

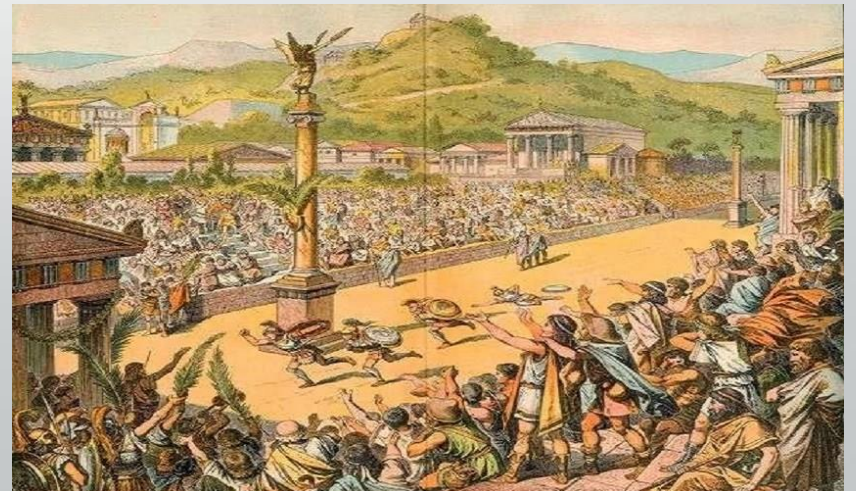


Olympic Games

PE - STEAM

History of the Olympic games

Ancient Olympics: The Olympic Games originated in **776 BCE** in Olympia, Greece, and were part of a religious festival honoring Zeus. They were held every four years and featured events like running, long jump, and wrestling. The games continued until **393 CE** when they were banned by the Roman Emperor Theodosius I.



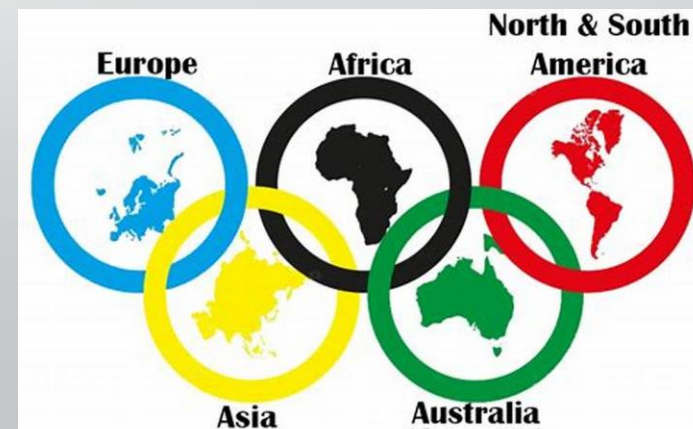
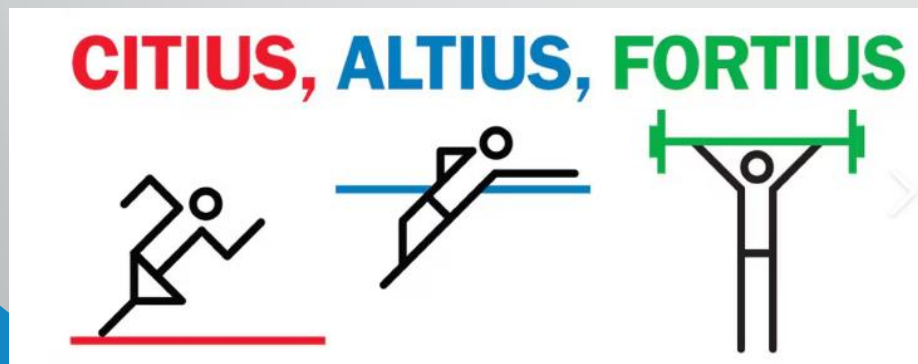
History of the Olympic games

Modern Olympics: The modern Olympic Games were revived in **1896** by French educator **Pierre de Coubertin**. The first modern Olympics were held in **Athens, Greece** and featured 241 athletes from 14 countries competing in 43 events.



The Olympic Motto and Symbol

- The Olympic motto is "**Citius, Altius, Fortius**" (Latin for "Faster, Higher, Stronger"), symbolizing the athletes' drive to improve their performance.
- Faster, Higher, Stronger – Together (2021)
- The Olympic symbol consists of **five interlocking rings** (blue, yellow, black, green, and red) on a white background. These rings represent the union of the five inhabited continents (Africa, the Americas, Asia, Europe, and Oceania) and the meeting of athletes from around the world.



Summer and Winter Olympic Games

- The Olympic Games are divided into two events: the **Summer Olympics** and the **Winter Olympics**, each held every four years, two years apart from one another.
- The **Summer Olympics** feature traditional sports like athletics, swimming, and gymnastics. The **Winter Olympics**, first held in **1924**, focus on sports like skiing, ice hockey, and figure skating.



Host Cities

- The location of the Olympics changes every four years.
- **Tokyo, Japan** hosted the 2020 Summer Olympics (held in 2021 due to COVID-19).
- **Beijing, China** hosted the 2022 Winter Olympics.
- **Paris, France** hosted 2024 Summer Olympics
- 2026 Winter Olympics will be held in **Milan and Cortina d'Ampezzo, Italy**.

Number of Events and Sports

- The Summer Olympics feature a wide range of sports, currently including **33 different sports** and more than **300 events**. Sports range from **traditional events** like **athletics** (track and field), **swimming**, and **gymnastics** to newer additions like **skateboarding** and **surfing**.
- The Winter Olympics focus on **15 different sports**, including **skiing**, **snowboarding**, and **ice hockey**.

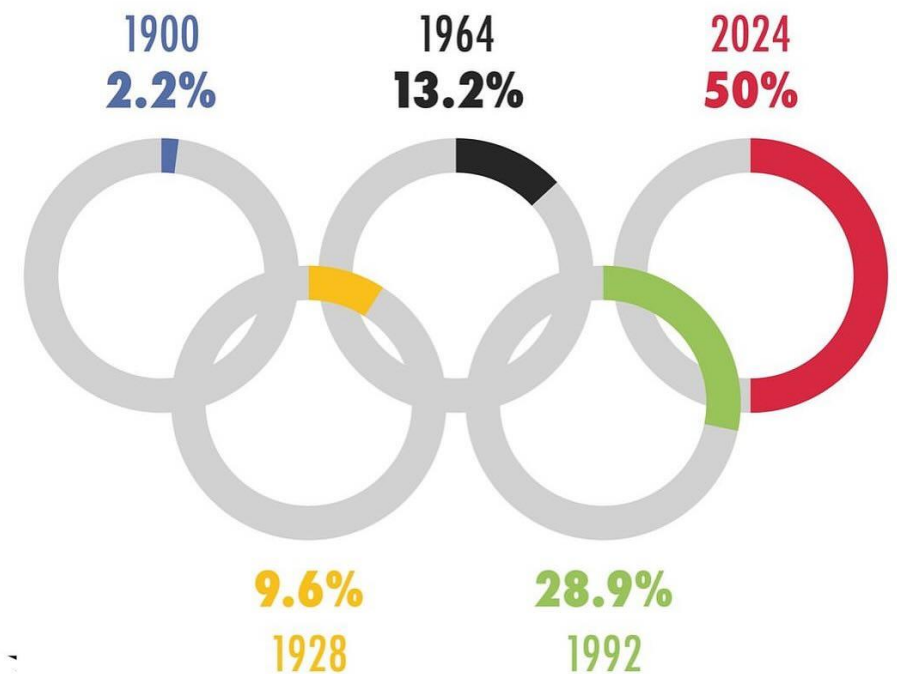


Participation

- At the first modern Olympics in **1896**, only **241 athletes** (all male) from **14 countries** participated. In contrast, the **2020 Tokyo Olympics** saw over **11,000 athletes** from **206 countries**, including both male and female athletes, compete.
- Women were first allowed to participate in the Olympics in **1900** (Paris Games), though they only made up 2% of the athletes. Today, the participation of women is almost equal to that of men.

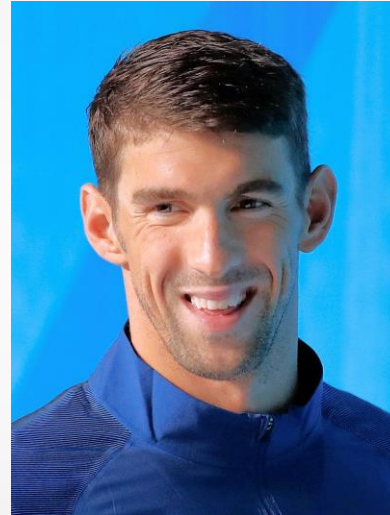
Equality at the Olympics

Share of female athletes



Olympic Records and Legends

- **Michael Phelps (USA):** The most decorated Olympian of all time with **28 medals** (23 golds) in swimming.
- **Usain Bolt (Jamaica):** Widely regarded as the fastest man in history, holding the world record for the 100m (9.58 seconds) and 200m sprints.
- **Simone Biles (USA):** A gymnastics superstar with **11 Olympic medals**, known for her groundbreaking skills and high difficulty routines.



The Olympic Charter and Values

- The Olympic Charter governs the Olympic Movement and lays down the rules for organizing the games. It emphasizes **fair play, sportsmanship**, and the **unifying power of sports** to foster peace and international cooperation.
- **Olympic Values:** The core values of the Olympics are **Excellence, Friendship, and Respect**, guiding both the athletes and the organization of the Games.

Paralympic Games

- The **Paralympic Games** were first held in **1960** in Rome, Italy, and are dedicated to athletes with physical disabilities. Today, the Paralympics are held just after the Summer and Winter Olympics in the same host city.
- The **Paralympic Movement** promotes inclusion and provides opportunities for athletes with disabilities to showcase their abilities and compete at the highest level.



Olympic Games and Mathematics

Statistics and Probability

- **Medal Distribution:** You can analyze the number of medals won by different countries over time. This involves **statistical analysis** (mean, median, mode), percentages, and ratios.
- **Probability:** You can calculate the probability of a country or athlete winning based on past performances. For example, given certain data, what is the likelihood of a country winning a gold medal in a specific sport?



Olympic Games and Mathematics

Geometry and Physics in Sports

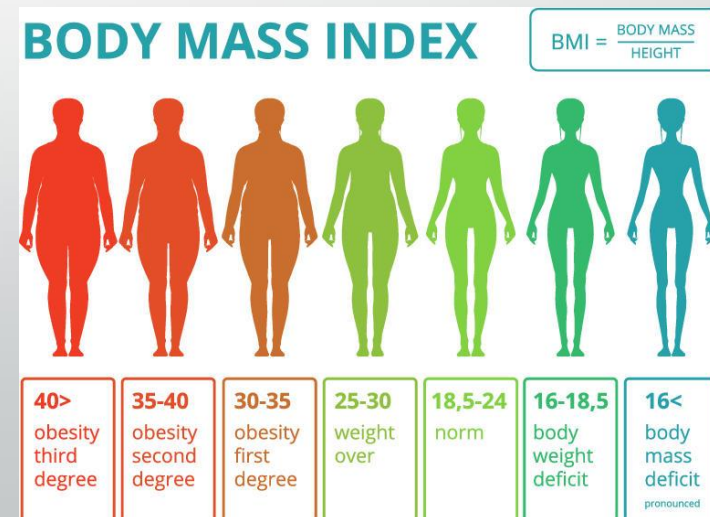
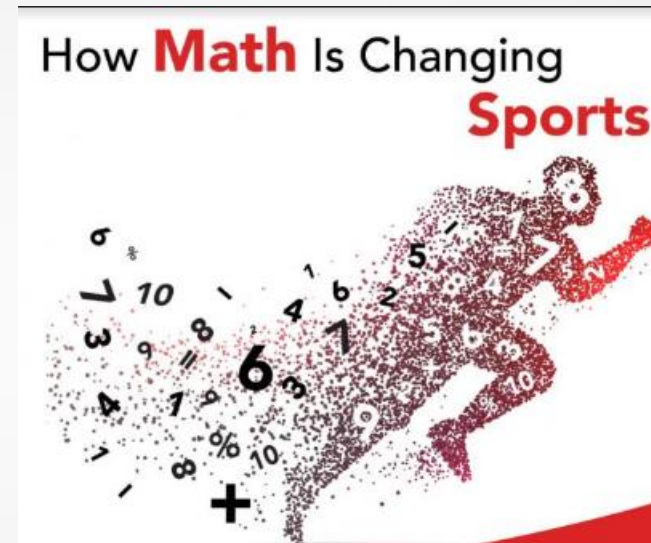
- **Trajectory in Athletics:** In sports like javelin throw or long jump, athletes have to consider angles and distances. The **optimal angle** for a long jump or javelin throw can be found using geometric principles (parabolas, projectile motion).
- **Swimming Pool Dimensions:** The Olympic swimming pool follows exact measurements. There is **geometry** behind this (rectangles, volumes).



Olympic Games and Mathematics

Optimization and Training

- **Timing and Speed:** Athletes need to optimize their training to achieve the fastest times, which involves a lot of mathematical concepts like rates (distance/time), average speed, and using calculus to determine optimal training schedules.
- **Body Mass Index (BMI):** BMI, a simple ratio of weight to height, can also be discussed as a factor in athlete performance.



Olympic Games and Mathematics

Mathematics of Scheduling and Logistics

- Organizing the Olympic Games requires complex mathematical modeling, from scheduling events to managing logistics. Topics like **optimization**, **network theory**, and **linear programming** play a huge role in this.

Macedonia on Olympic Games

First Participation

- **As part of Yugoslavia:** Before gaining independence in 1991, athletes from North Macedonia competed as part of the **Yugoslavian** team. Athletes from the region won medals while representing Yugoslavia, but these were credited to the overall Yugoslav team.
- **As an independent country:** North Macedonia made its **Olympic debut** as an independent nation at the **1996 Summer Olympics in Atlanta, USA.**





Macedonia on Olympic Games

Summer Olympics Participation

- **Number of Appearances:** North Macedonia has participated in **every Summer Olympic Games** since 1996.
- **Athletes:** The country has generally sent small delegations to the Summer Olympics. The number of athletes varies, with delegations ranging from a handful to about 10 athletes per edition.
- **Sports:** North Macedonia competes in a variety of sports, including **athletics, wrestling, judo, swimming, and shooting.**

Macedonia on Olympic Games



Winter Olympics Participation

- North Macedonia has also participated in the **Winter Olympic Games** since **1998**, sending athletes to compete in **skiing** and other winter sports.
- **Number of Appearances:** North Macedonia has competed in every Winter Olympics since **Nagano 1998**. However, their presence in the Winter Games is more limited compared to the Summer Olympics.

Macedonia on Olympic Games



Medals

- **Summer Olympics:** North Macedonia has won **one Olympic medal** to date:
 - **Bronze medal:**
 - **Wrestling – 2000 Sydney Olympics:** The country's only Olympic medal was won by wrestler **Mogamed Ibragimov** in the **men's freestyle wrestling** (97 kg category).
- **Winter Olympics:** North Macedonia has not won any medals in the Winter Olympic Games so far.

Macedonia on Olympic Games



Notable Athletes

- **Mogamed Ibragimov:** As mentioned, Ibragimov is North Macedonia's only Olympic medalist. He won **bronze** in the **men's freestyle wrestling** at the **2000 Sydney Games**.
- **Dejan Georgievski:** **silver** in taekwondo, 2020 (2021) Tokyo.
- Many Macedonian players as a part of Yugoslavia team: **2 gold, 5 silver, 5 bronze**

Macedonia on Olympic Games



Challenges and Future Aspirations

- North Macedonia faces challenges such as limited resources, which restrict the development of elite athletes. However, the country is working on improving its sports infrastructure and athlete development to be more competitive on the world stage.



THANK YOU!