

CHROMATIDS



REPLICATED CHROMOSOME

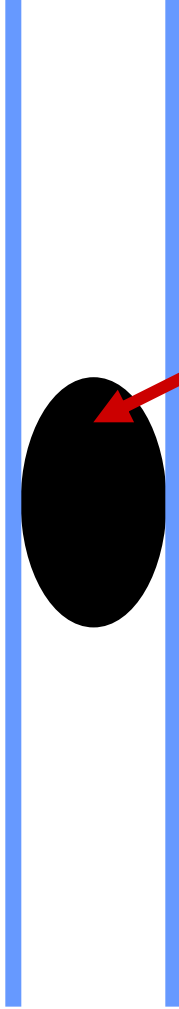
CENTROMERE

CENTROMERE

CHROMATIDS
ATTACHMENT POINT
UPON REPLICATED
CHROMOSOME

CENTROMERE

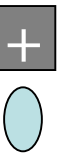
CHROMATIDS



CENTROMERE

REPLICATED CHROMOSOME

KINETOCHORE



KINETOCHORE

**MICROTUBULE
ATTACHMENT POINT
UPON CHROMOSOME**

KINETOCHORE

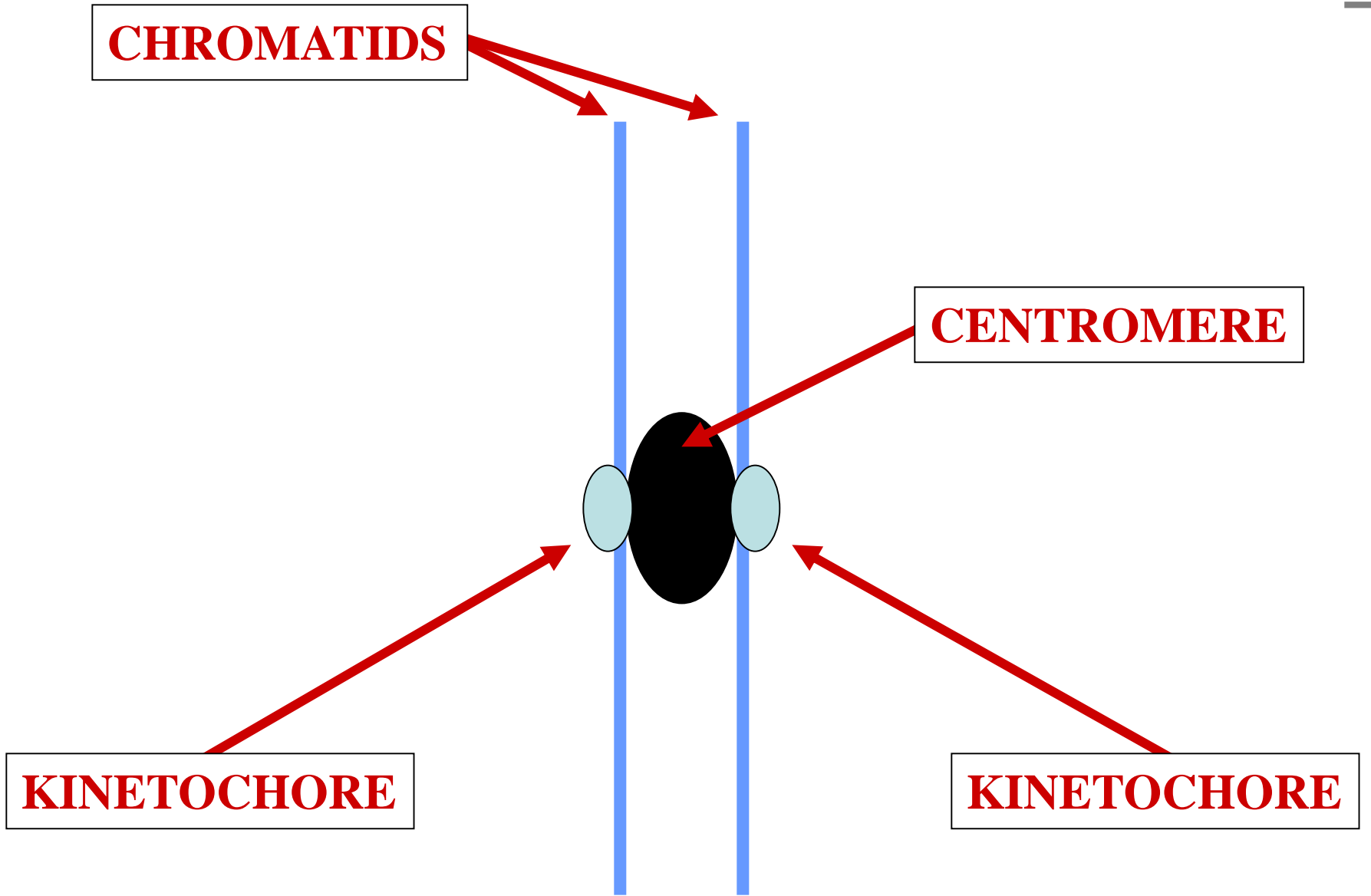
CHROMATIDS

CENTROMERE

KINETOCHORE

KINETOCHORE

REPLICATED CHROMOSOME





CHROMATIDS

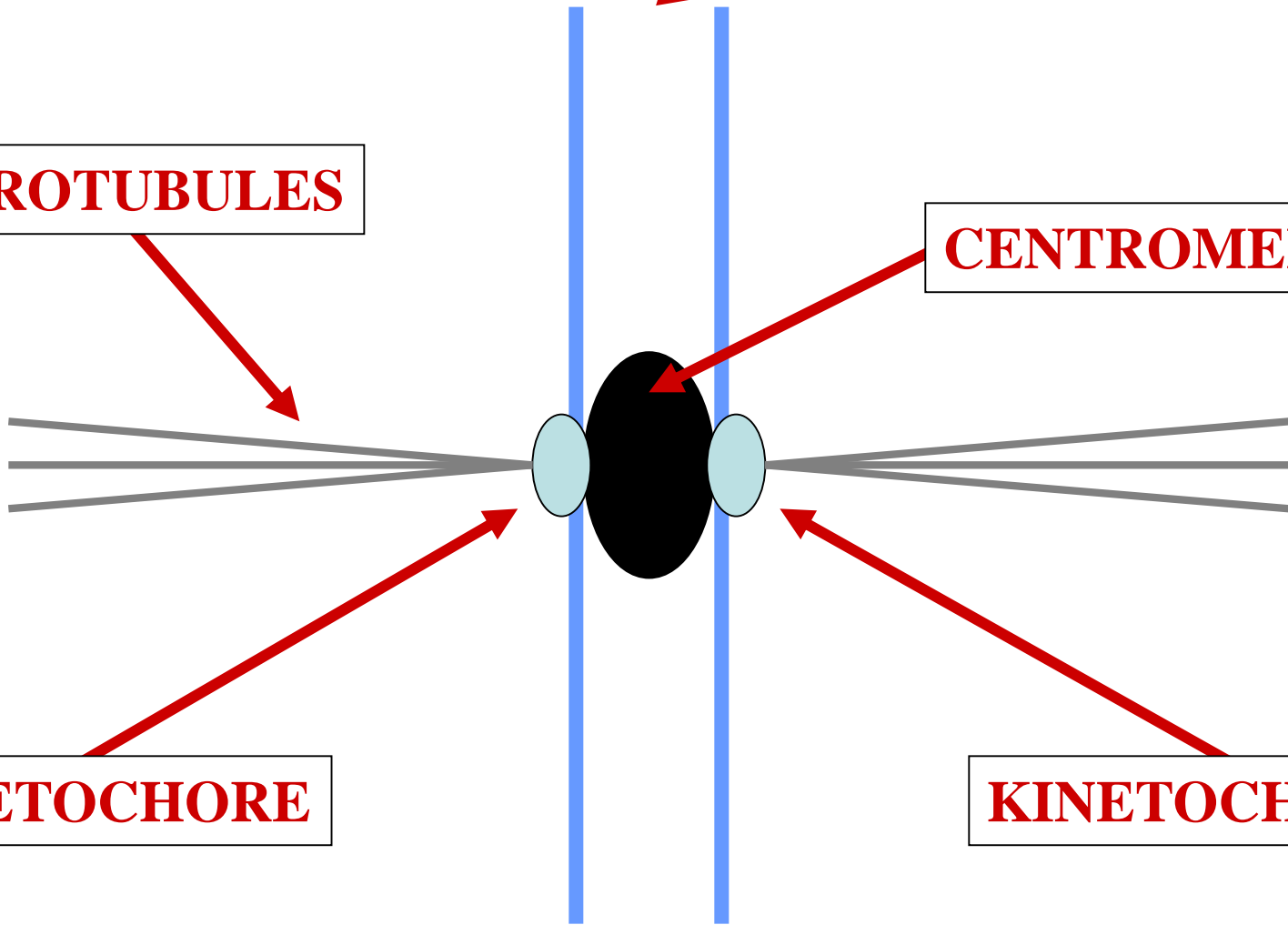
MICROTUBULES

CENTROMERE

KINETOCHORE

KINETOCHORE

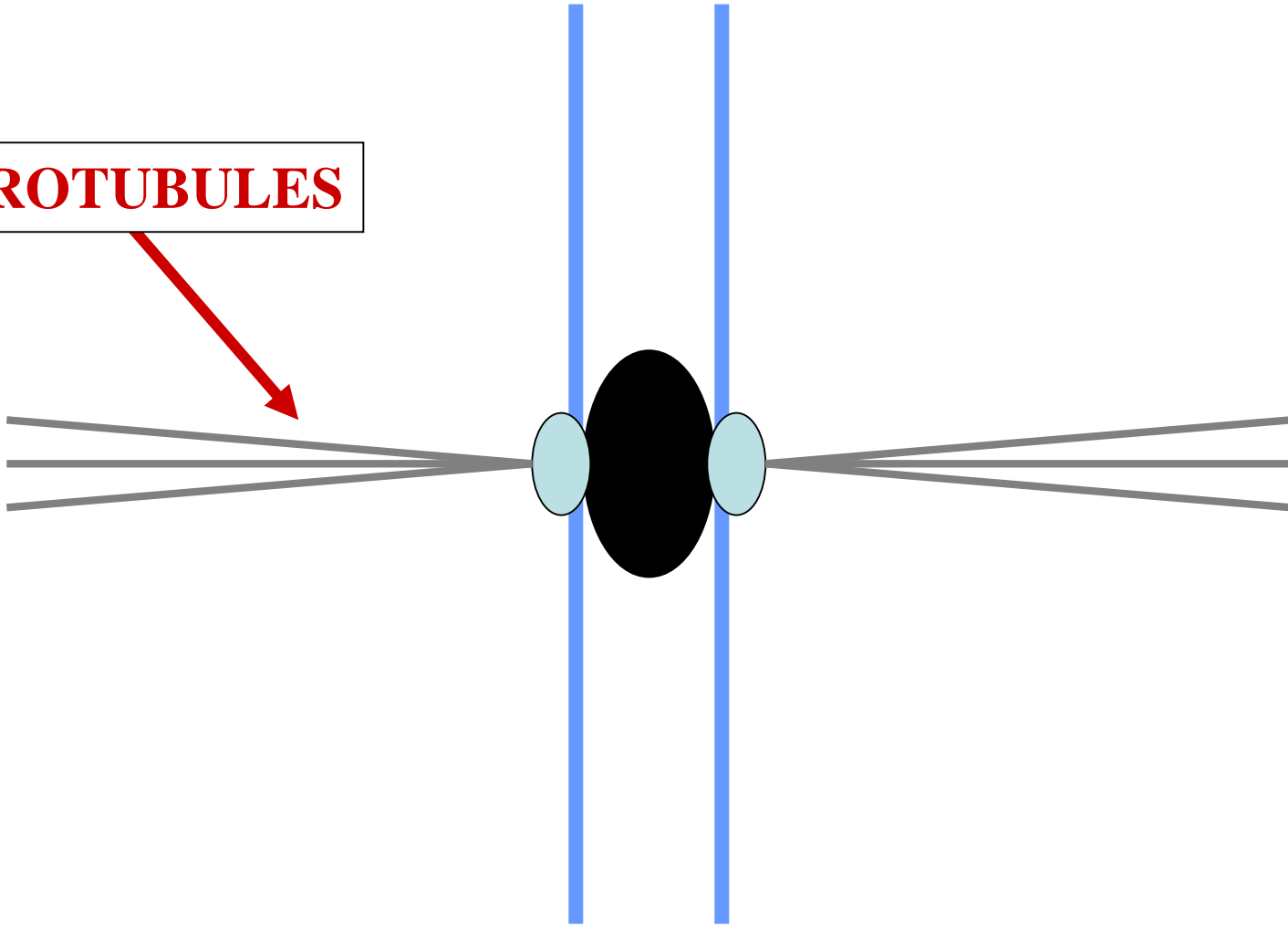
REPLICATED CHROMOSOME



KARYOKINESIS

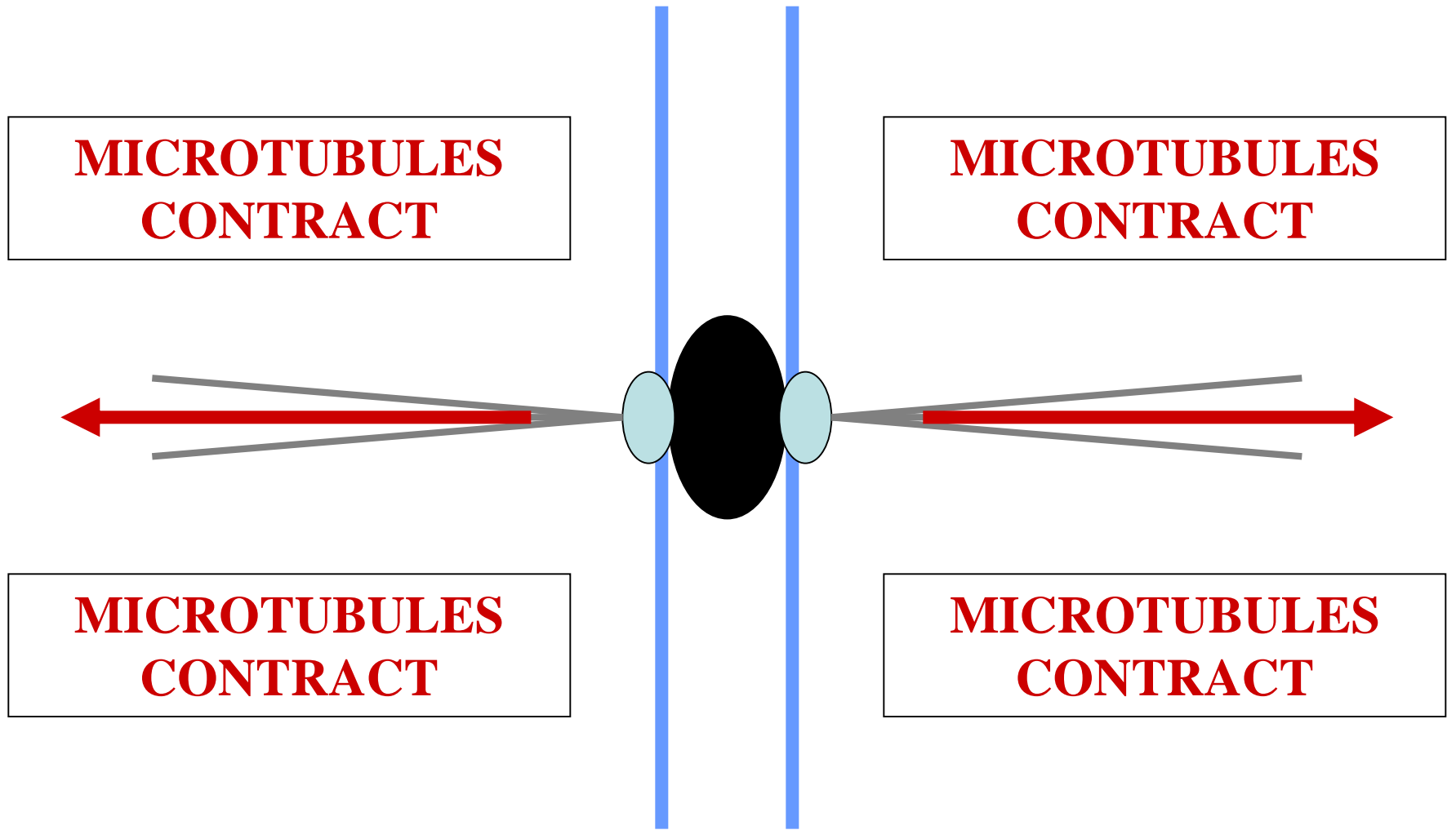


MICROTUBULES



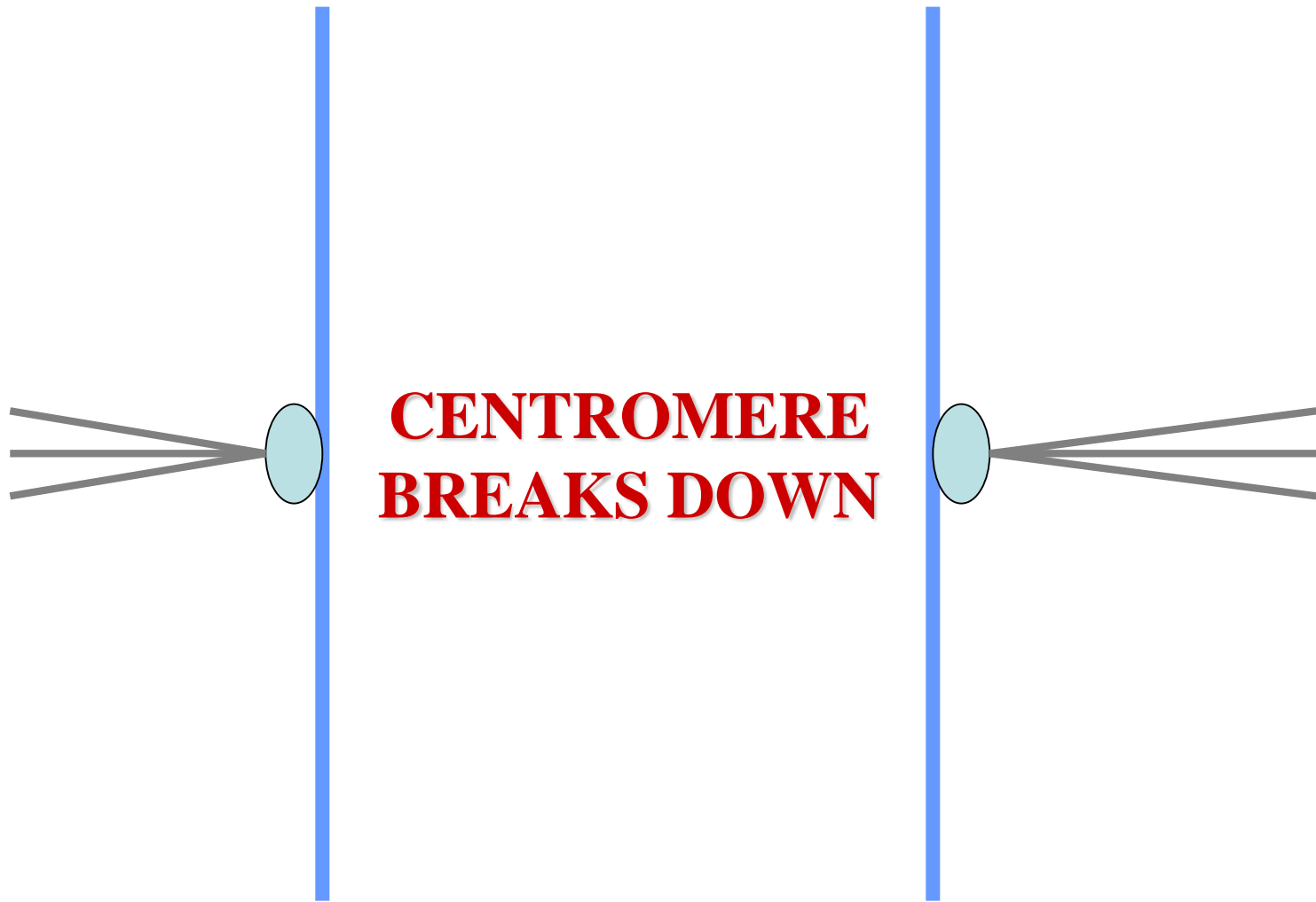
KARYOKINESIS

KARYOKINESIS



KARYOKINESIS

KARYOKINESIS



KARYOKINESIS

KARYOKINESIS



CHROMATIDS
SEPARATE

The diagram consists of two vertical blue lines, one on the left and one on the right, representing the spindle poles. The text 'CHROMATIDS SEPARATE' is centered between these lines, indicating the process of chromosome segregation during karyokinesis.

KARYOKINESIS

KARYOKINESIS



**DAUGHTER
CHROMOSOMES**

KARYOKINESIS

DAUGHTER CHROMOSOMES



**DAUGHTER
CHROMOSOMES**

SEPARATED CHROMATIDS



**DAUGHTER
CHROMOSOMES**

DAUGHTER CHROMOSOMES

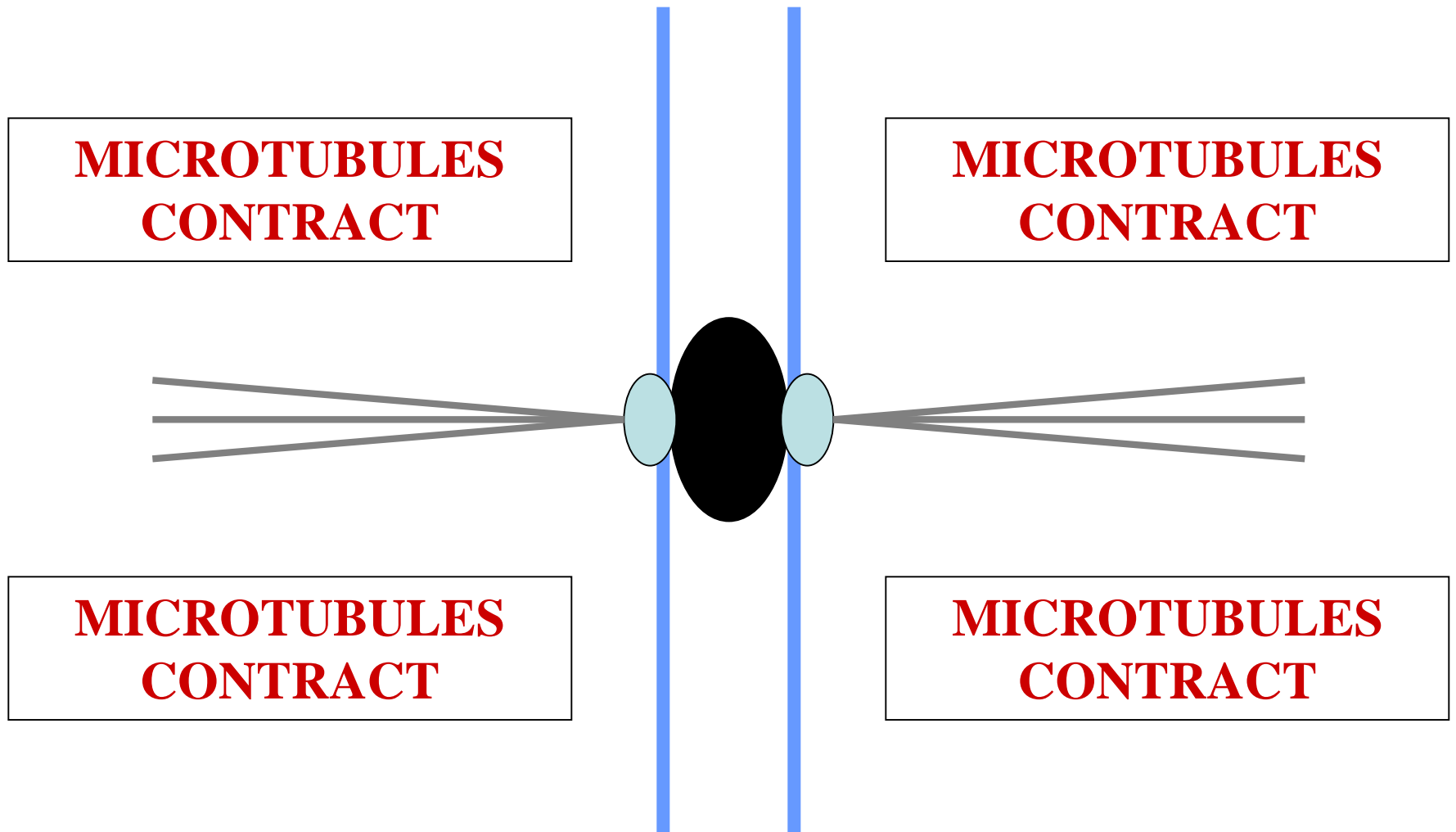
SEPARATED CHROMATIDS



DAUGHTER CHROMOSOMES

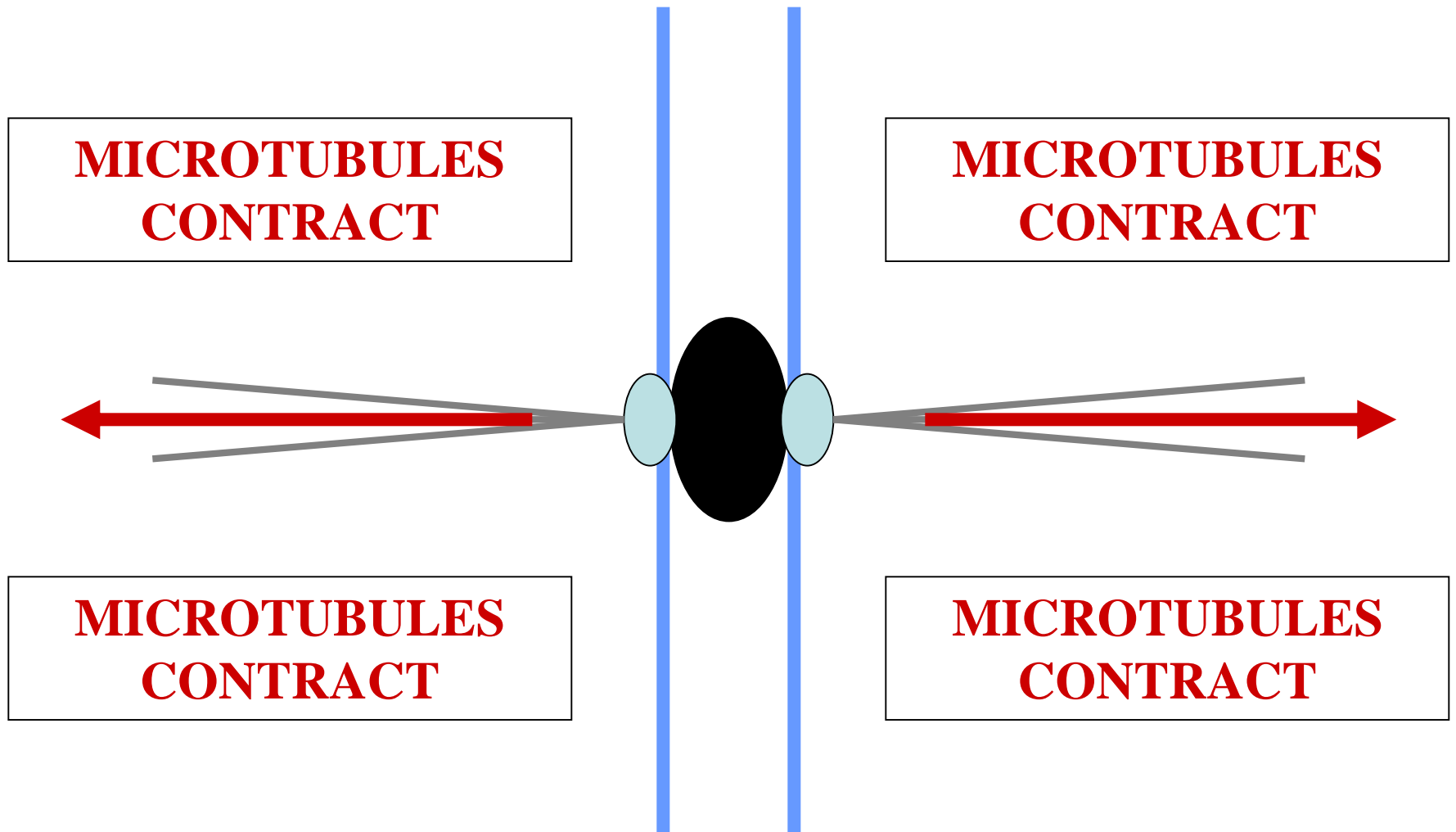
DAUGHTER CHROMOSOMES

KARYOKINESIS



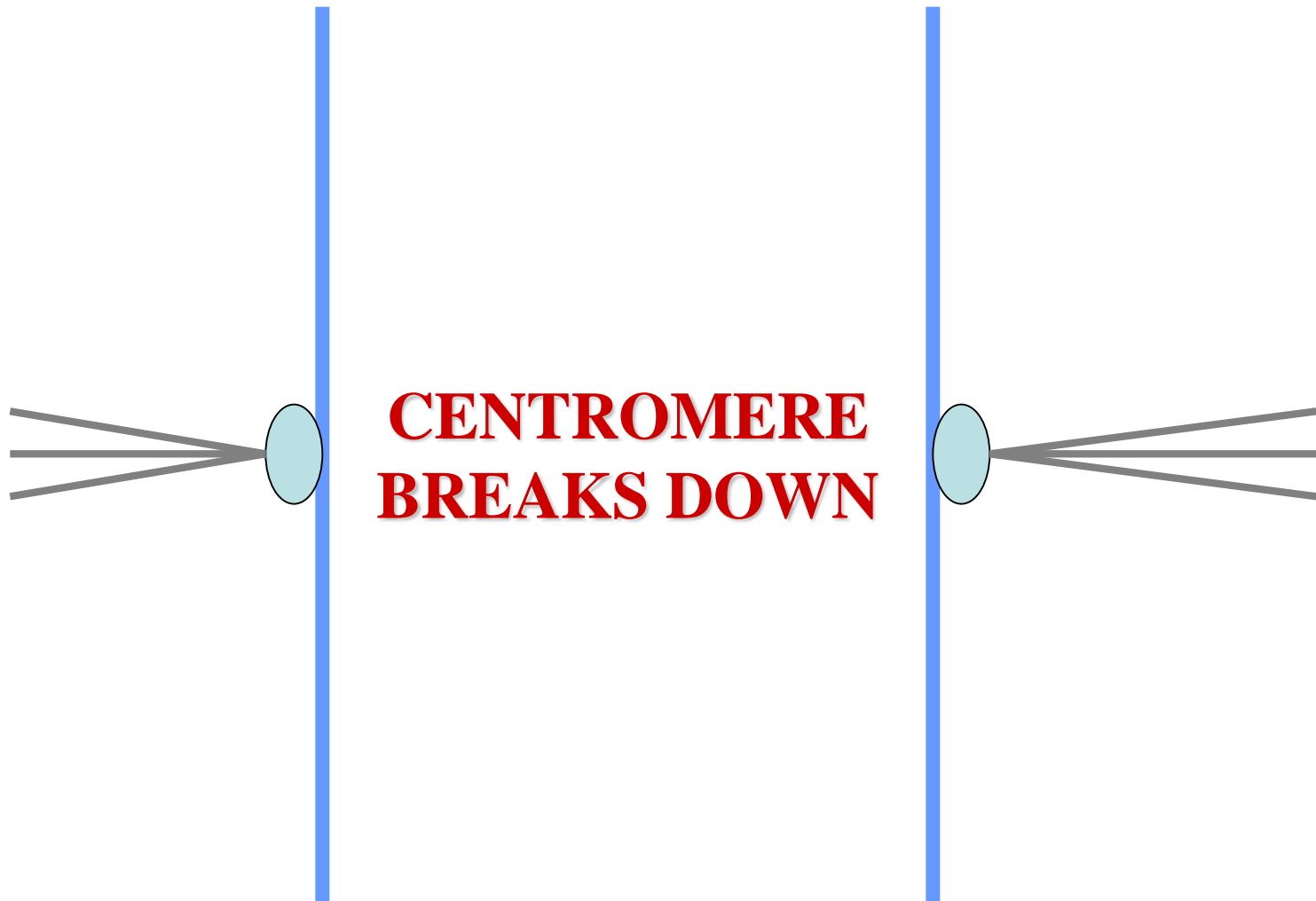
KARYOKINESIS

KARYOKINESIS



KARYOKINESIS

KARYOKINESIS



KARYOKINESIS

KARYOKINESIS



CHROMATIDS
SEPARATE

The diagram consists of two vertical blue lines, one on the left and one on the right, representing the spindle poles. The text 'CHROMATIDS SEPARATE' is centered between these lines, indicating the process of chromatid separation during karyokinesis.

KARYOKINESIS



KARYOKINESIS

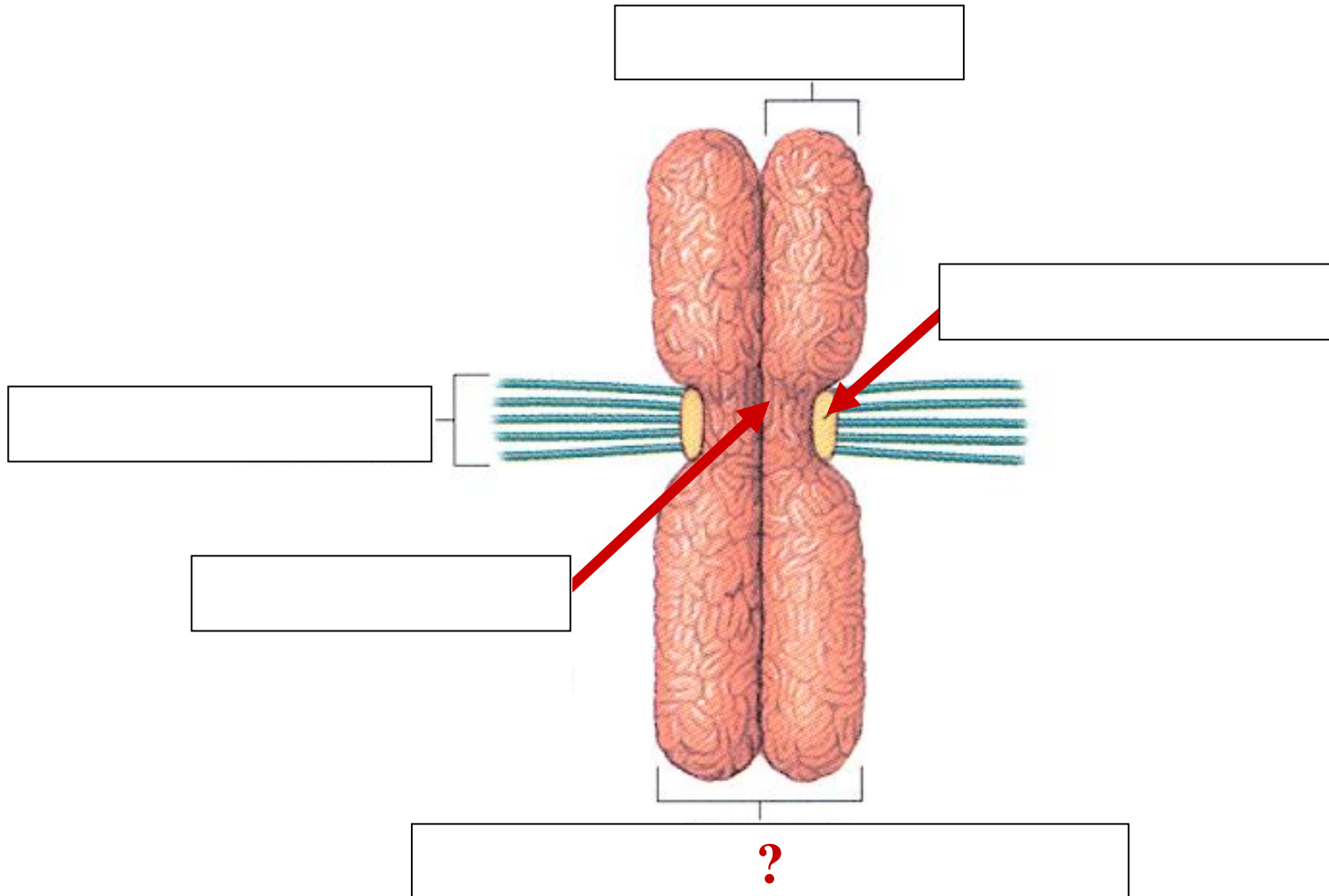
**DAUGHTER
CHROMOSOMES**

KARYOKINESIS



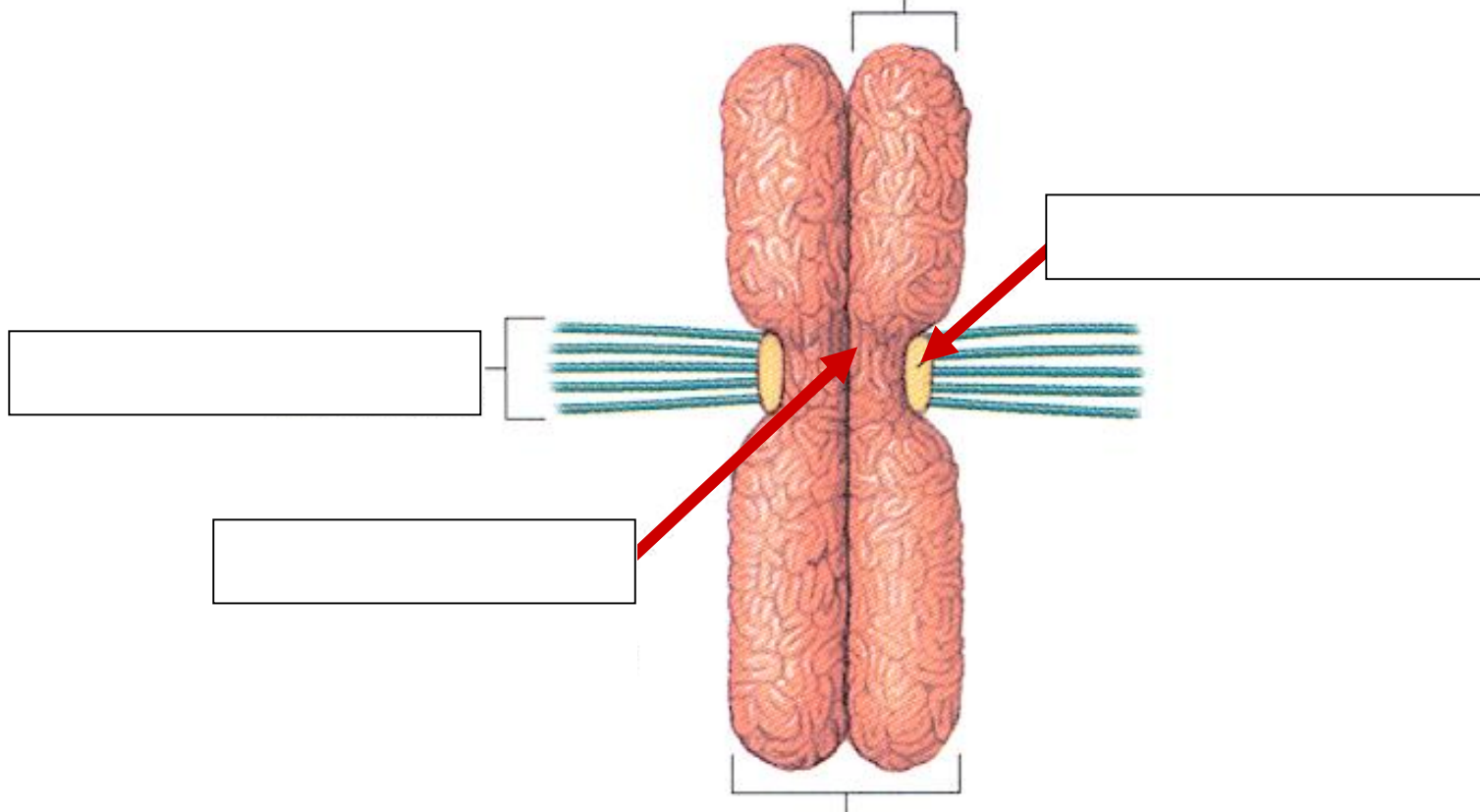
CHROMOSOME TERMS SUMMARY

CHROMOSOME TERMS



CHROMOSOME TERMS

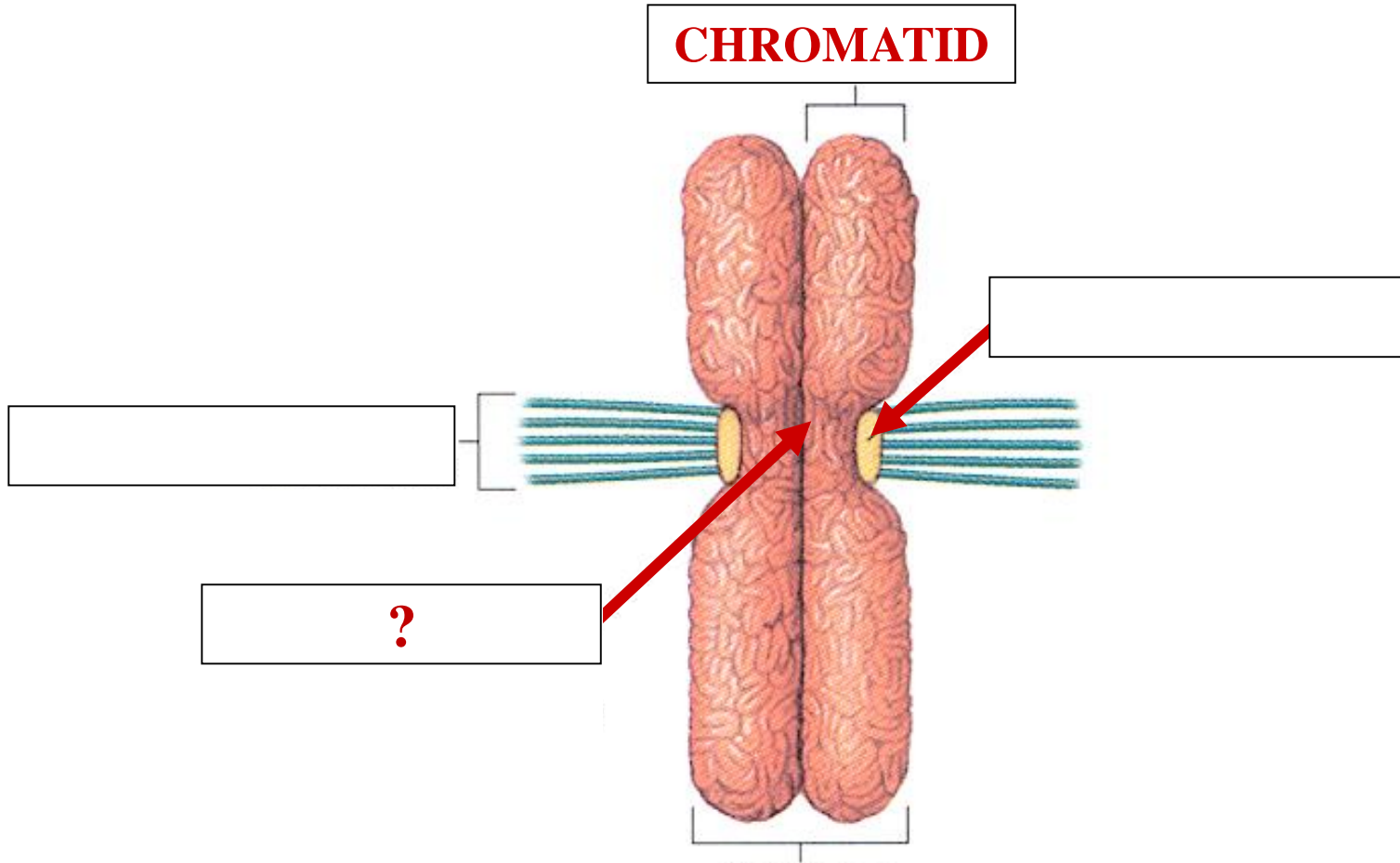
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REPLICATED CHROMOSOME

CHROMOSOME TERMS

CHROMATID



REPLICATED CHROMOSOME

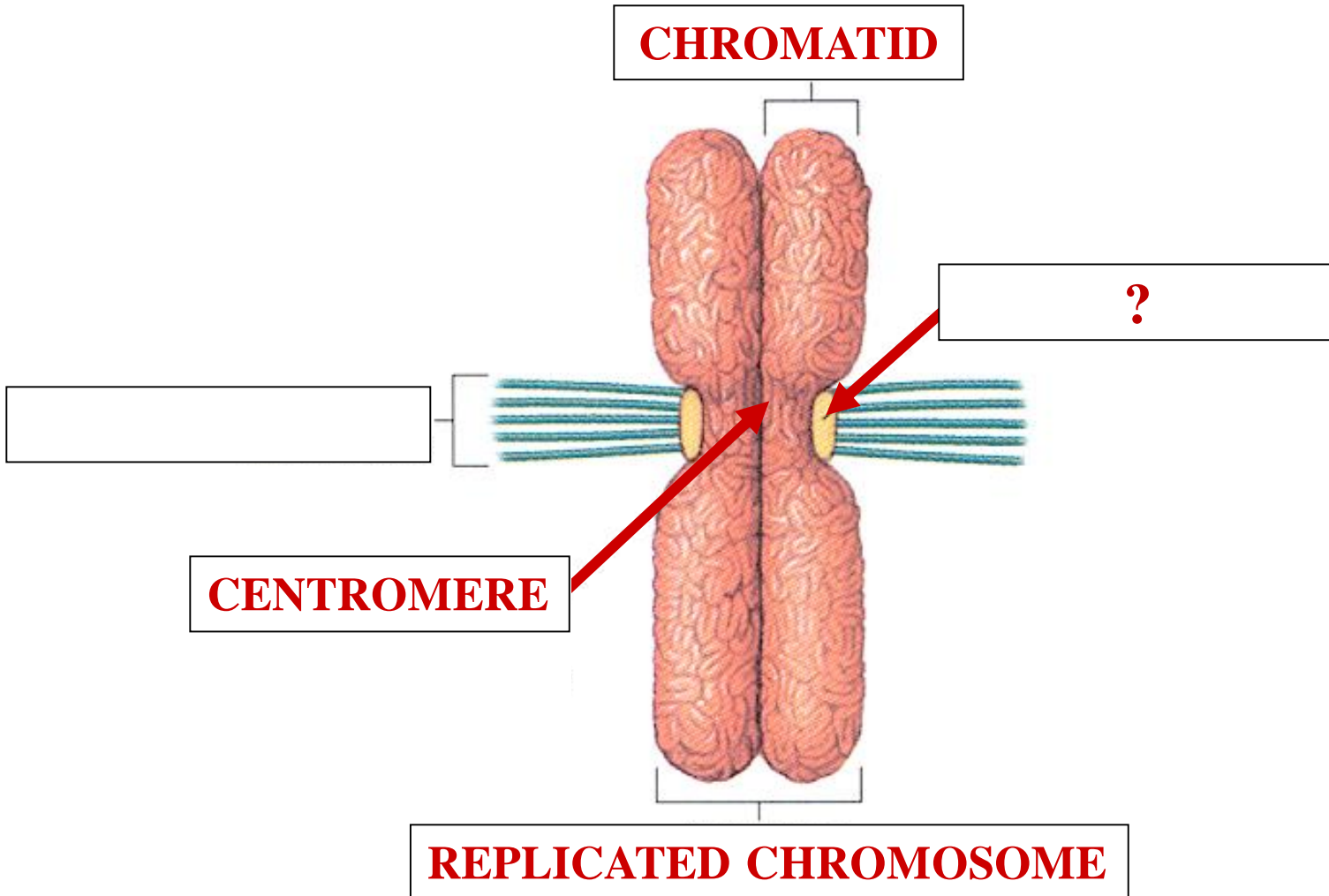
CHROMOSOME TERMS

CHROMATID

?

CENTROMERE

REPLICATED CHROMOSOME



CHROMOSOME TERMS

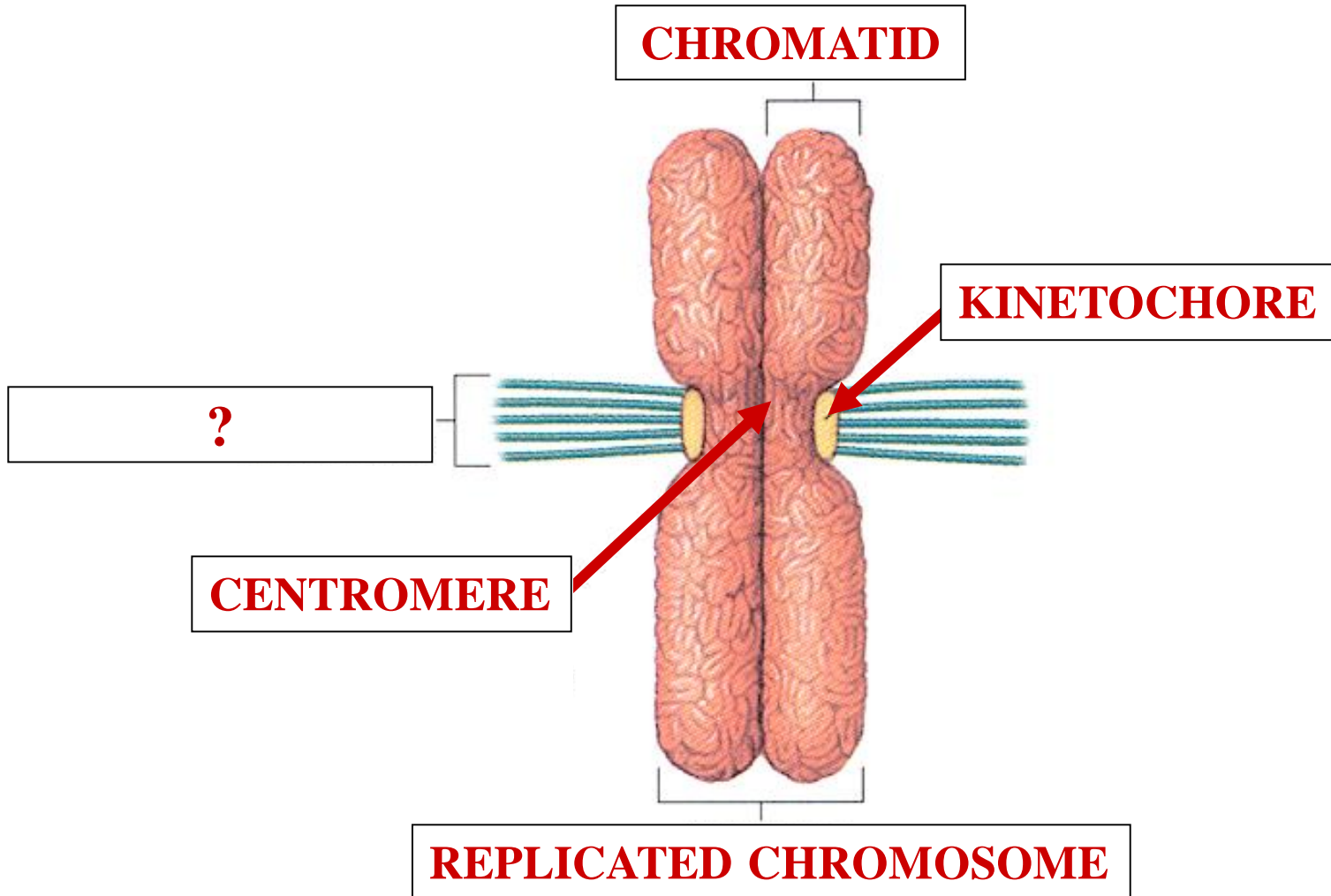
CHROMATID

KINETOCHORE

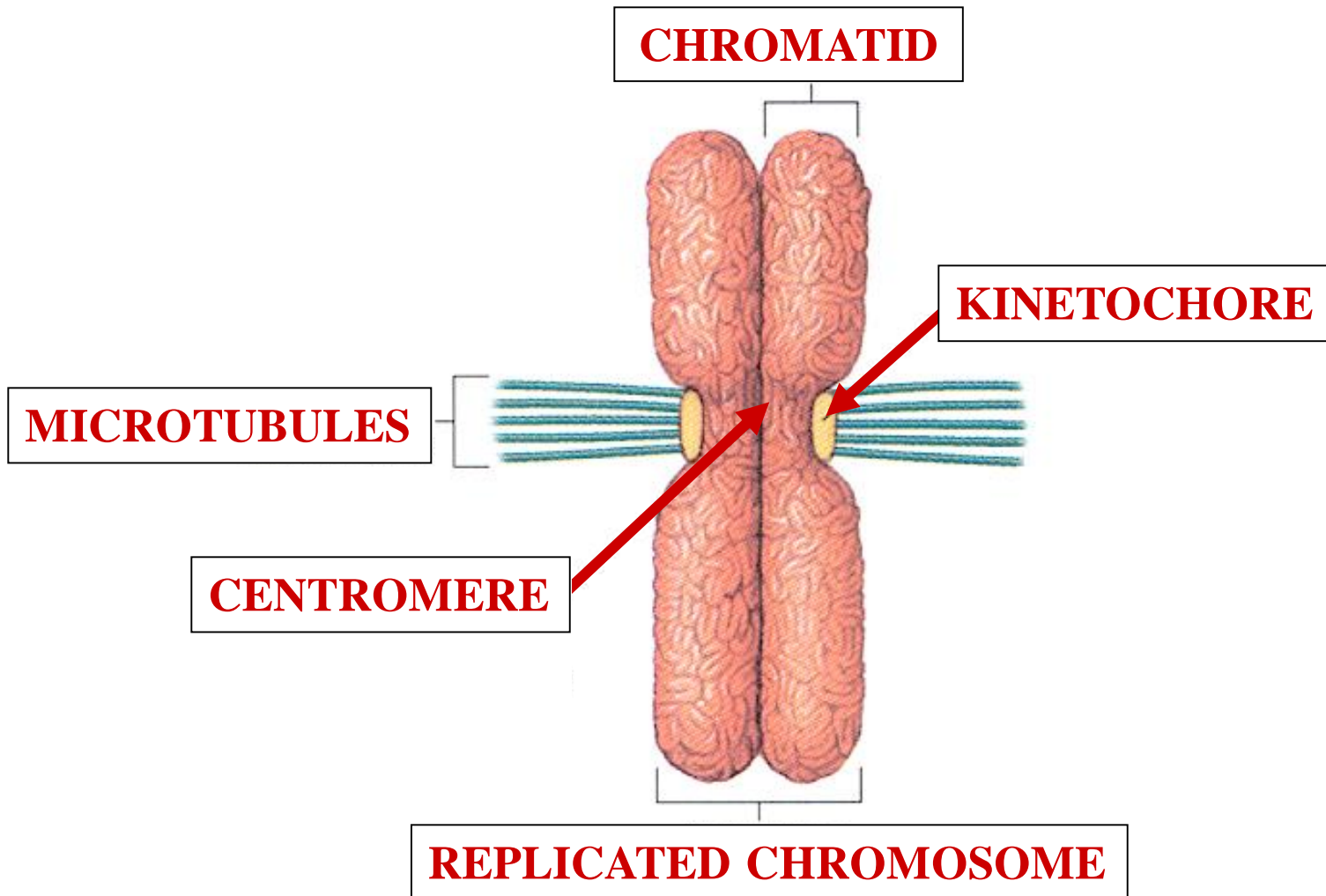
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CENTROMERE

REPLICATED CHROMOSOME



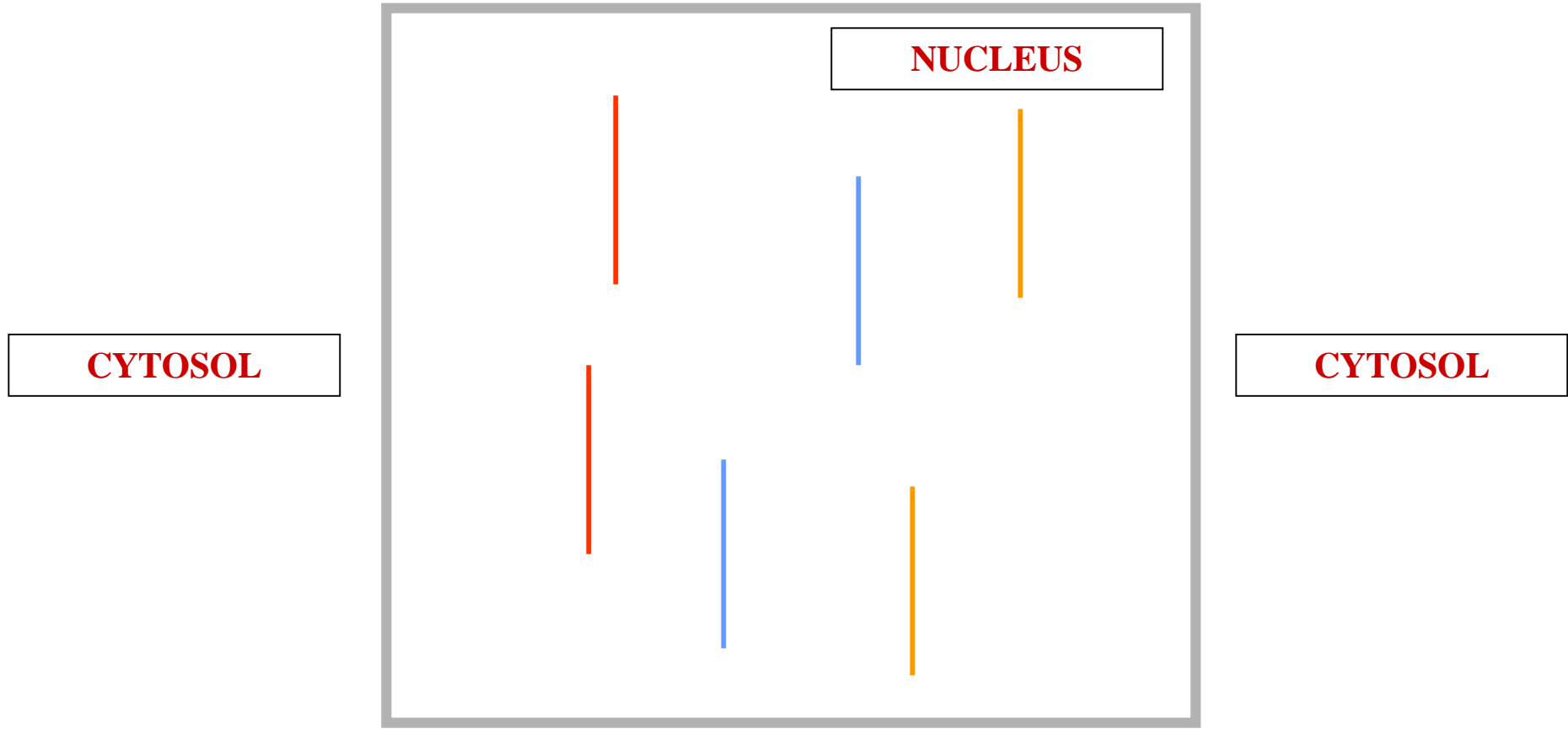
CHROMOSOME TERMS





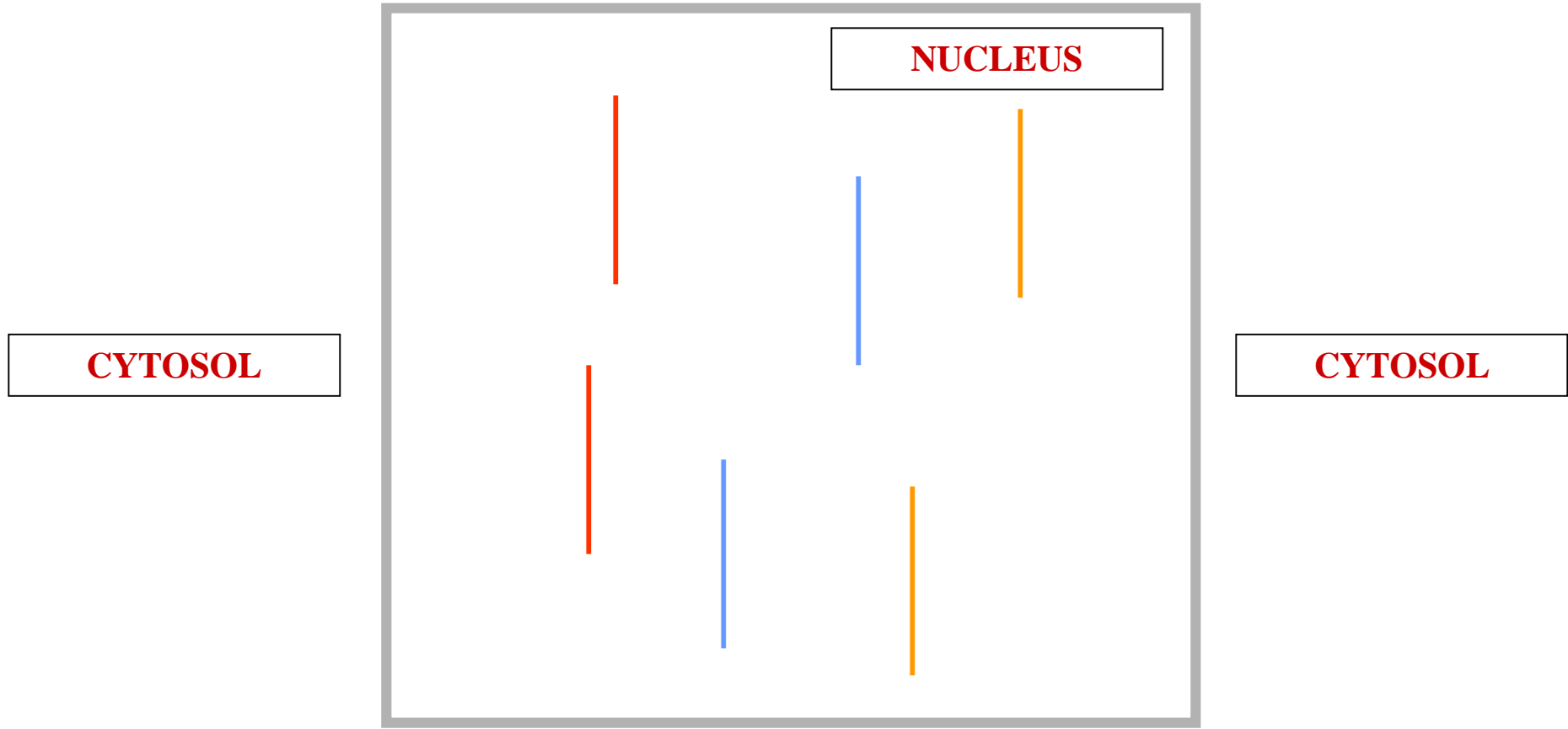
EUKARYOTE CHROMOSOME REPLICATION

CHROMOSOME REPLICATION



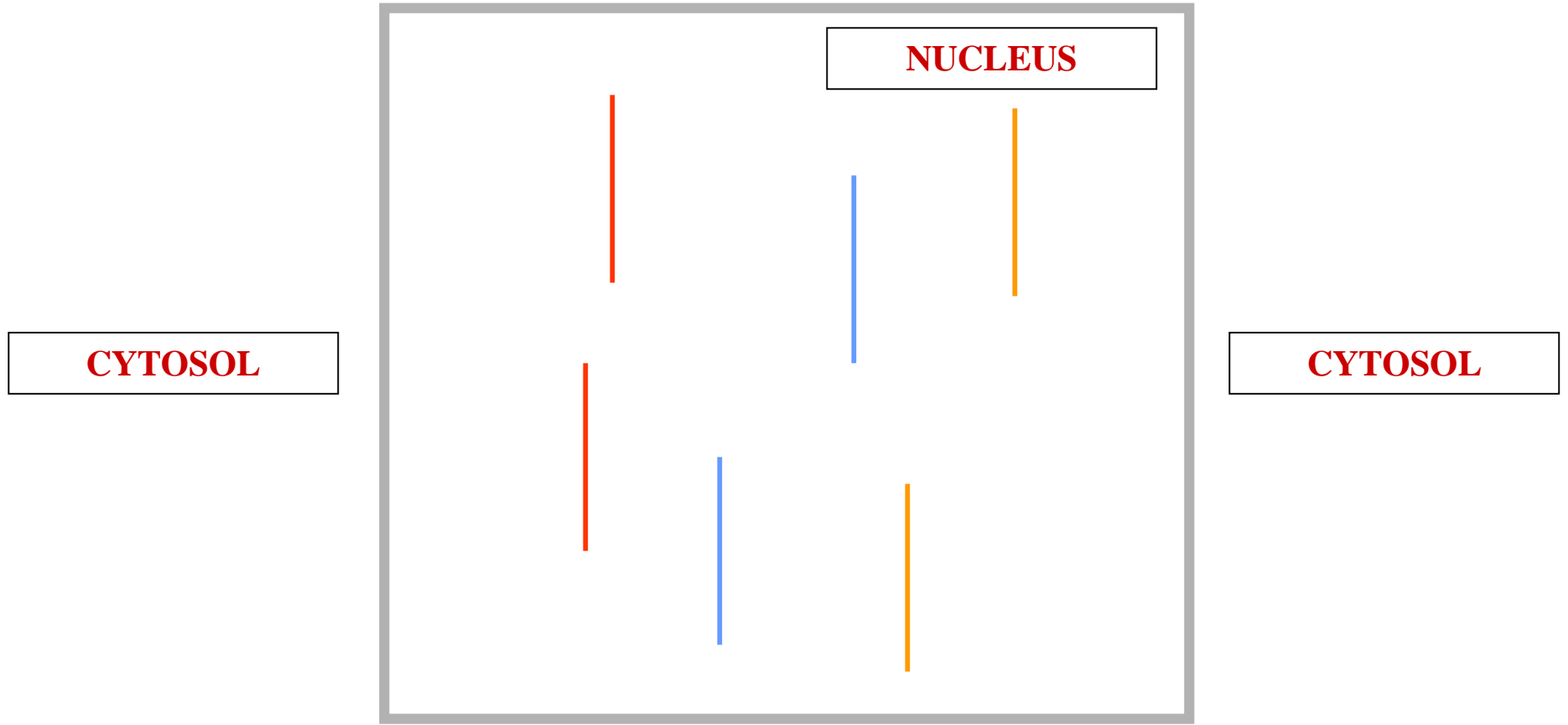
6 CHROMOSOMES

CHROMOSOME REPLICATION



CHROMOSOMES REPLICATE

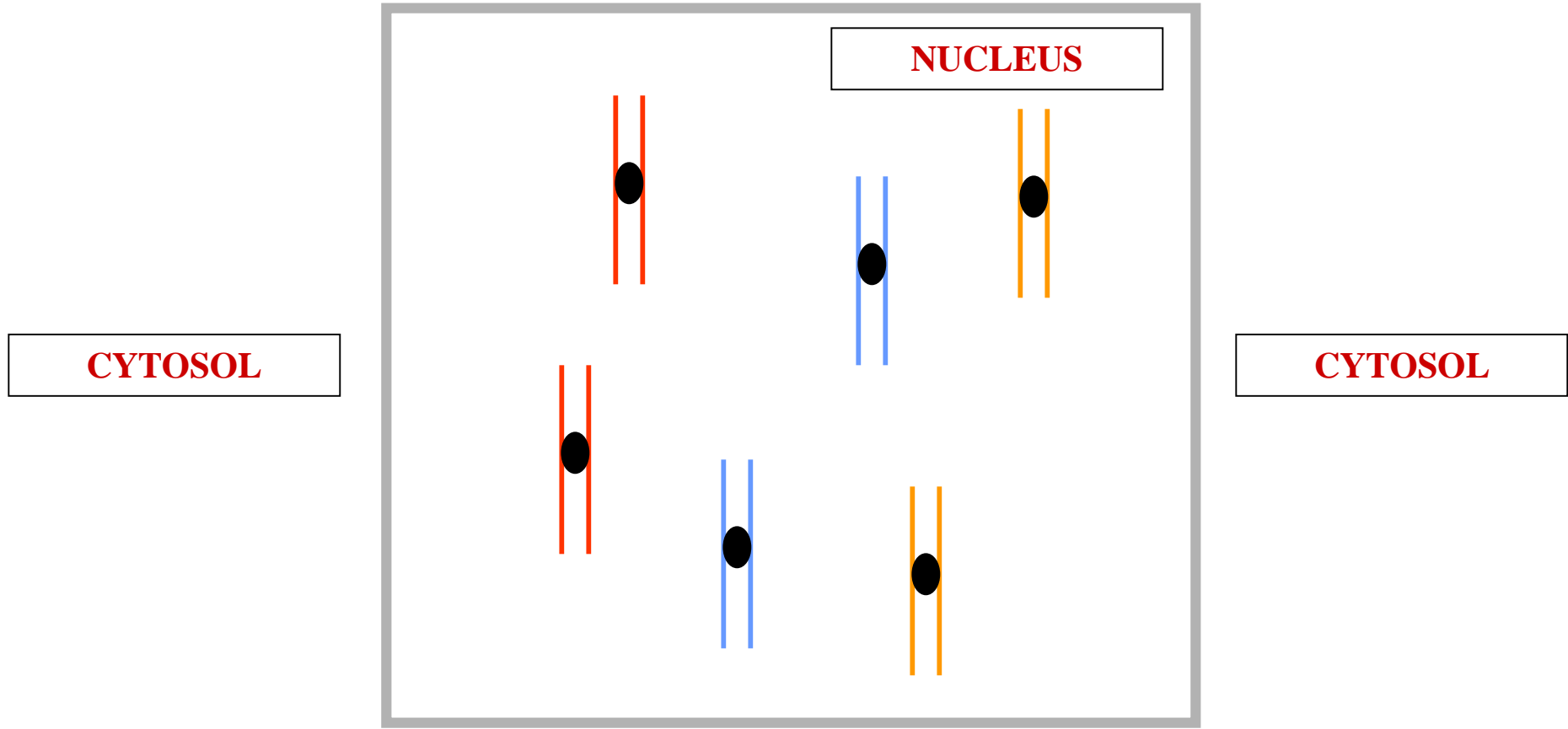
CHROMOSOME REPLICATION



CHROMOSOMES COPY THEMSELVES



CHROMOSOME REPLICATION

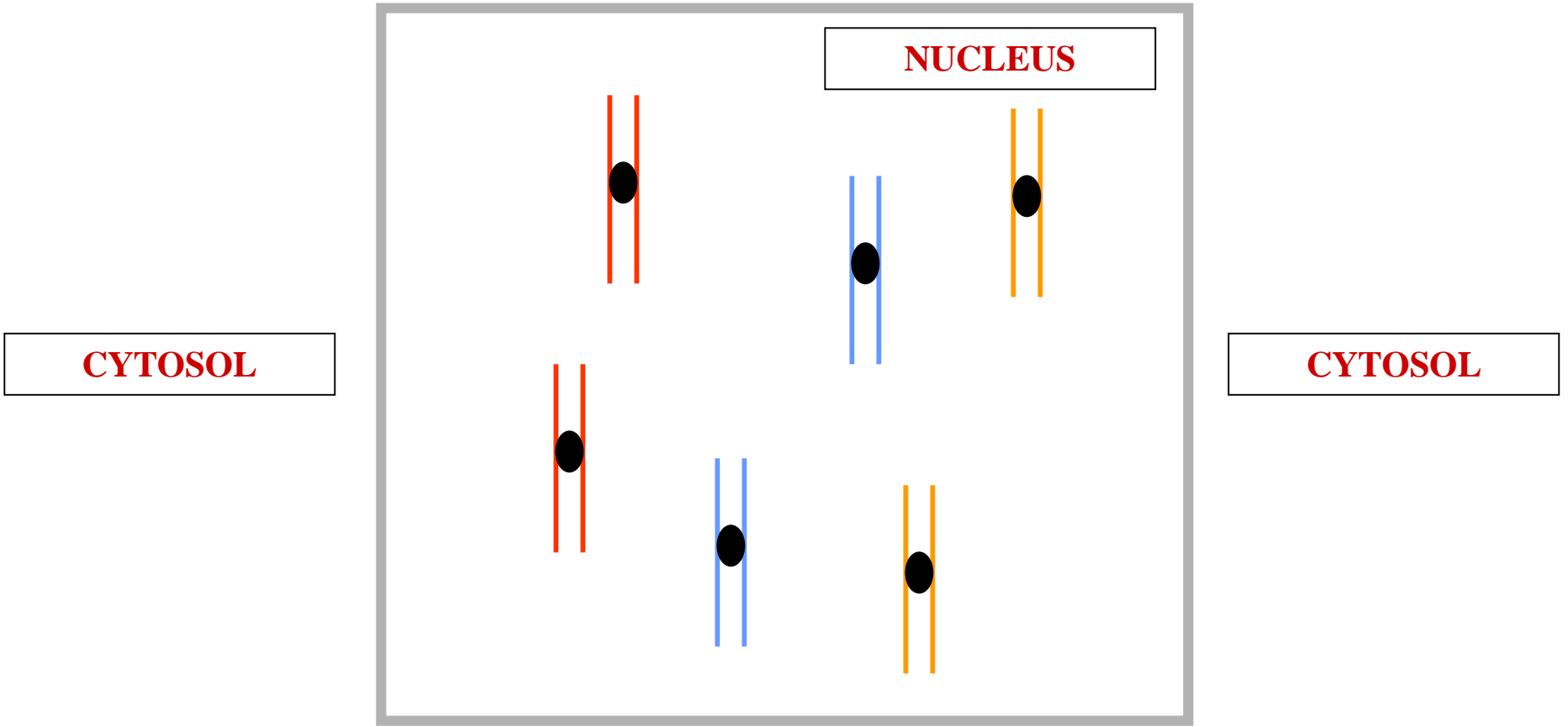


CHROMOSOMES COPY THEMSELVES



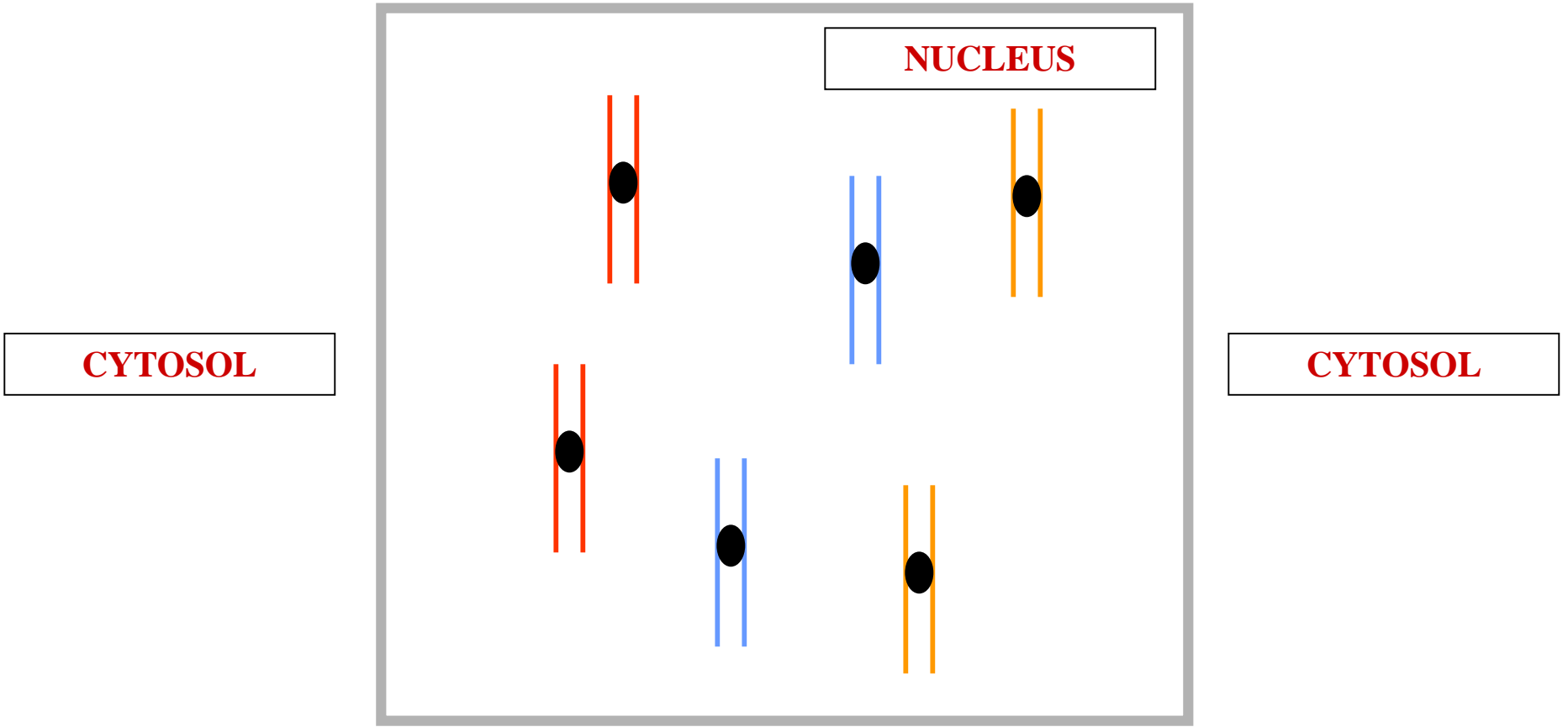
**EUKARYOTE
CHROMOSOME
POST
REPLICATION**

CHROMOSOME POST REPLICATION



REPLICATED CHROMOSOMES

CHROMOSOME POST REPLICATION

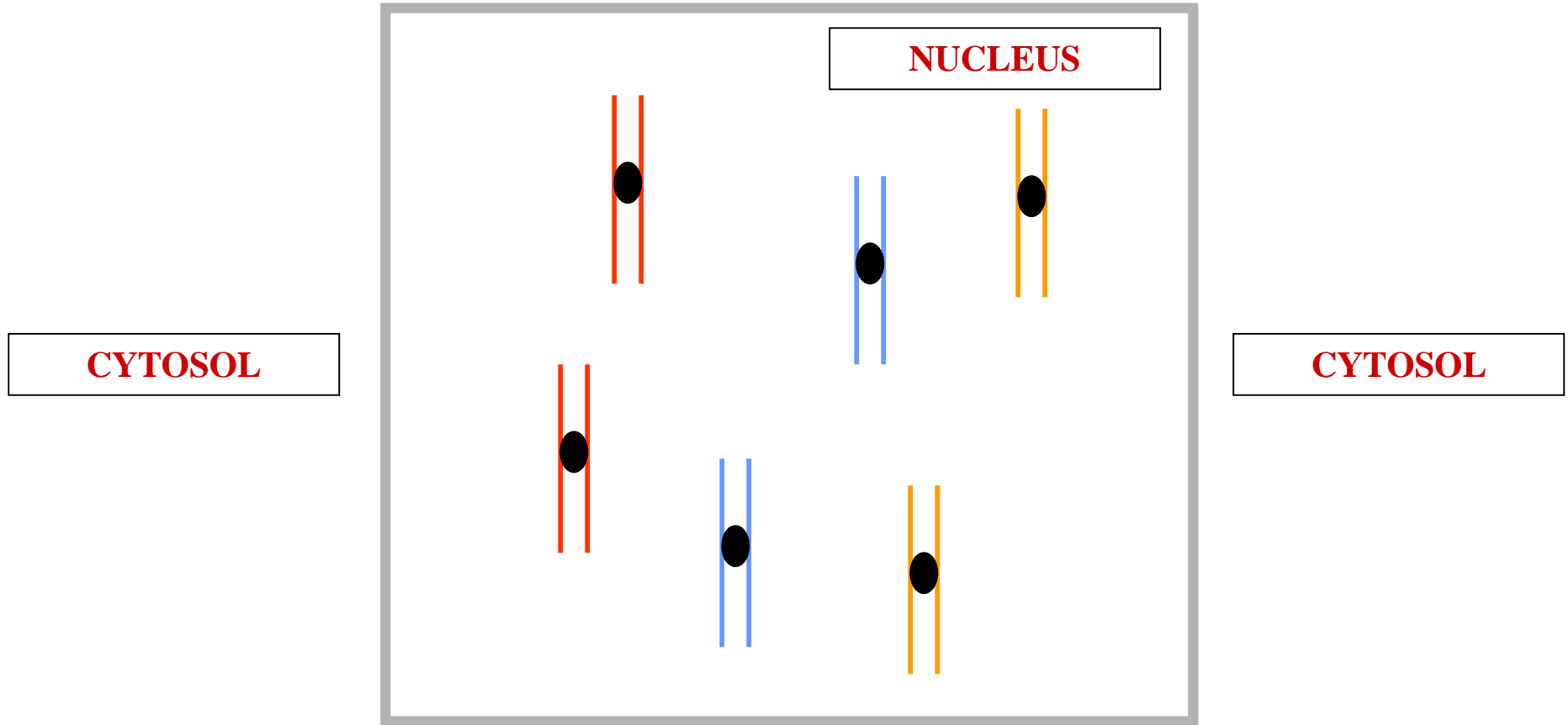


TWO CHROMATIDS

CHROMOSOME POST REPLICATION

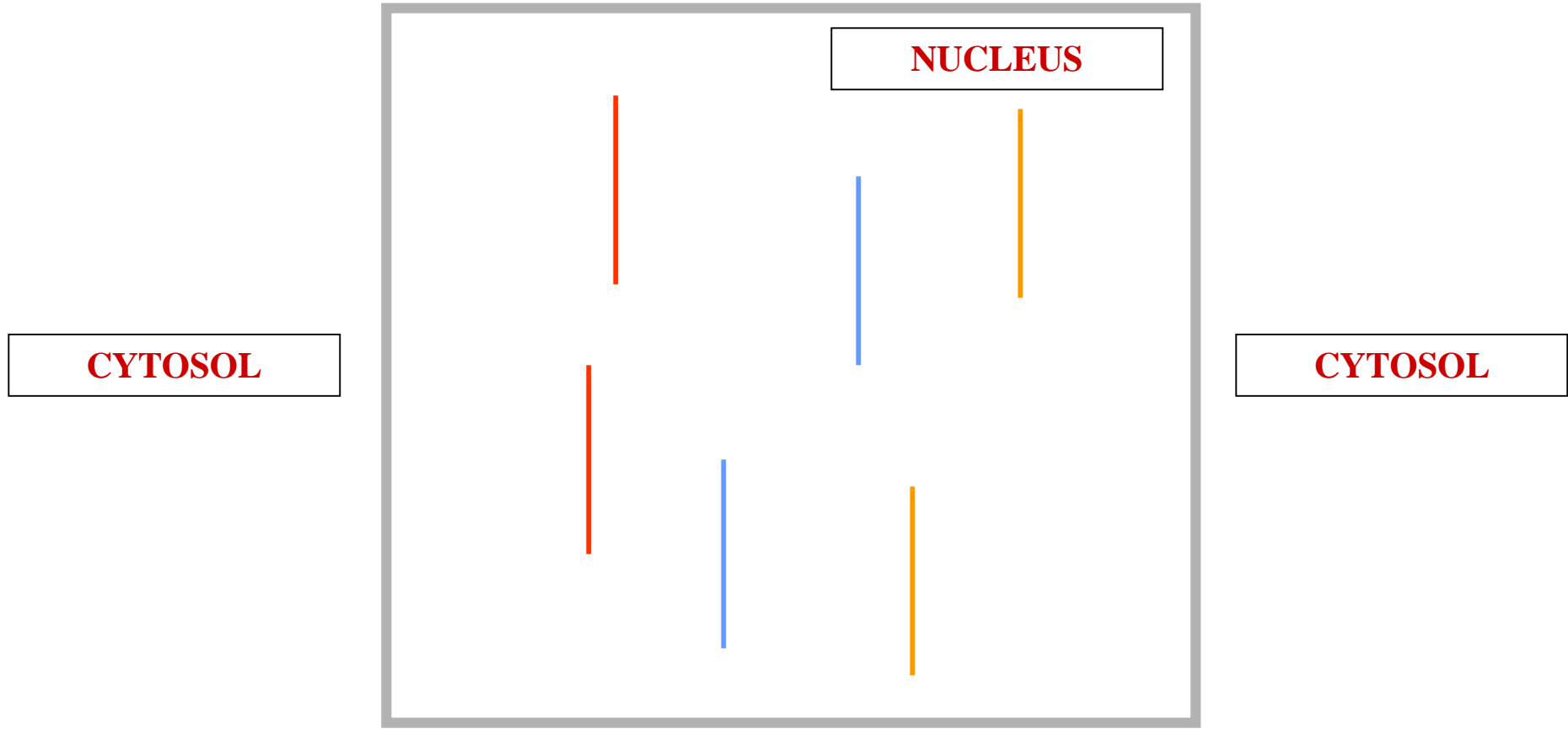


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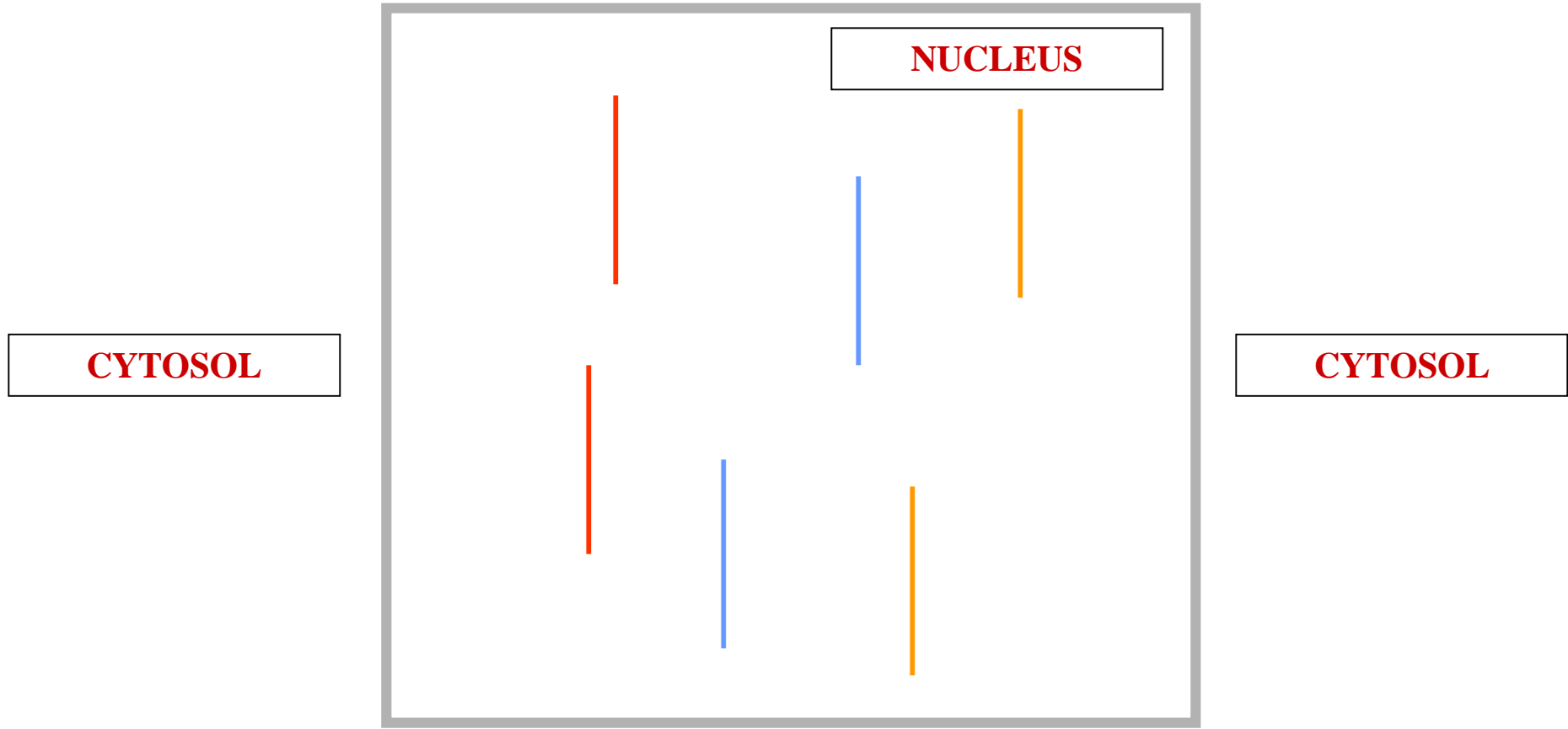
DNA CONTENT DOUBLED

CHROMOSOME POST REPLICATION



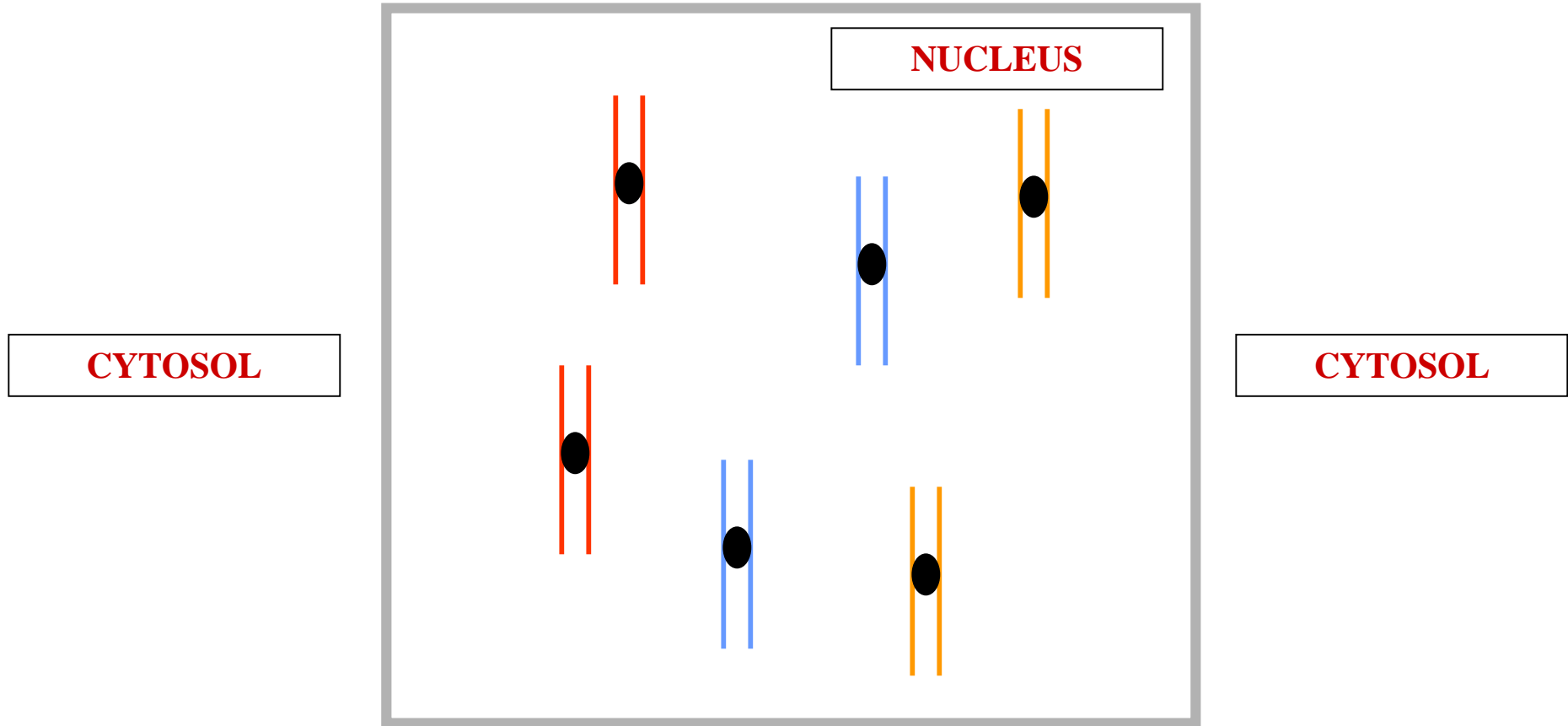
6 CHROMOSOMES

CHROMOSOME POST REPLICATION



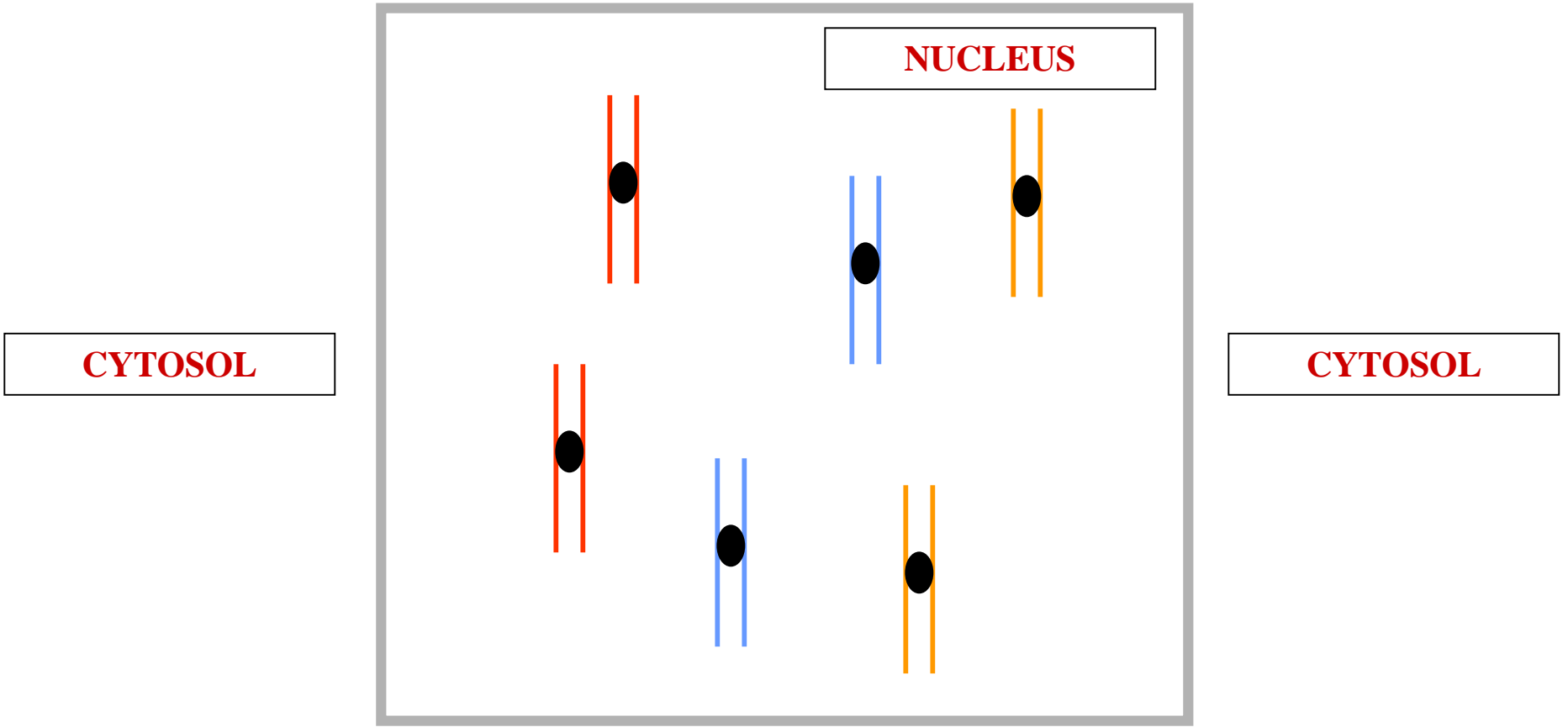
REPLICATION

CHROMOSOME POST REPLICATION



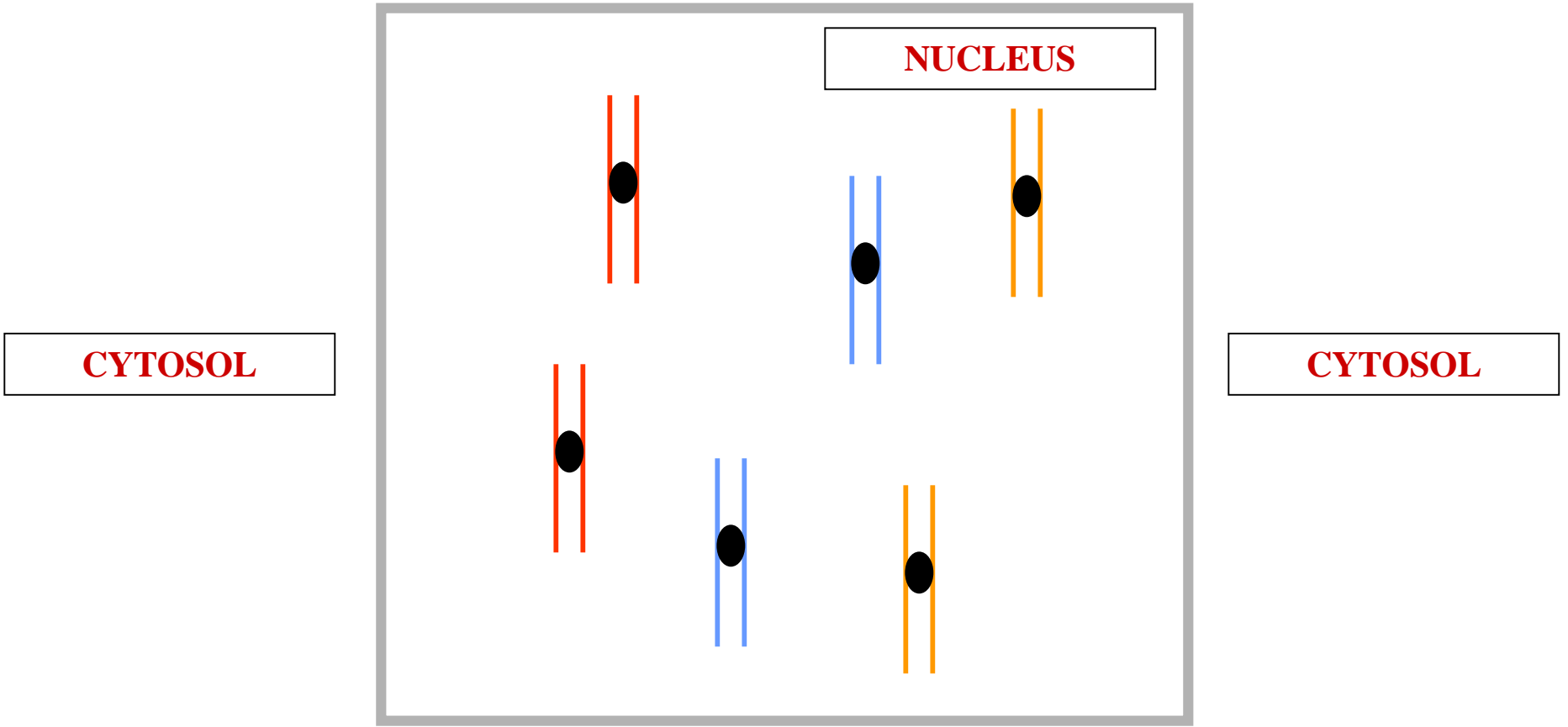
12 REPLICATED CHROMOSOMES

CHROMOSOME POST REPLICATION



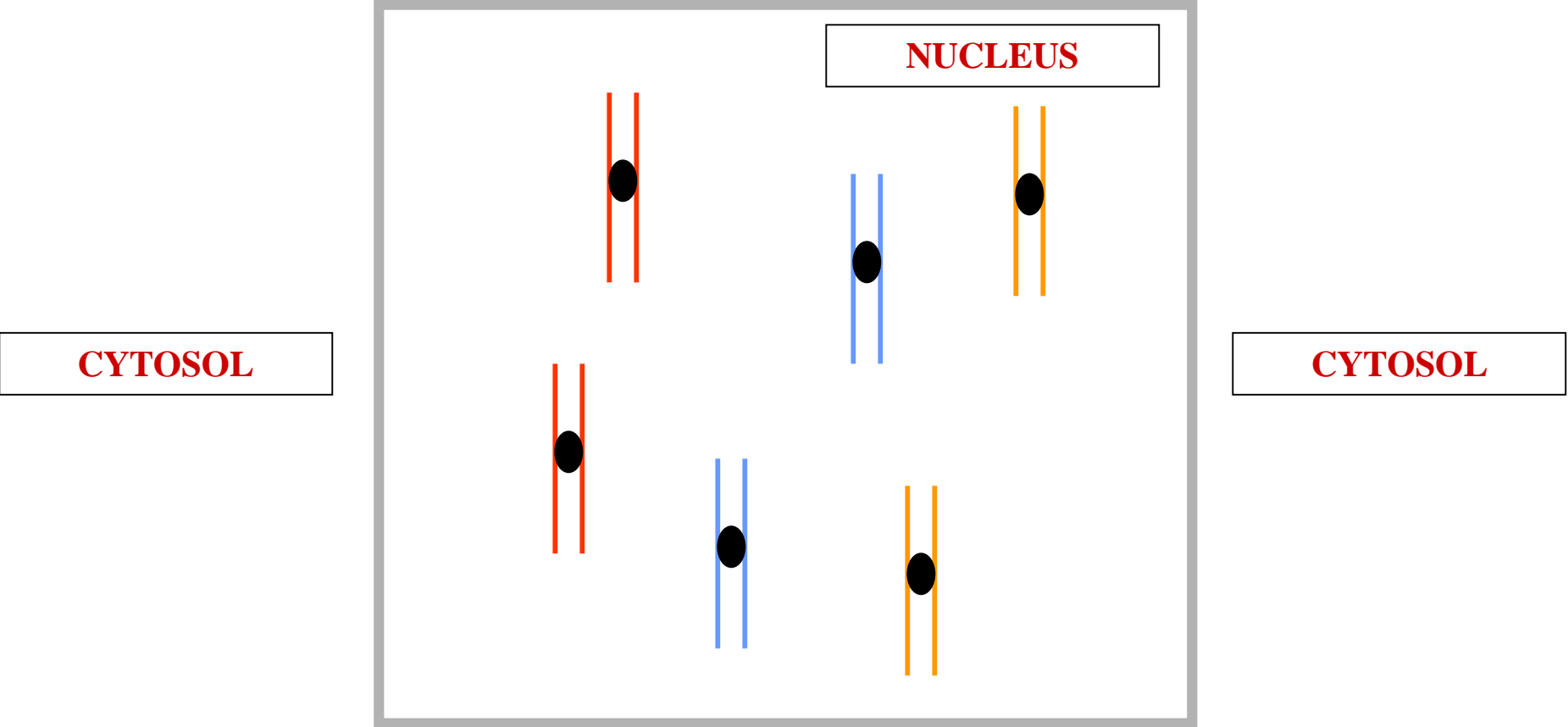
12 REPLICATED ~~CHROMOSOMES~~

CHROMOSOME POST REPLICATION



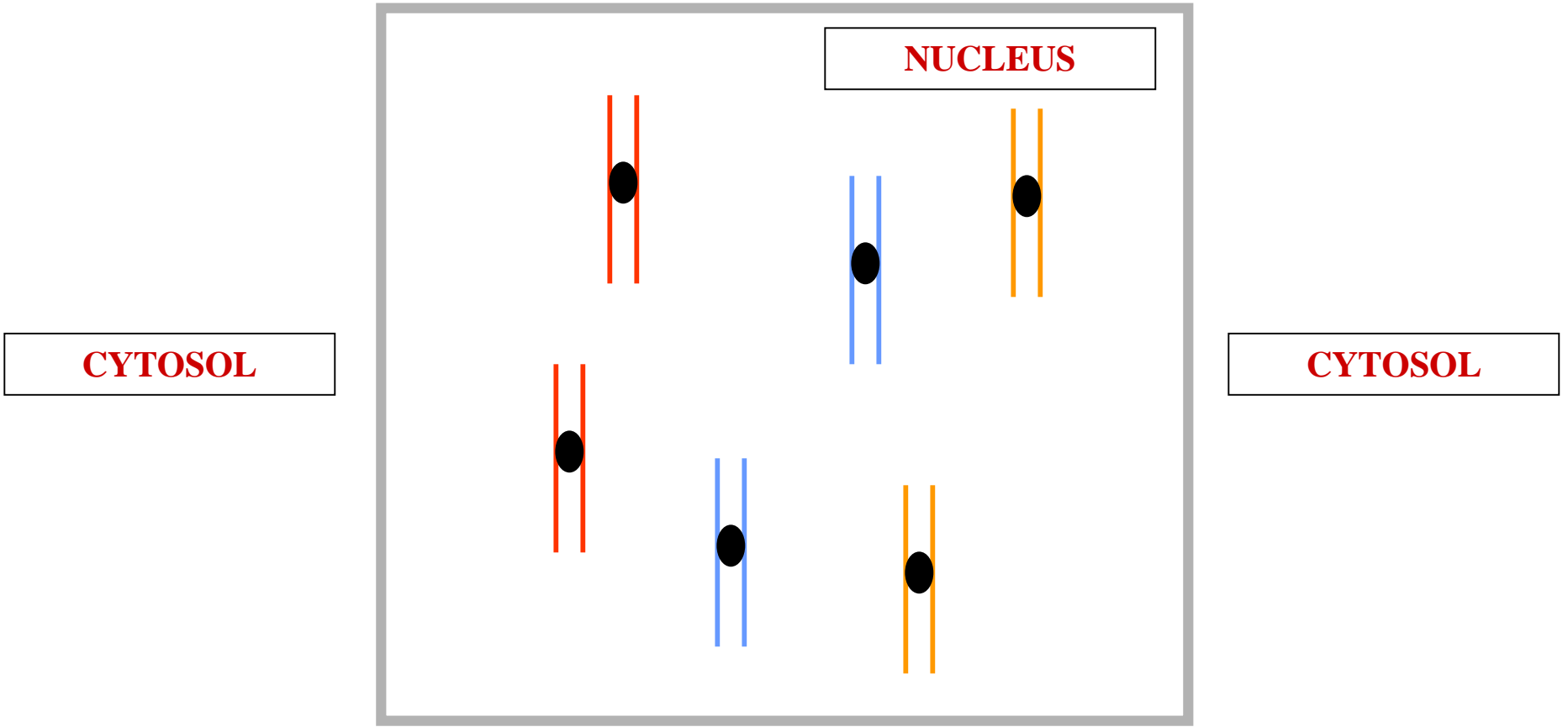
6 REPLICATED CHROMOSOMES

CHROMOSOME POST REPLICATION



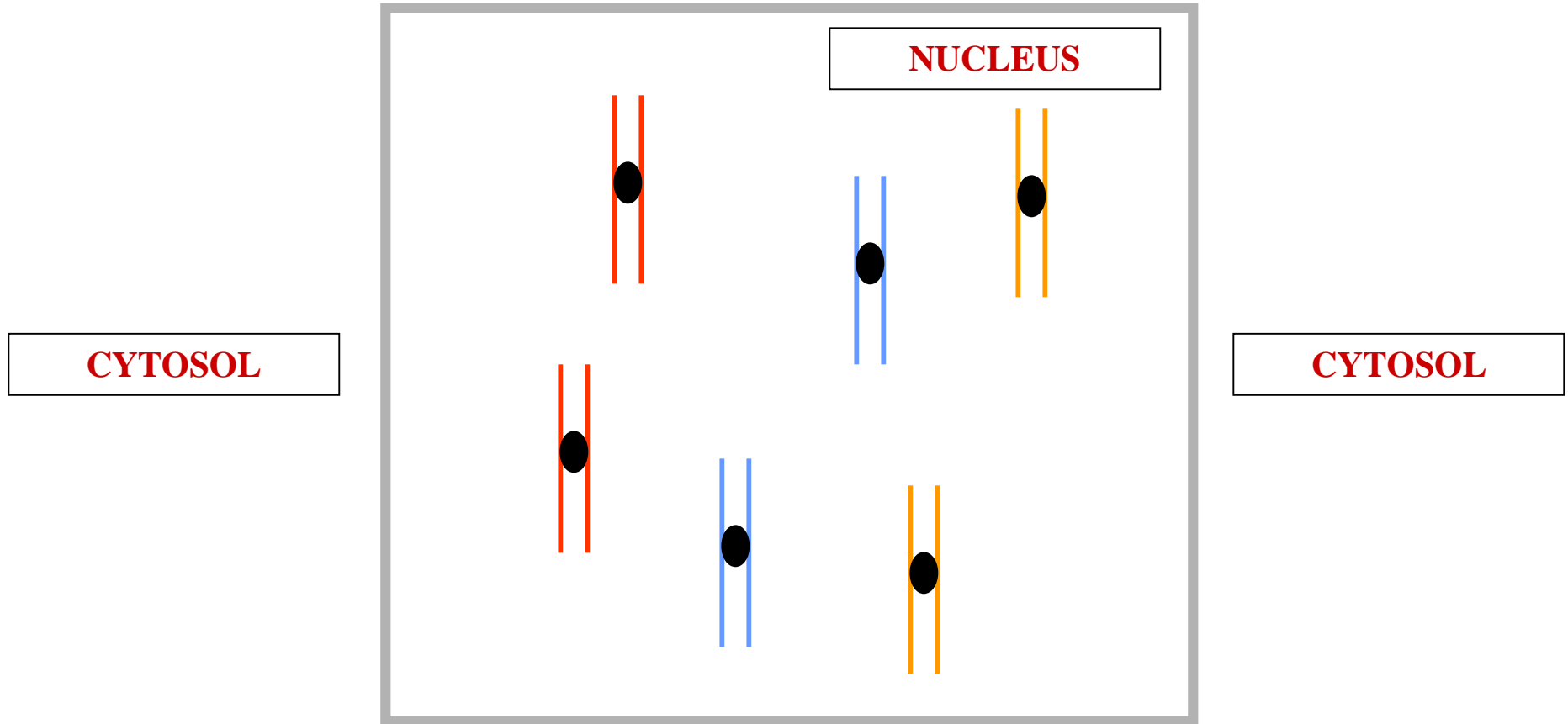
TWO CHROMATIDS

CHROMOSOME POST REPLICATION



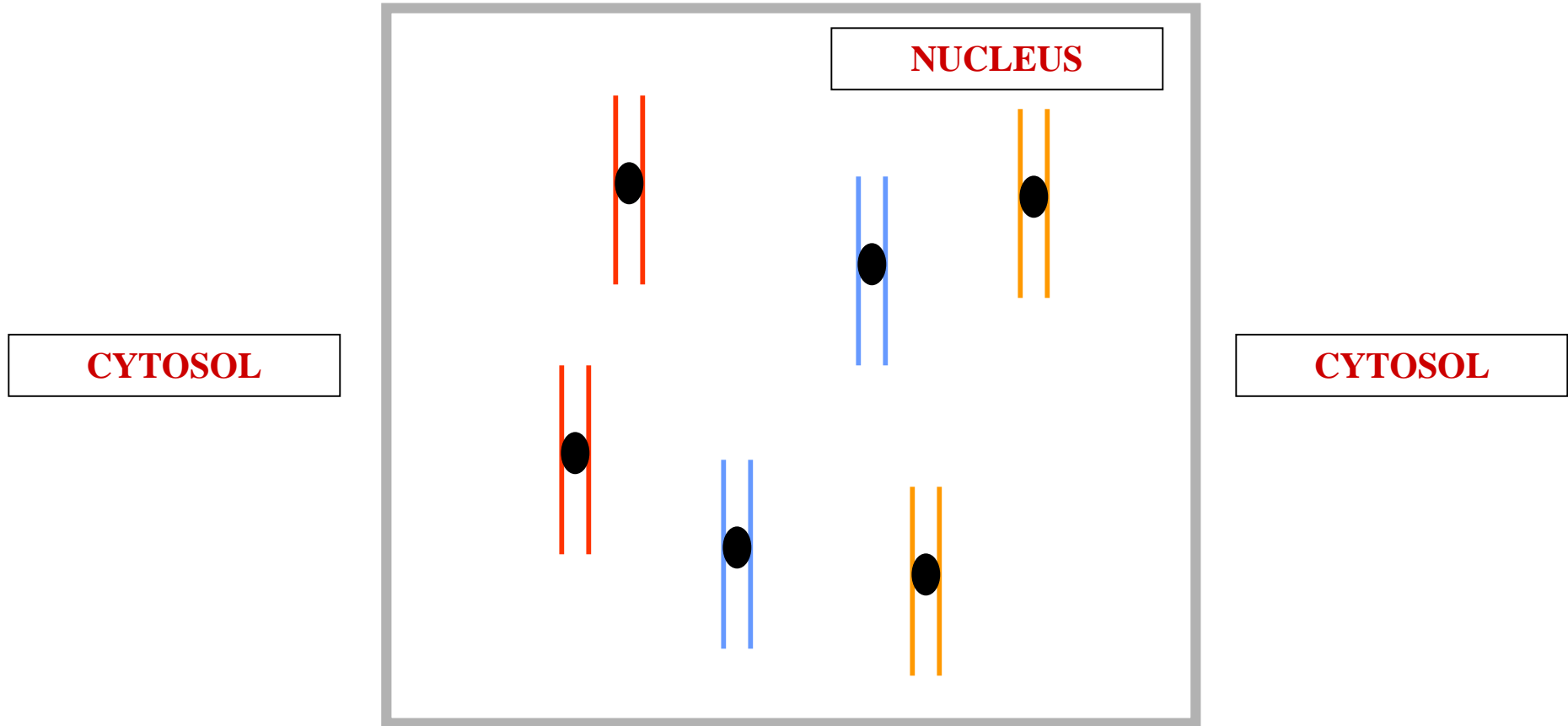
DNA CONTENT DOUBLED

CHROMOSOME POST REPLICATION



6 REPLICATED CHROMOSOMES

CHROMOSOME POST REPLICATION



CHROMOSOME NO. UNCHANGED



***REPLICATION
MUST OCCUR
PRIOR TO
KARYOKINESIS***



SOMATIC CELL CYCLE

WILD ONION

**SOMATIC
ROOT CELL**



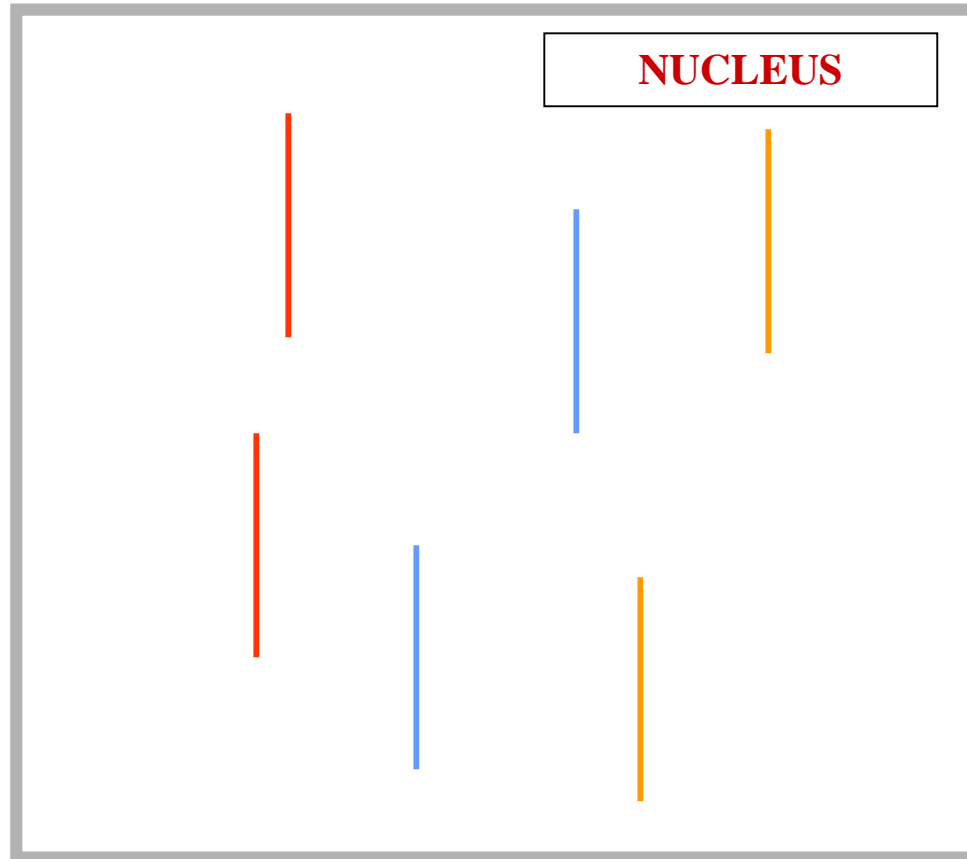
SOMATIC MOTHER CELL

E

CC



CYTOSOL



CYTOSOL

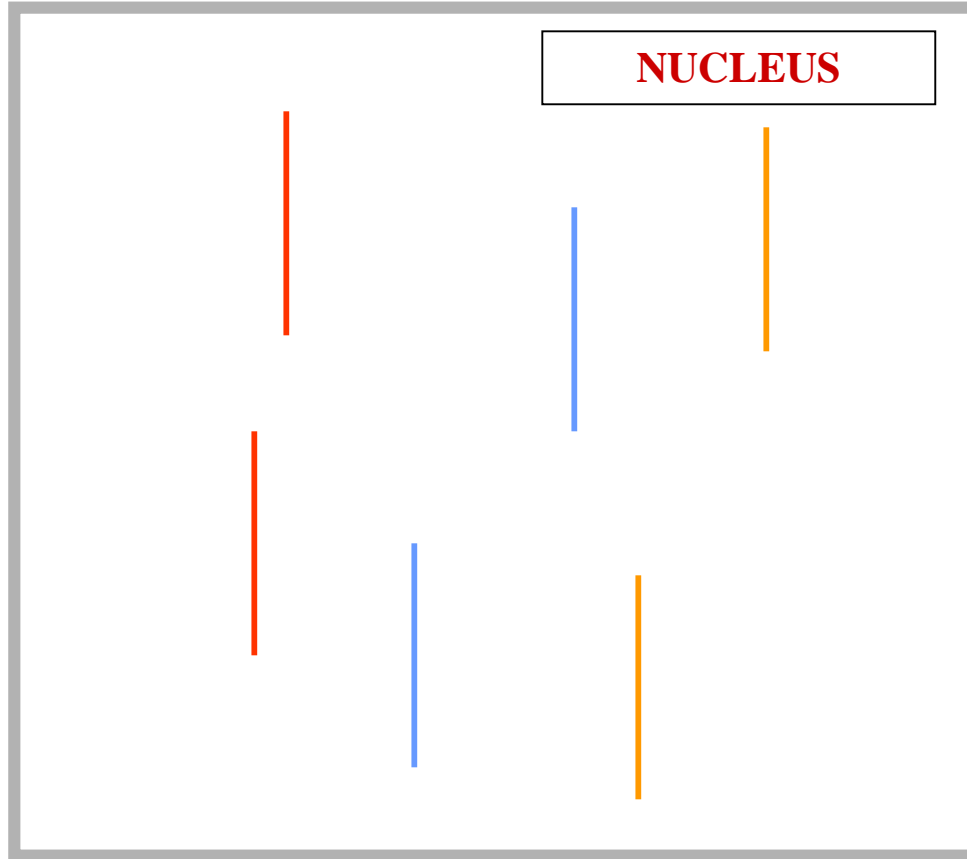
6 CHROMOSOMES



SOMATIC MOTHER CELL



CYTOSOL



CYTOSOL

ENTERS SOMATIC CELL CYCLE

SOMATIC CELL CYCLE STAGES

SOMATIC CELL CYCLE STAGES

INTERPHASE

SOMATIC CELL CYCLE STAGES

SOMATIC CELL CYCLE STAGES

**INTERPHASE
KARYOKINESIS**

**SOMATIC CELL CYCLE
STAGES**

SOMATIC CELL CYCLE STAGES

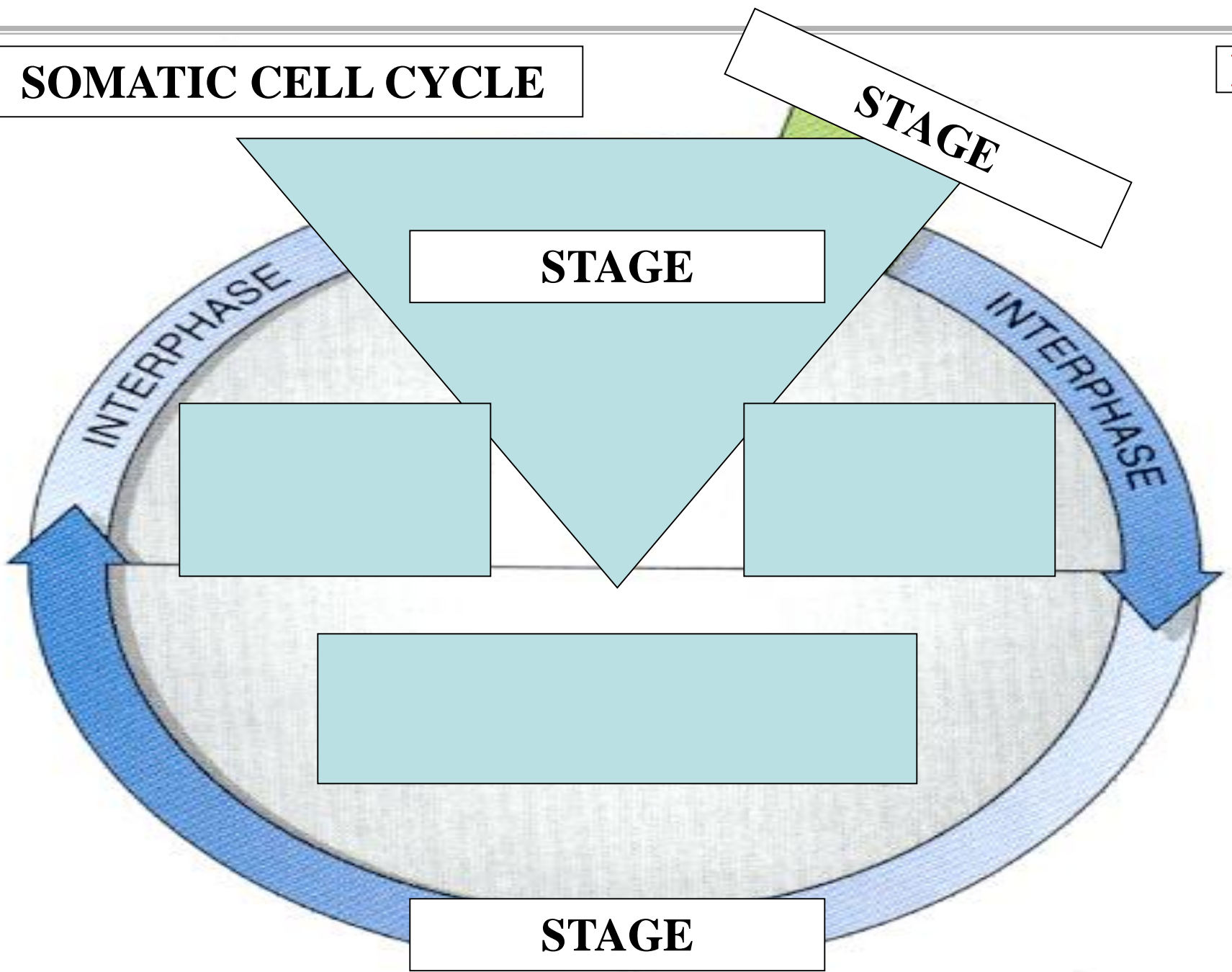


**INTERPHASE
KARYOKINESIS
CYTOKINESIS**

**SOMATIC CELL CYCLE
STAGES**

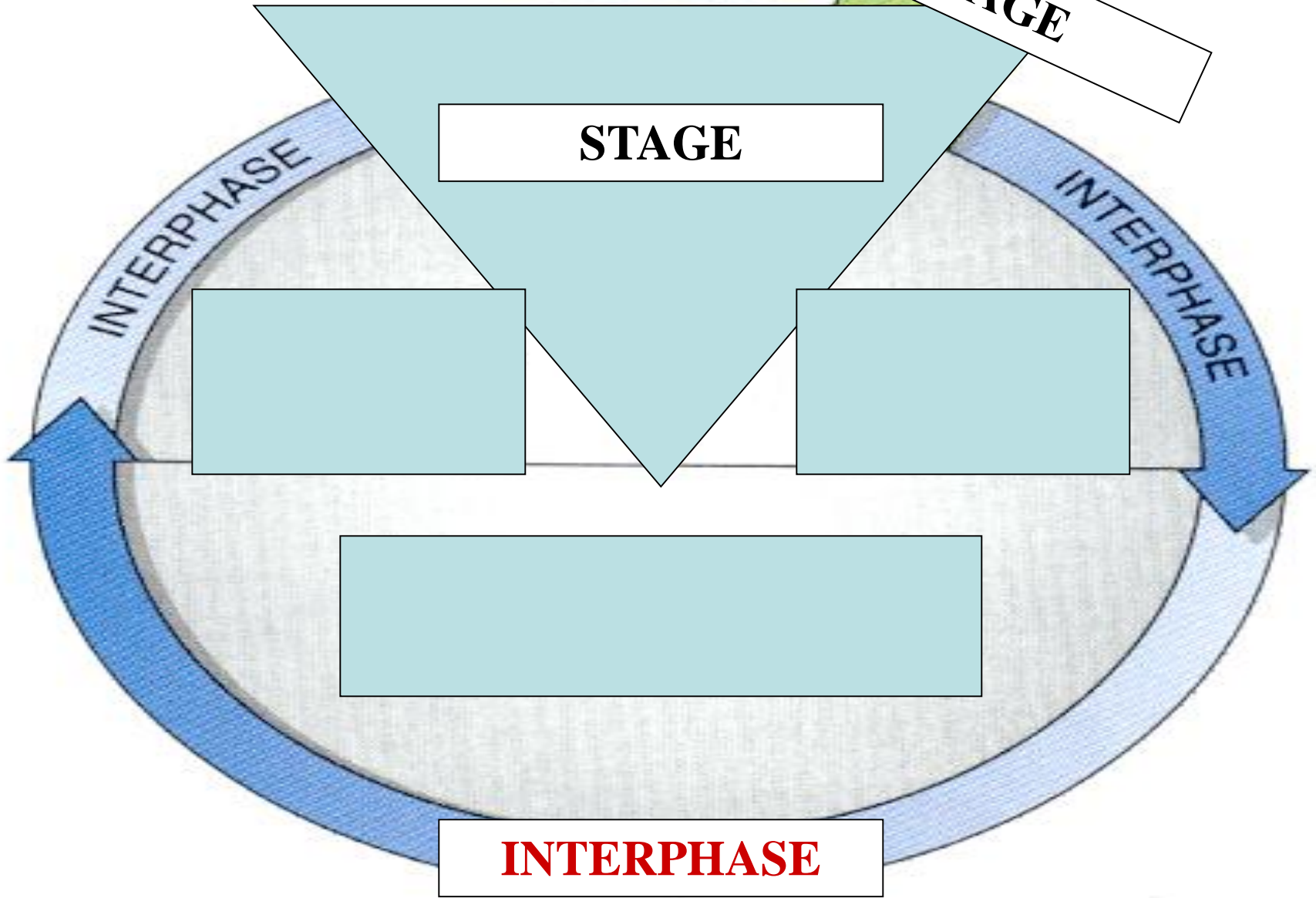
SOMATIC CELL CYCLE

I



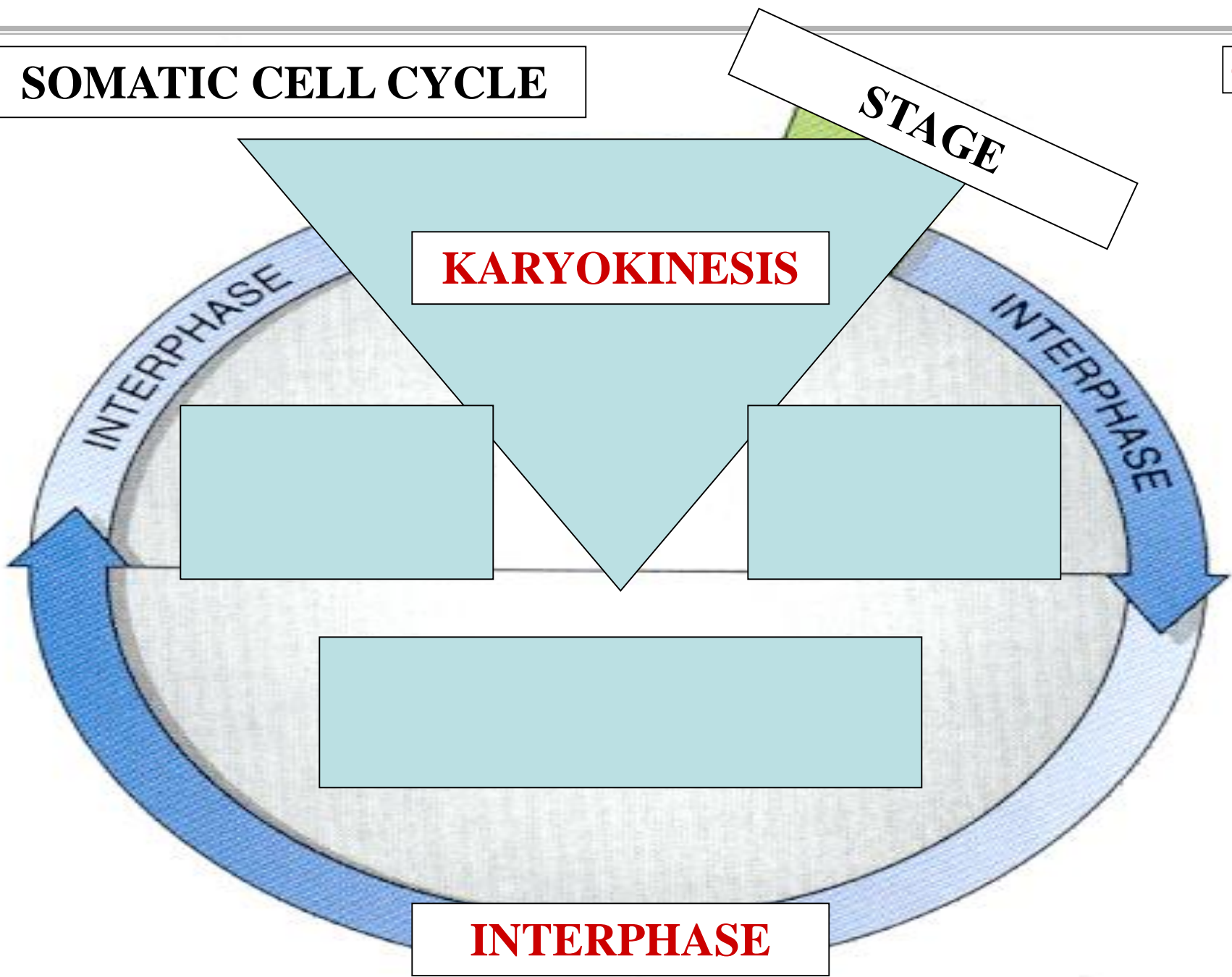
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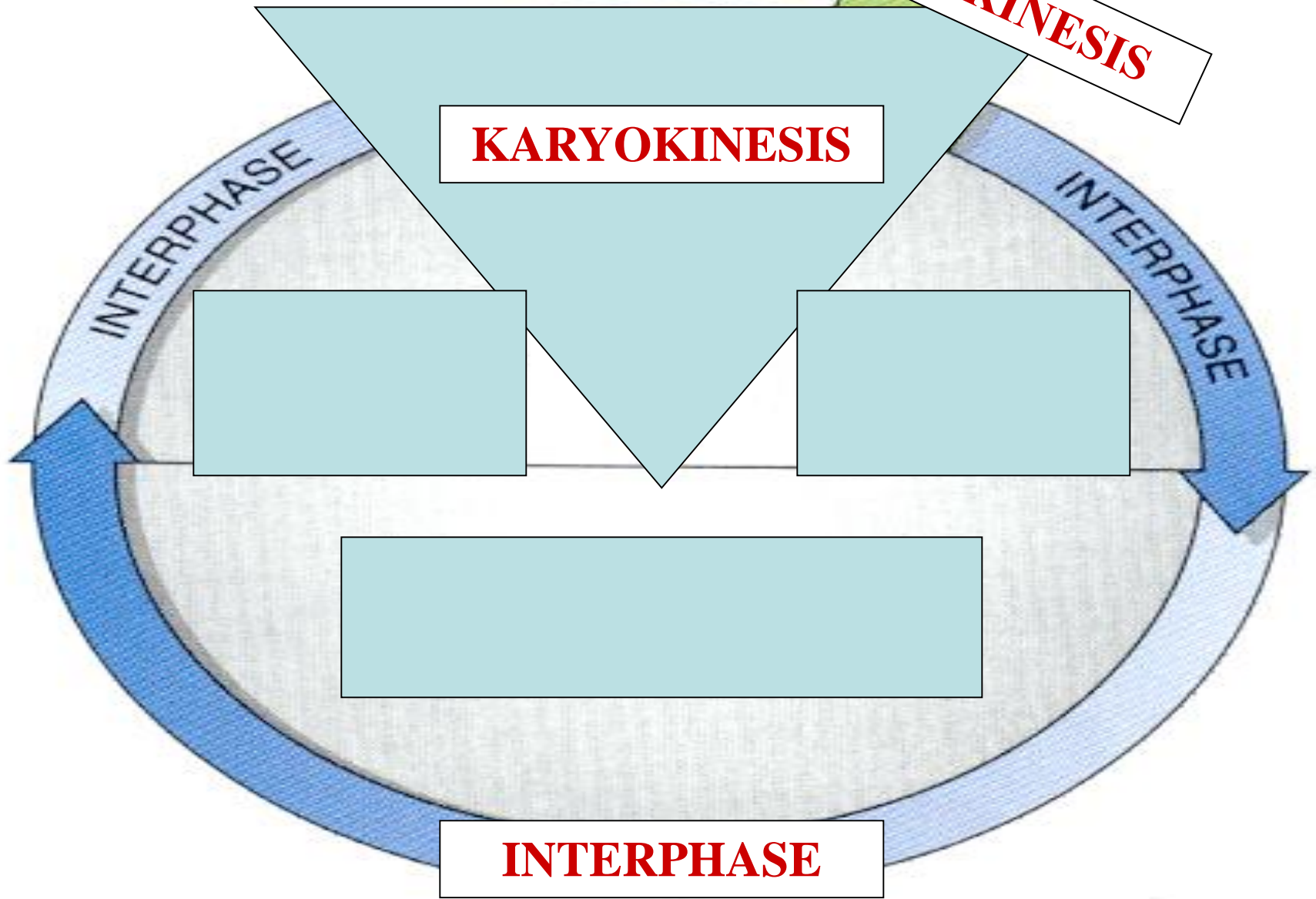


SOMATIC CELL CYCLE

C



SOMATIC CELL CYCLE



INTERPHASE STAGE

INTERPHASE

INTERPHASE STAGE



**INTERVAL BETWEEN
CELL DIVISION**

**INTERPHASE
STAGE**

SOMATIC CELL CYCLE

K

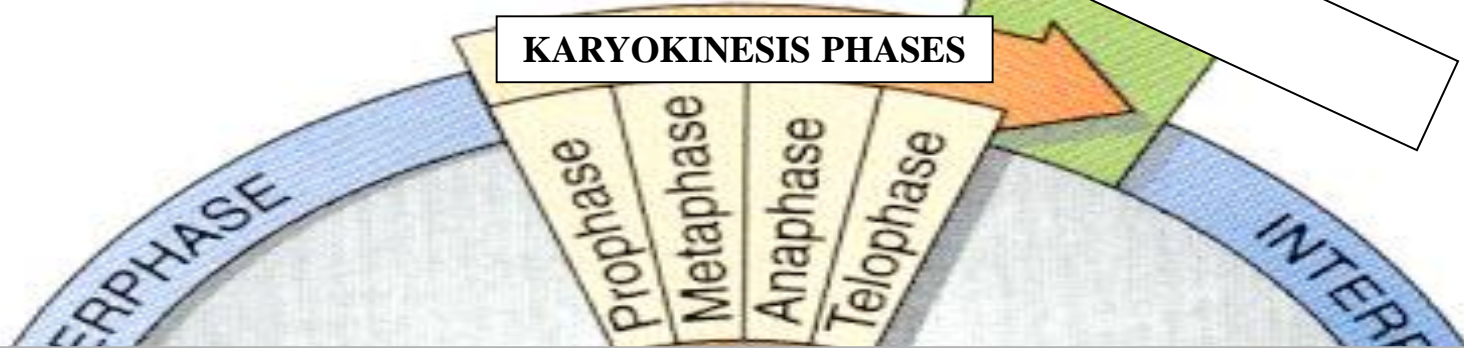


KARYOKINESIS

**INTERPHASE
IS NOT A
KARYOKINESIS
PHASE**

SOMATIC CELL CYCLE

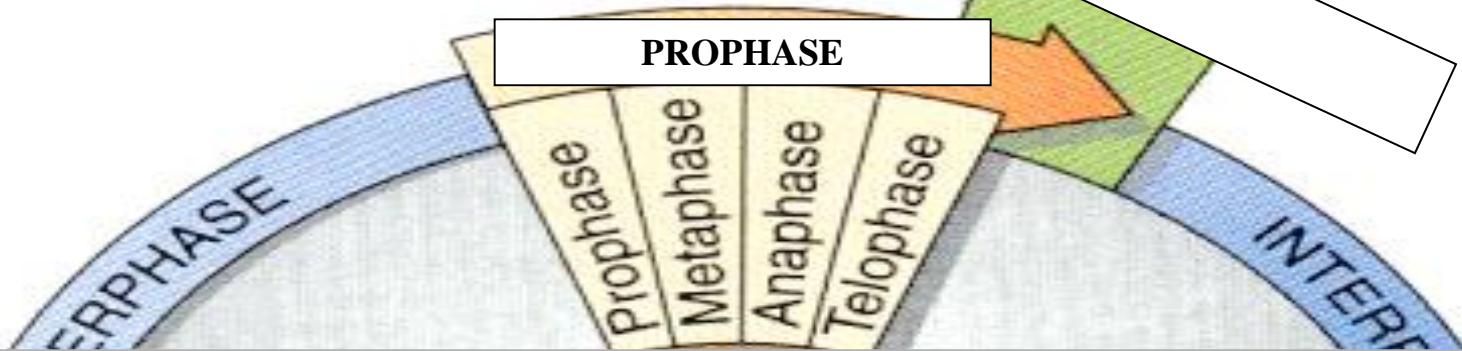
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**INTERPHASE
IS NOT A
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SOMATIC CELL CYCLE

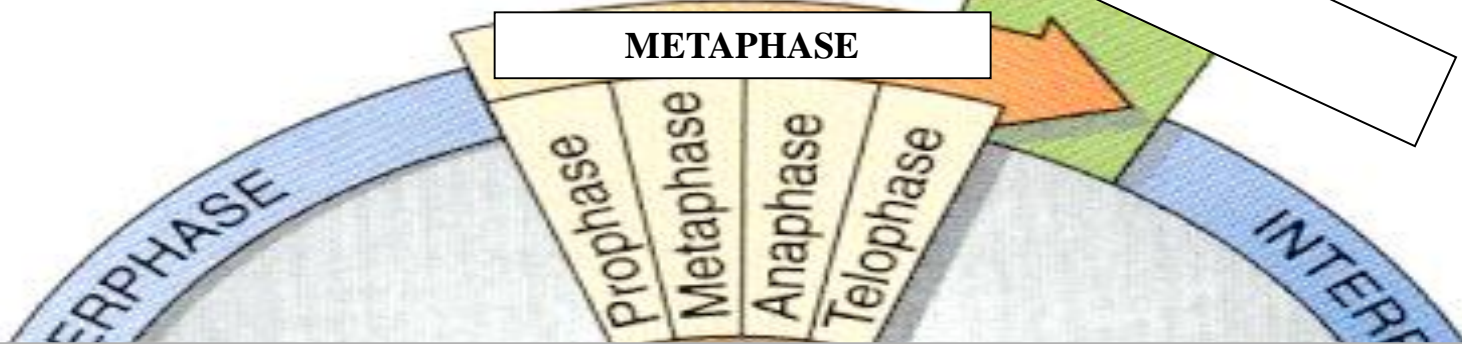
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**INTERPHASE
IS NOT A
KARYOKINESIS
PHASE**

SOMATIC CELL CYCLE

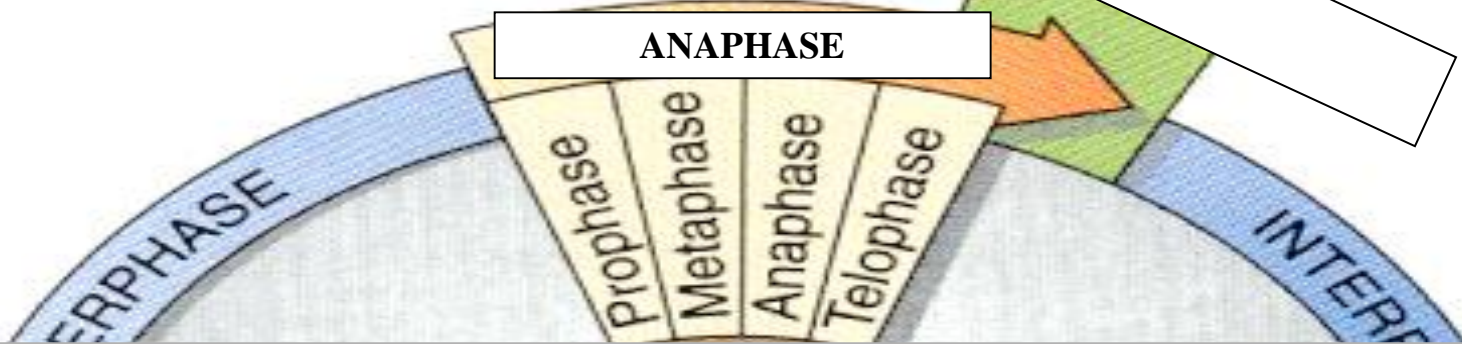
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**INTERPHASE
IS NOT A
KARYOKINESIS
PHASE**

SOMATIC CELL CYCLE

T



**INTERPHASE
IS NOT A
KARYOKINESIS
PHASE**