

**Student Activity**

Name: \_\_\_\_\_

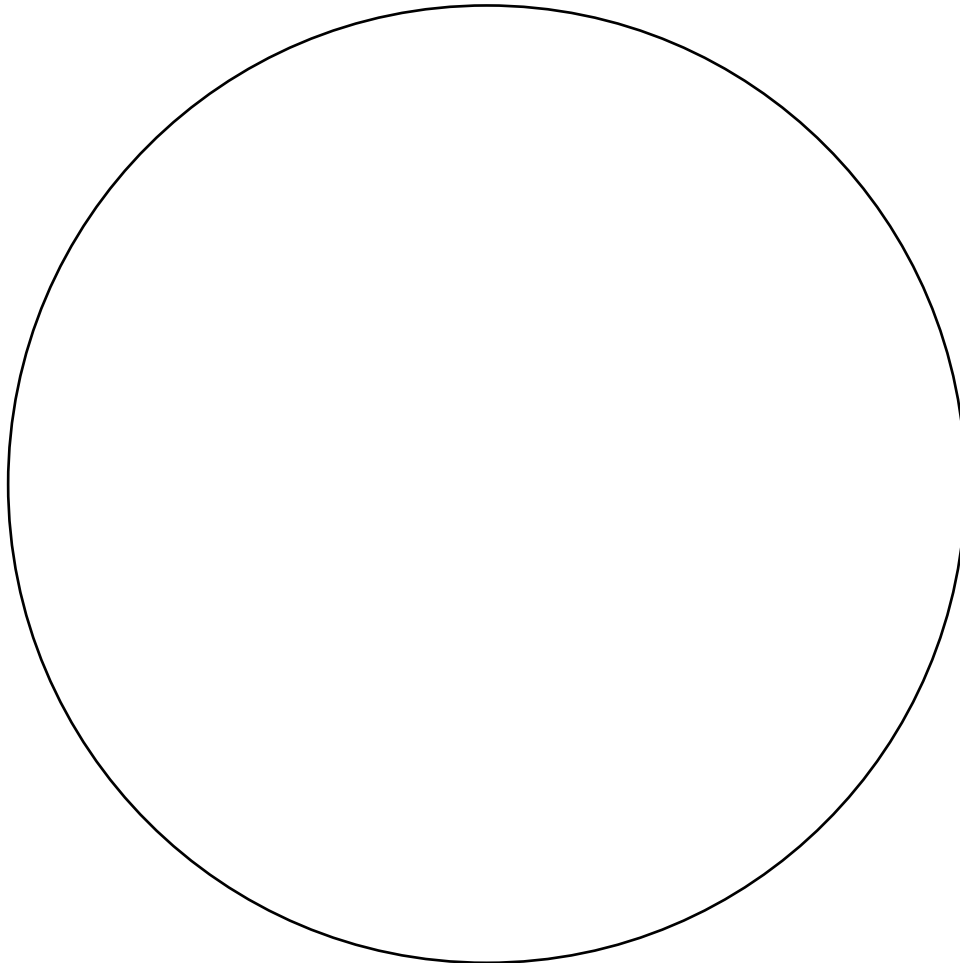
# Using Manipulatives for Mitosis

## Materials

- Red and blue yarn
- Pipe cleaners
- Tape
- Scissors

## Directions

1. Get materials from the teacher and bring items back to your desk.
2. Use the blue yarn to make the **chromatin** in the cell below and tape it to the circle.



## Interphase

What is happening during this phase?

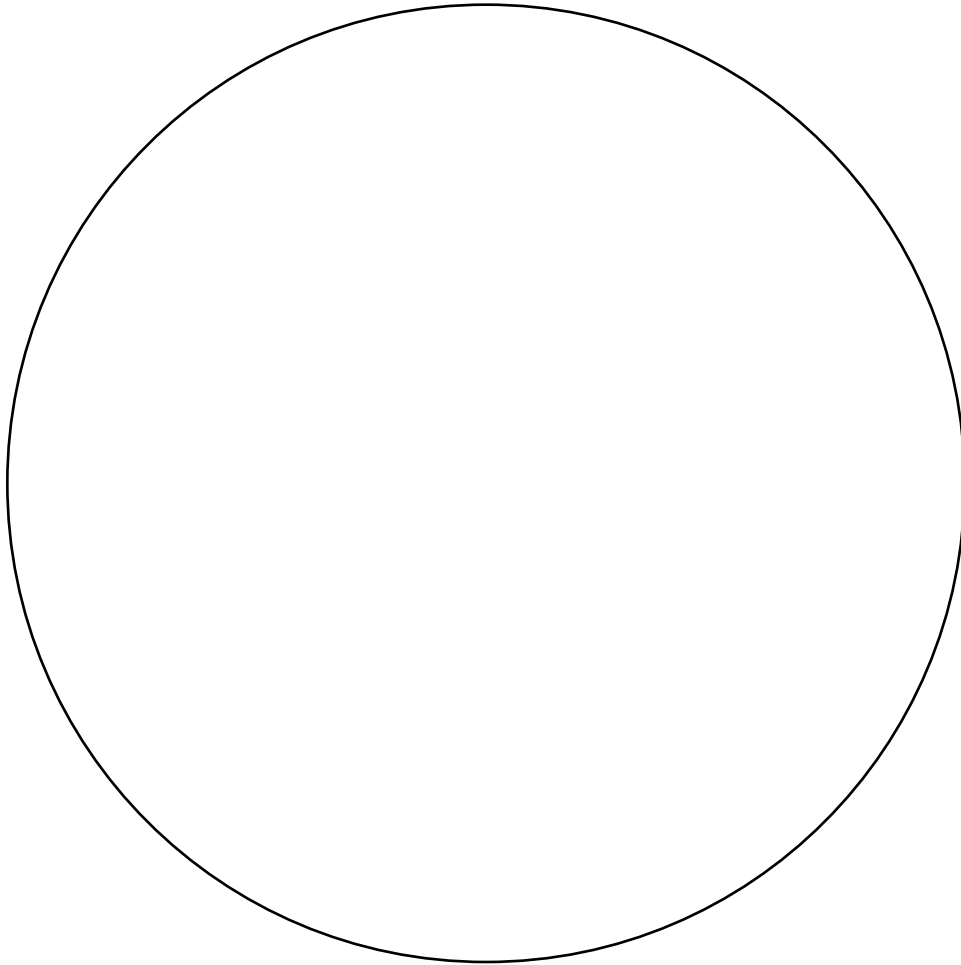
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**Student Activity**

3. Use pipe cleaners to make three pairs of chromosomes and tape them to the circle.



**Early Prophase**

What is happening during this phase?

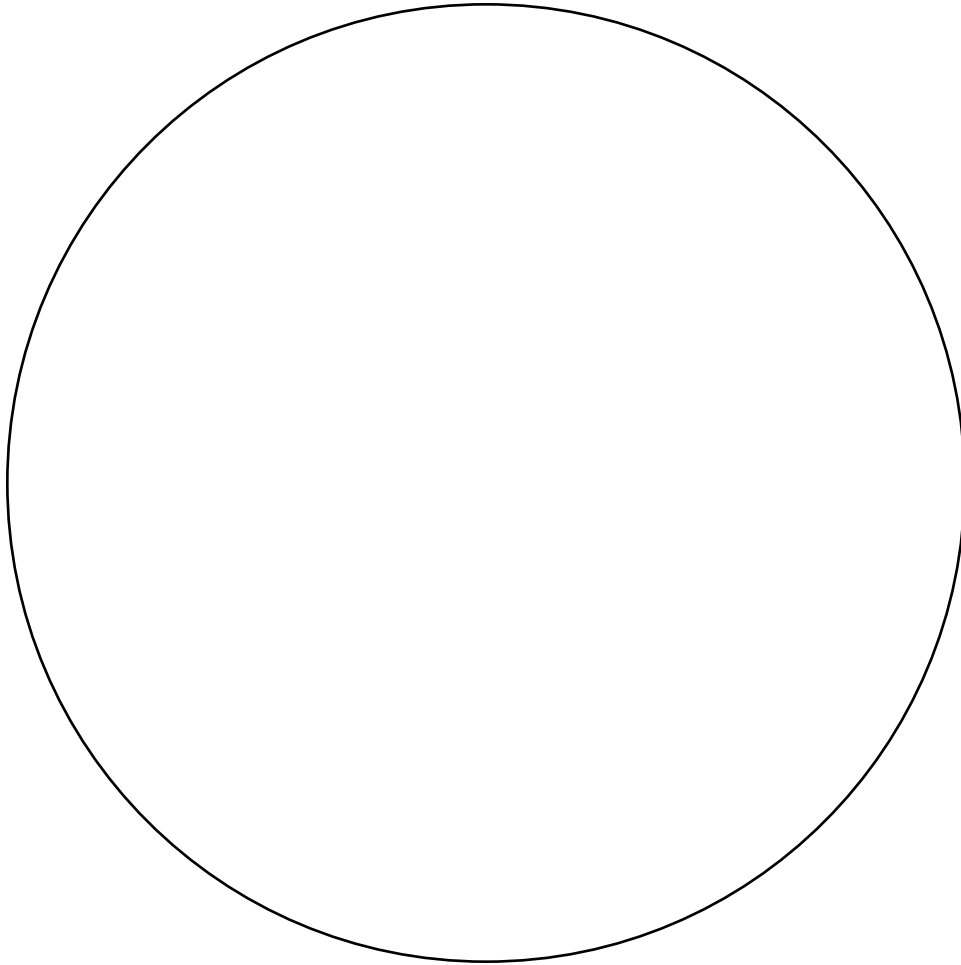
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**Student Activity**

- 4. Use pipe cleaners to make three pairs of chromosomes and red yarn as spindle fibres to attach to each pair of chromosomes from the top and bottom of the circle. Tape them to the circle.



**Prophase**

What is happening during this phase?

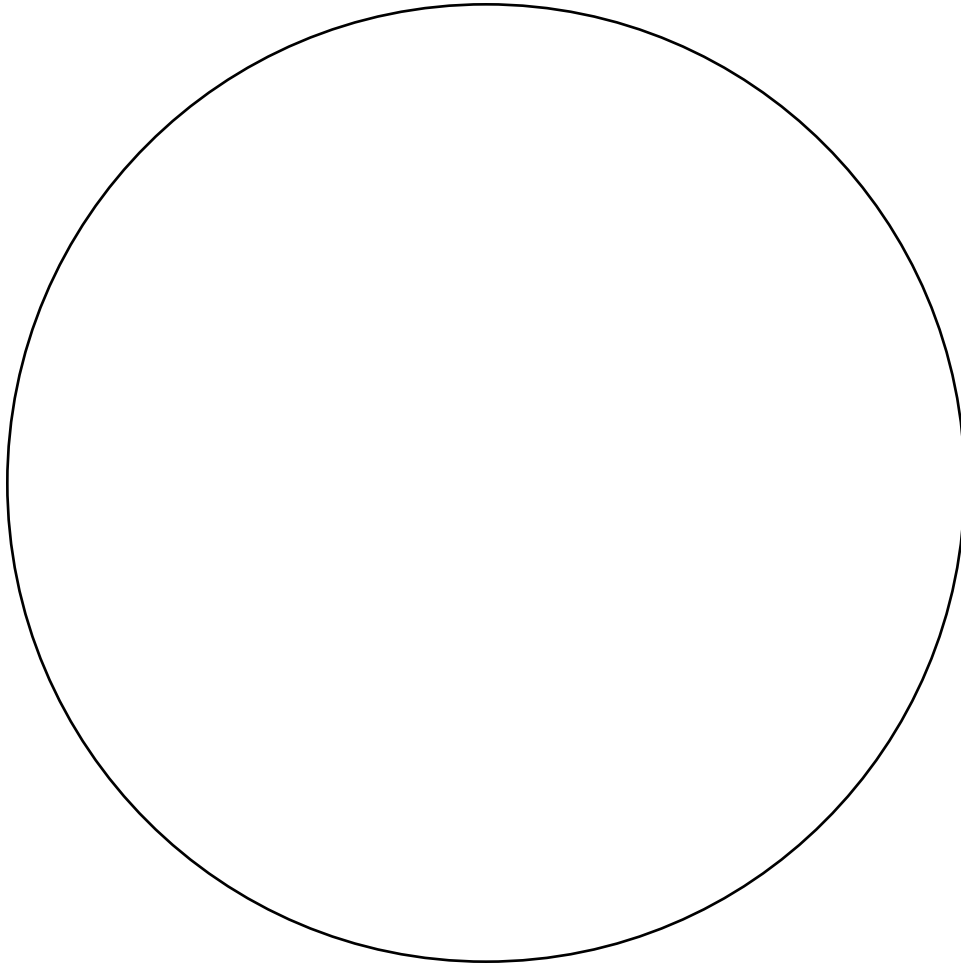
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**Student Activity**

- 5. Use pipe cleaners to make three pairs of chromosomes and red yarn as spindle fibres to attach to each pair of chromosomes from the top and bottom of the circle, taping them in a line across the middle of the circle.



**Metaphase**

What is happening during this phase?

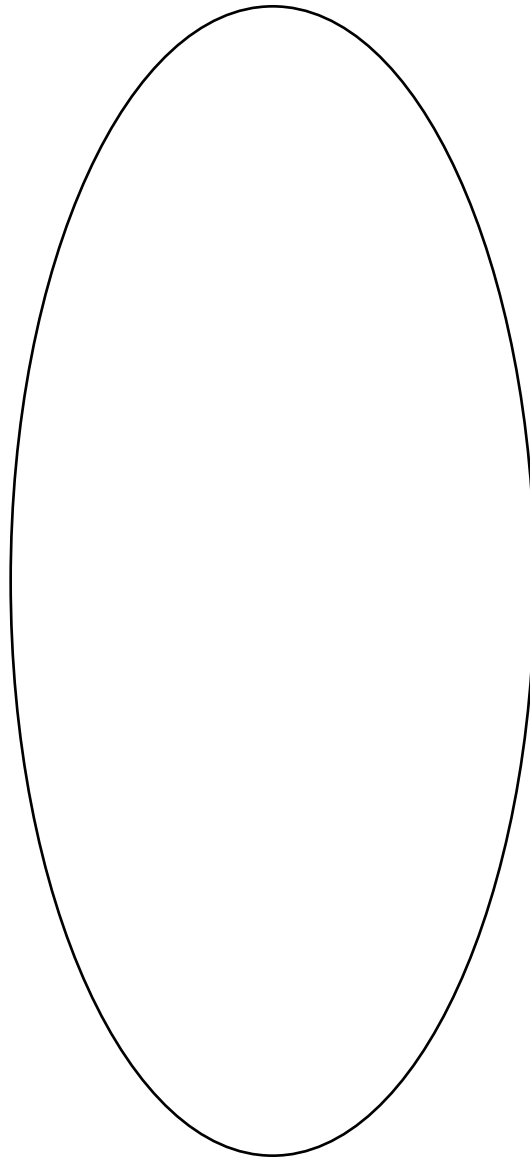
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**Student Activity**

- 6. Use pipe cleaners to make six chromosomes splitting apart from the middle and red yarn as spindle fibres to attach to each chromosome from the top and bottom of the circle. Tape them to the circle.



**Anaphase**

What is happening during this phase?

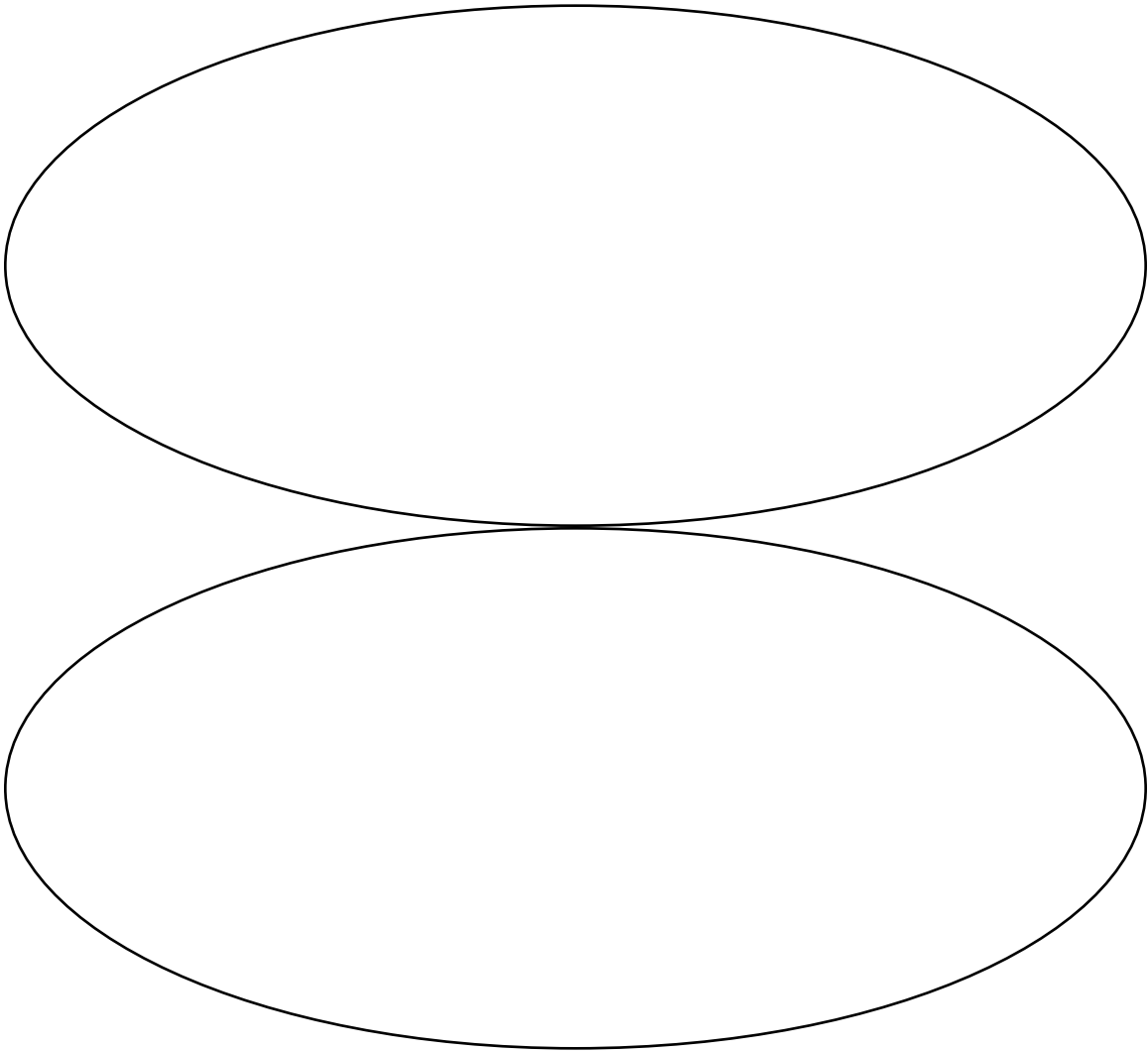
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**Student Activity**

7. Use pipe cleaners to make three chromosomes taped to each cell.



**Telophase**

What is happening during this phase?

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