



SMART JUNIORS 2

The Natural World

Lesson 46

Critical Thinking

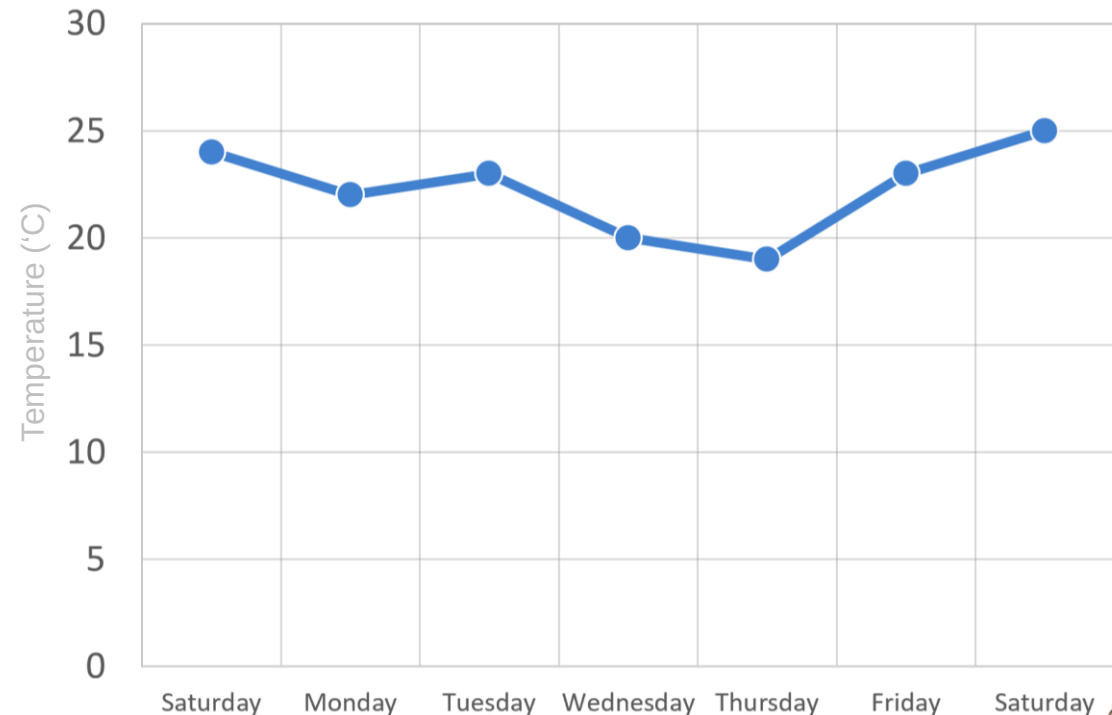


Understanding Line Graphs

- A **line graph** is used to display and analyze how things **change over time**.
- A line graph uses points on a line to show a **trend**.



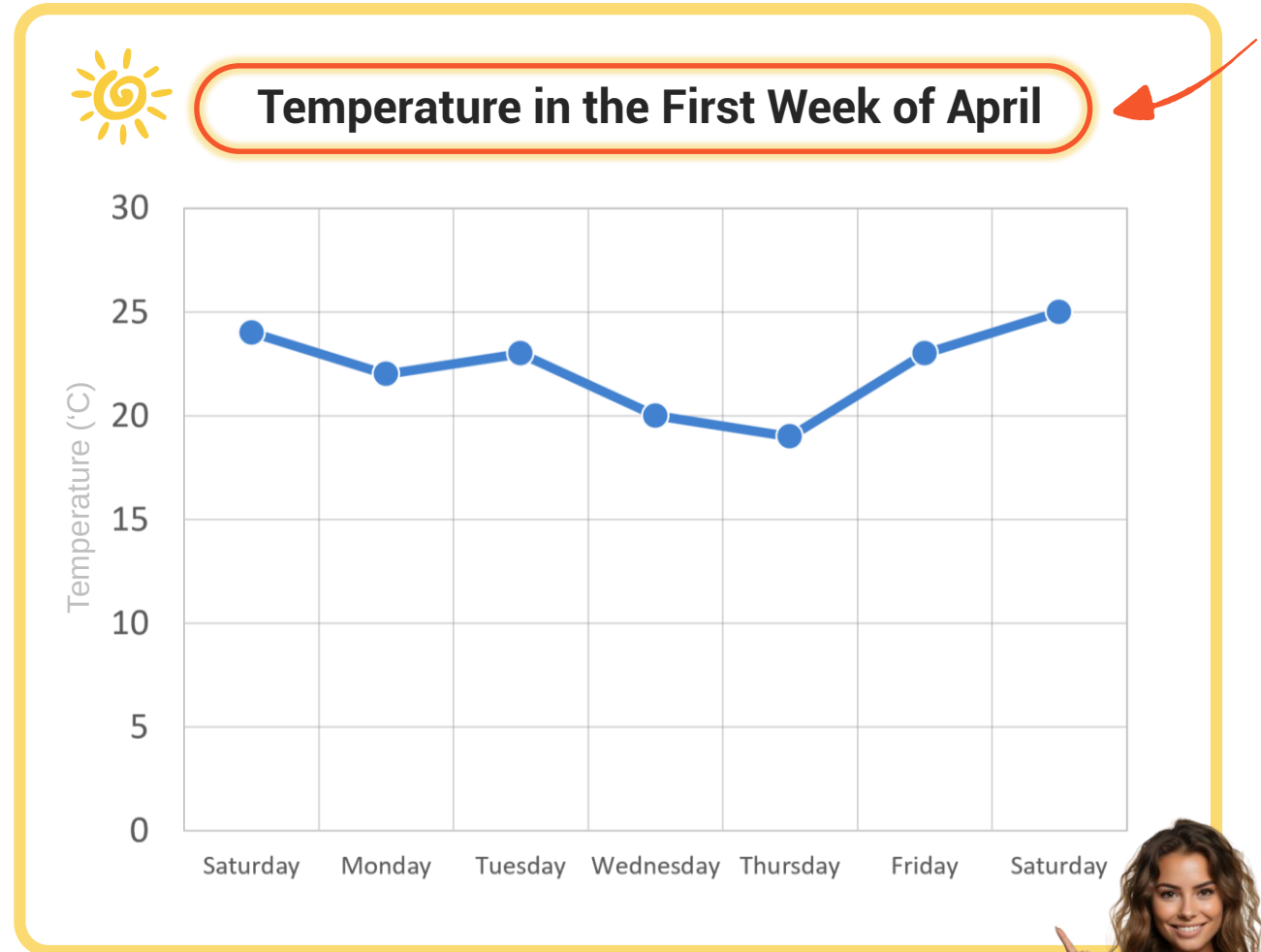
Temperature in the First Week of April



Understanding Line Graphs

How do we read a line graph?

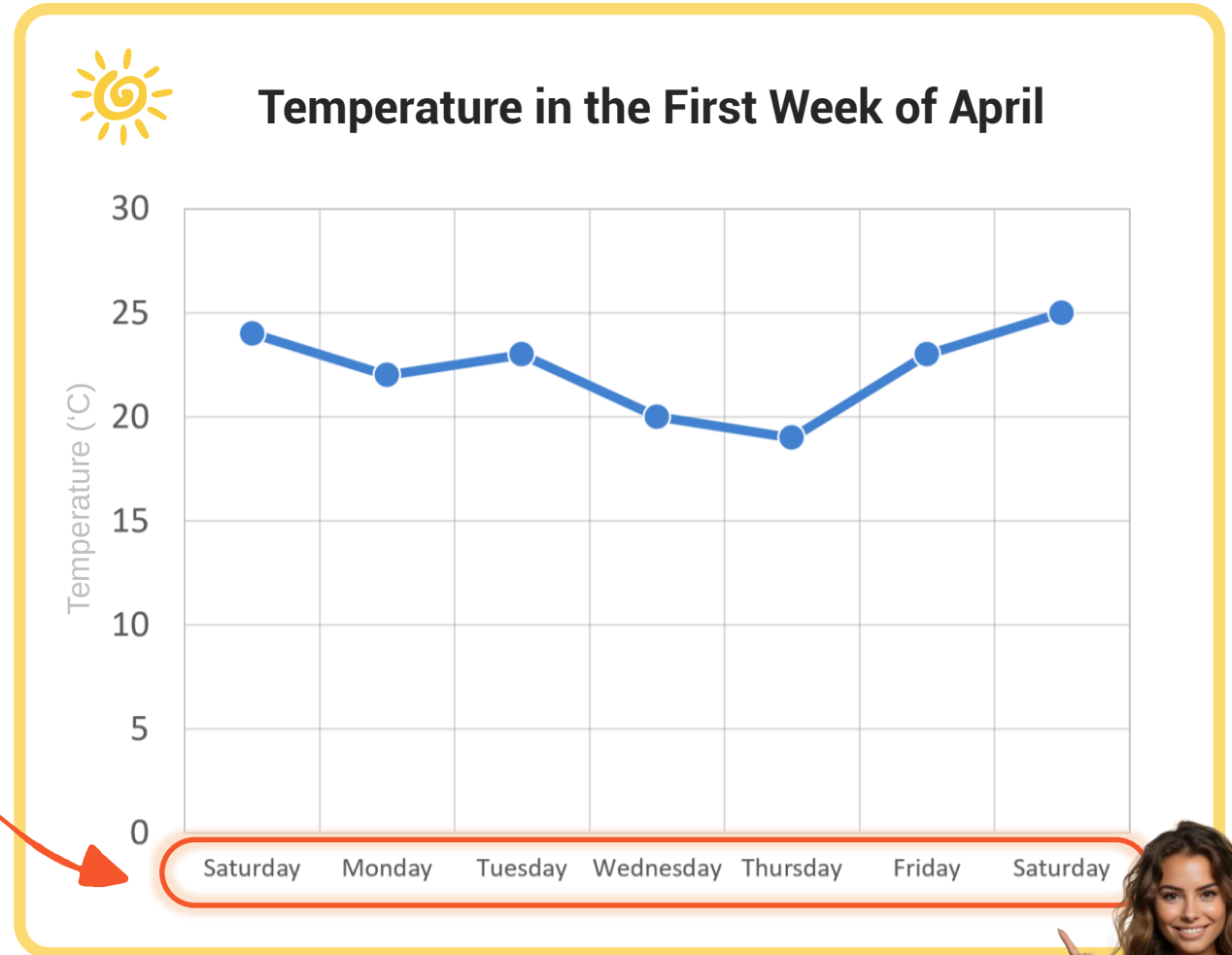
- 1 Read the title.**
This is the subject of the graph.
- 2 Check the time period**
at the bottom of the graph.
Is it in years, months, weeks, or days?
- 3 Look at the left side.**
This side shows numbers or percentages.



Understanding Line Graphs

How do we read a line graph?

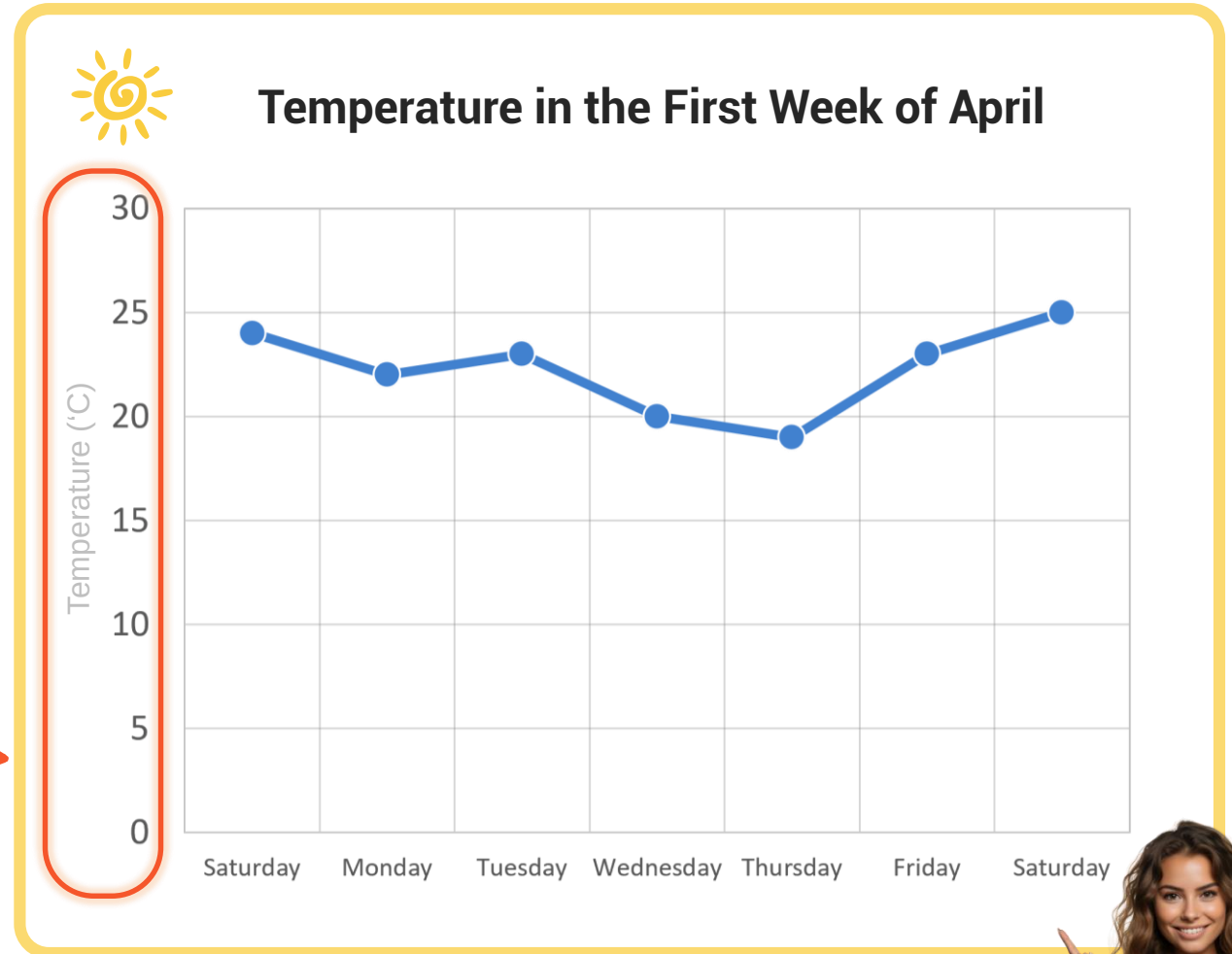
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Understanding Line Graphs

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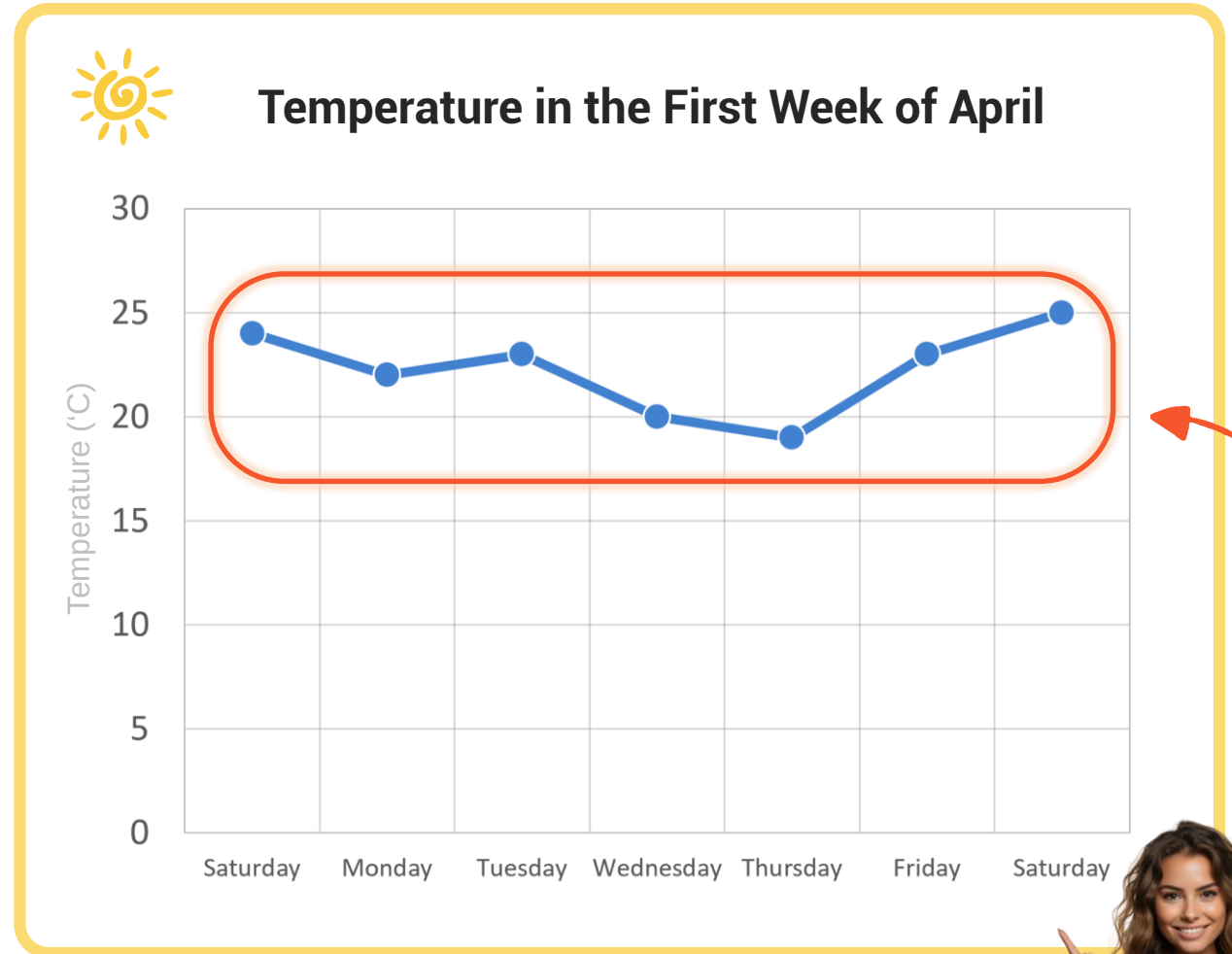
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Understanding Line Graphs

How do we read a line graph?

- 4 Check the colored lines.**
The lines show the trend.
- 5 Check the specific numbers.**
Find the value of each point.
Look for the smallest and biggest numbers.



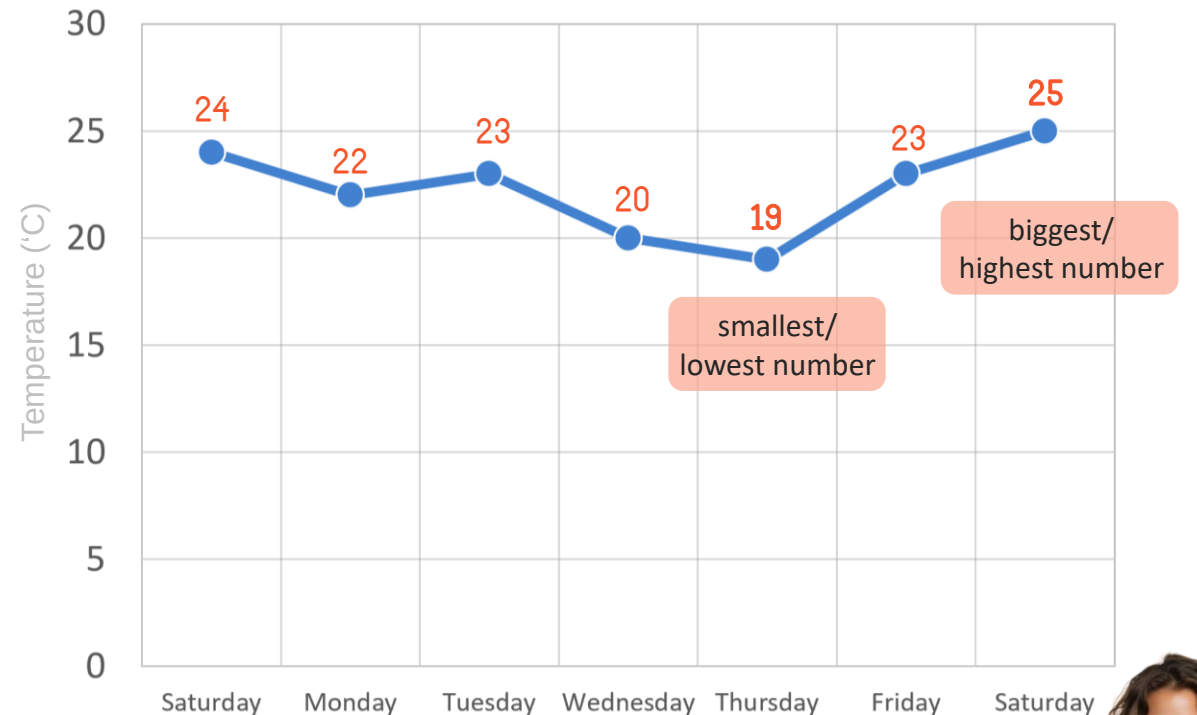
Understanding Line Graphs

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Temperature in the First Week of April



Understanding Line Graphs

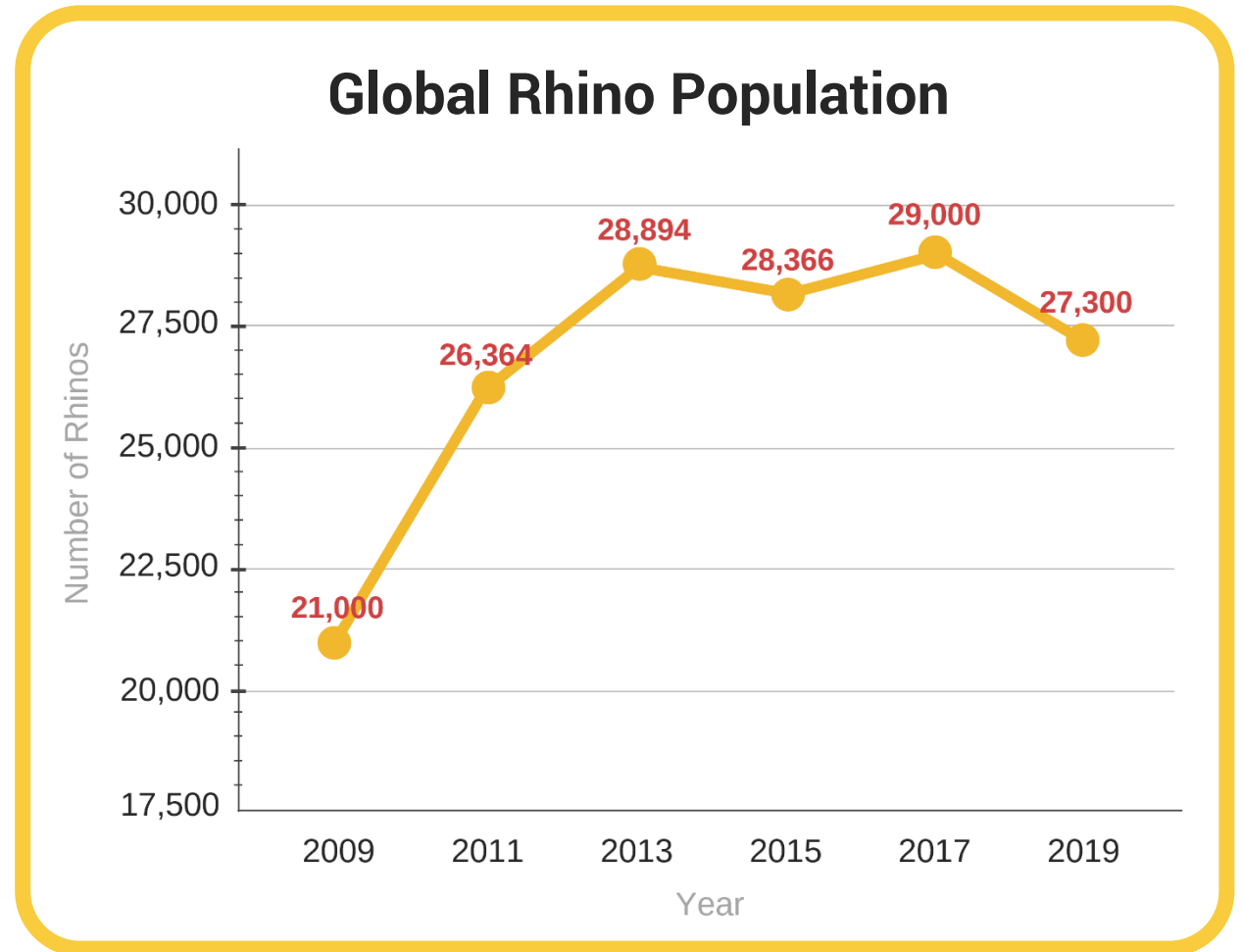
Answer the questions to help you read and understand the graph.

1. What is the title of the graph?

2. What time period is covered?

3. What is the meaning of the numbers on the left side of the graph?

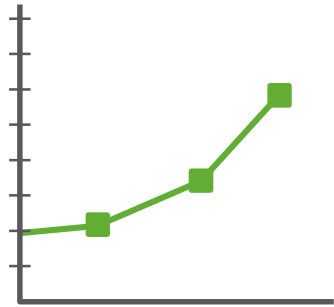
4. What is the biggest number recorded?
Which year was it recorded?



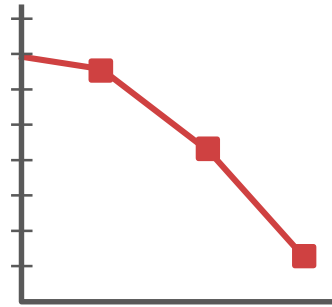
**data from IUCN African Rhino Specialist Group*

Understanding Line Graphs

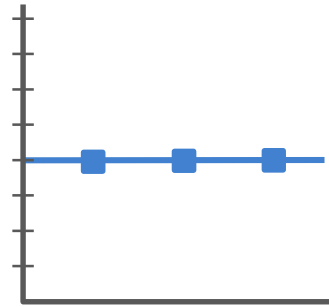
After reading the graph, we have to identify and describe the **trends**.



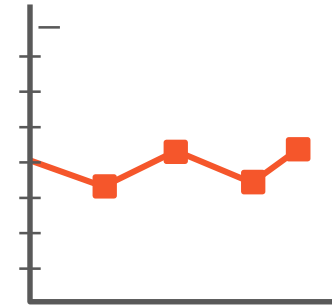
increase
(rise)



decrease
(fall)



stable
(stay the same)



fluctuating
(go up and down)

Trends are patterns that help us understand how data changes.

Examples:

- In the graph, there is a **stable** number of apples harvested for 3 weeks.
- The graph shows a **decrease** in the number of students who want to join the sports club from 2020 to 2021.
- The temperature in the first week of April is **fluctuating**.



Understanding Line Graphs

After describing the **trend**, you will need to do research in order to **explain the trend**.

Example:

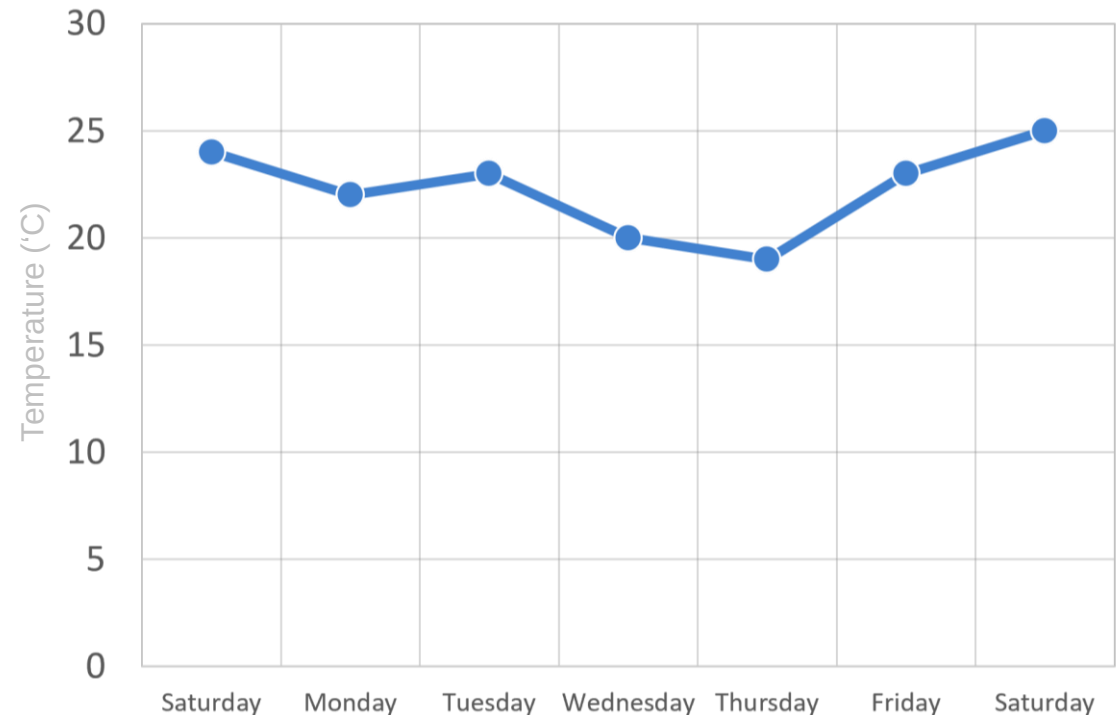
The temperature in the first week of April is **fluctuating**. April is the transition from winter to spring in many parts of the world. During this period, temperatures can change as the climate adjusts to changing sunlight and weather patterns.



When explaining trends, make sure your explanations are factual.



Temperature in the First Week of April



Understanding Line Graphs

Choose the correct letter of the trend.

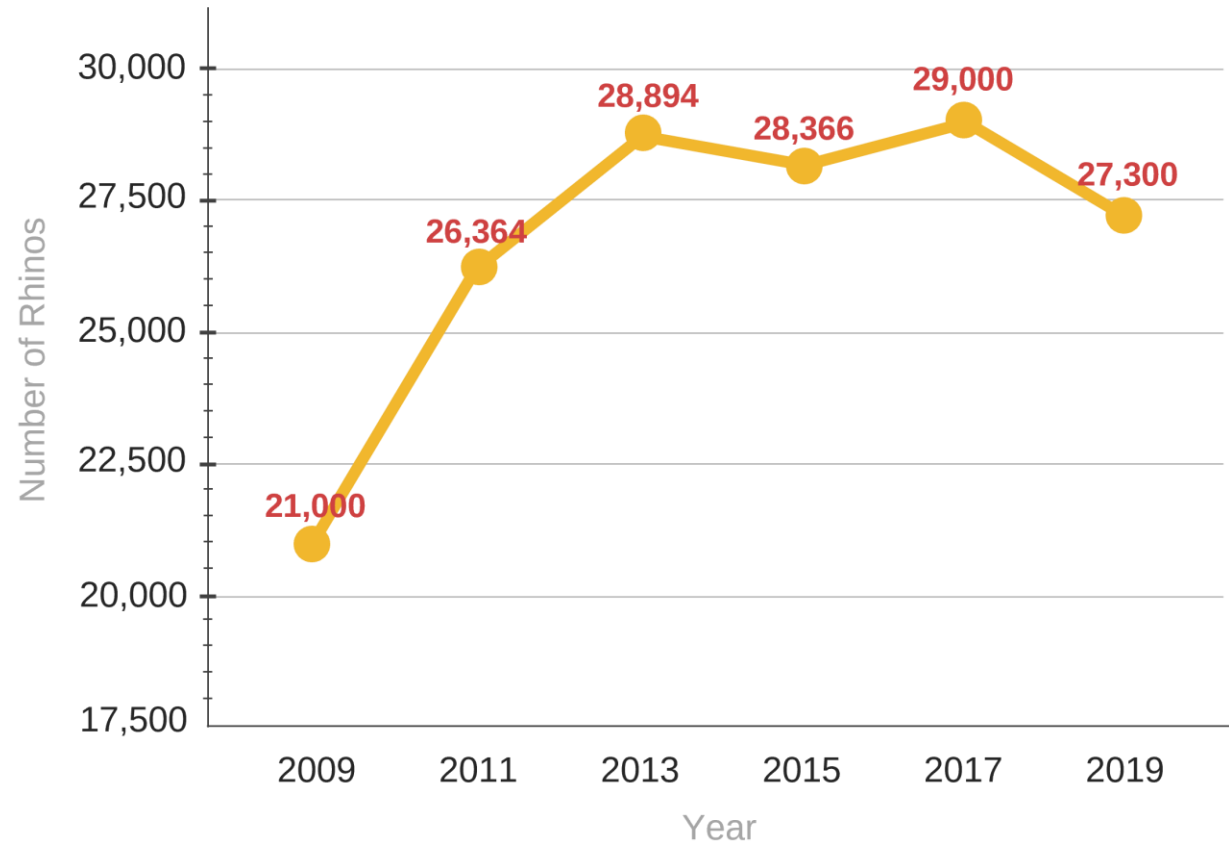
- A** increasing
- B** decreasing
- C** stable
- D** fluctuating

- _____ 2009 to 2013
- _____ 2013 to 2019
- _____ 2017 to 2019



Why do you think the rhino population was fluctuating?

Global Rhino Population



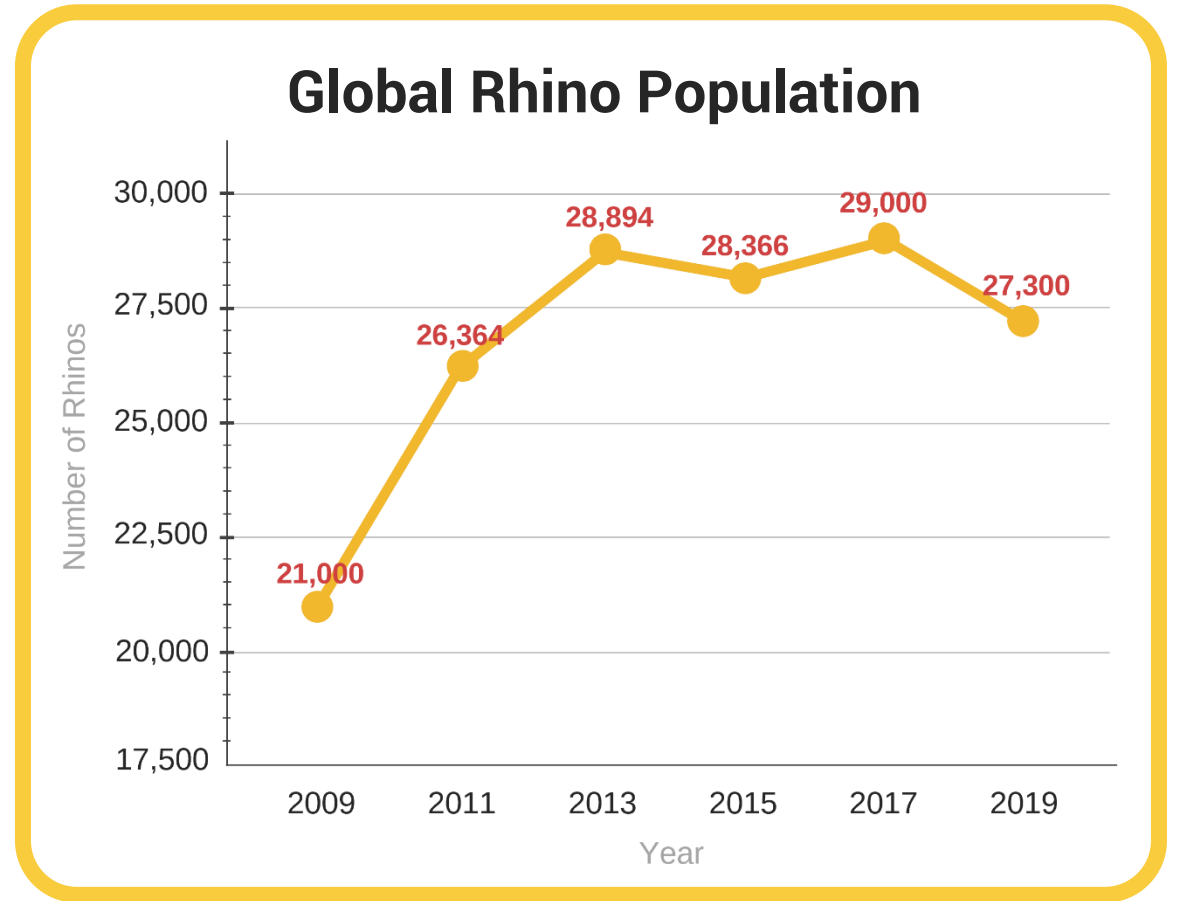
**data from IUCN African Rhino Specialist Group*

WRITING TASK



Complete the description of the graph.

The graph presents the _____ for _____ years. In the year 2009, there were _____. This number _____ to _____ in 2013. Between 2013 and 2017, the population of rhinos experienced _____ when it decreased to _____ in 2015 and then _____ to 29000 in 2017. Unfortunately, the population has decreased to _____ in 2019.



**data from IUCN African Rhino Specialist Group*



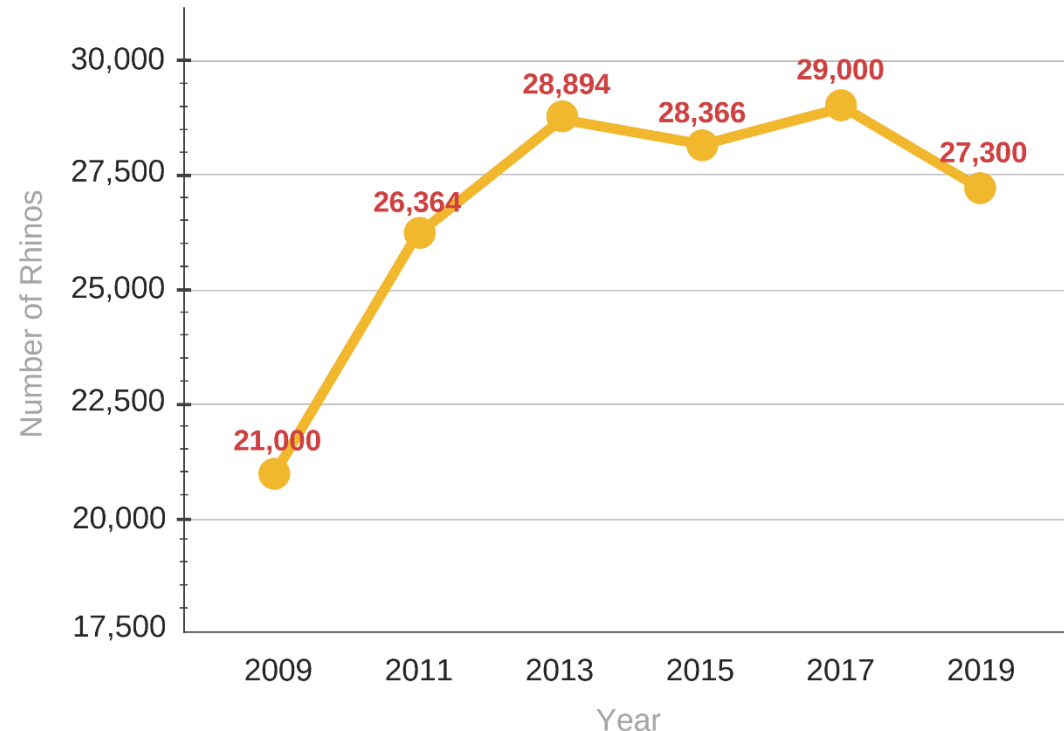
Complete the paragraph.

The _____ of the rhino population reflects the challenges and successes of rhino conservation. The increase in rhino population from 2009 to 2013 was likely because of _____

However, the decline to 27,300 in 2019 must be because of _____

People should _____ to ensure the safety and survival of these amazing creatures.

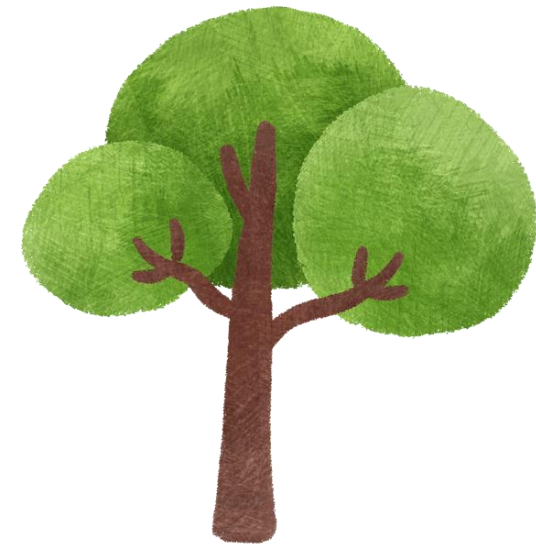
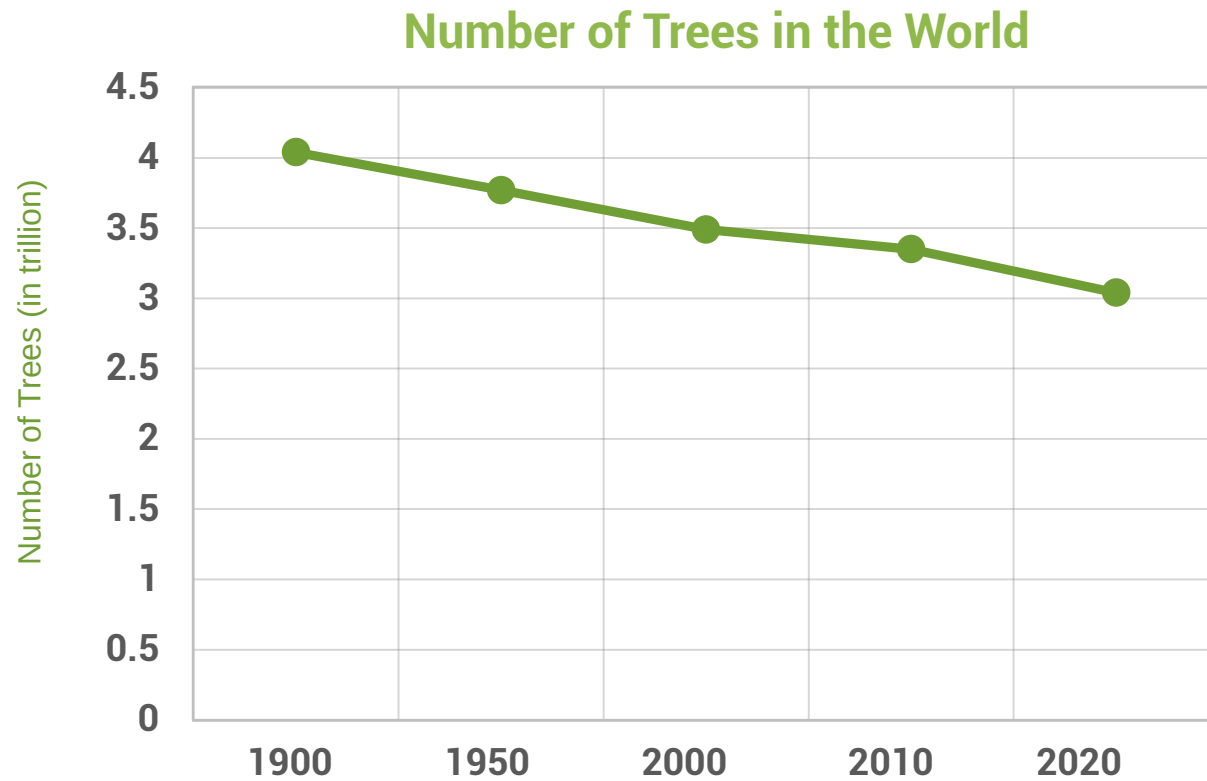
Global Rhino Population



**data from IUCN African Rhino Specialist Group*



Line graphs are useful to display and analyze how things change over time. It is important to learn how to read a line graph and explain trends using factual reasons. In the student's book on page 95, describe the line graph and explain the trends.





WHAT'S NEXT...

In the next lesson, we're going to learn
some important grammar points.

See you next time!