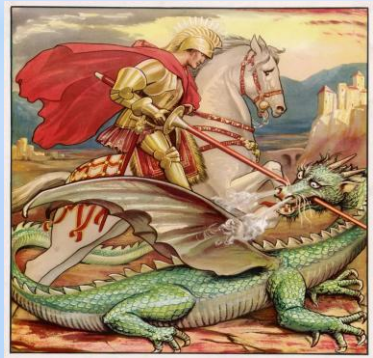
WORD Of the WEEK

Can you guess the word of the week?

P_

Meaning: the numerical value of the ratio of the circumference of a circle to its diameter



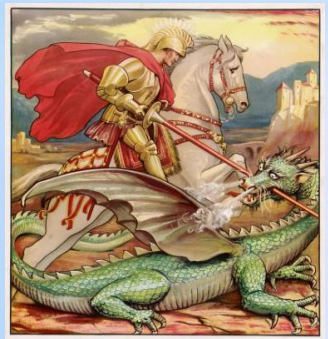
Summer Term

WORD Of the WEEK

Can you guess the word of the week?

Pi

Meaning: the numerical value of the ratio of the circumference of a circle to its diameter



Summer Term

Greek Root Word:

The word "Pi" derived from the Phoenician letter "pe" which means "mouth". The Greek letter π was originally called "pei" and was popularised by mathematician Leonhard Euler in 1737.

Task: Can you think of any other words that begin the prefix 'Pi'?

Task: Did you get any of these?

Picture
Pilot
Piano
Piece
Pigment
Pipe
Pivot
Pixel
Pirate
Pivotal
Pious
Pinnate
Pictorial

TUTOR LITERACY: WORD Of the WEEK Activities

- What do you know about Pi?
- Why is Pi important?
- In which careers, might you use calculations involving Pi?

TUTOR LITERACY: WORD Of the WEEK Activities

- **Why is Pi important?**

•1. Pi links the circumference and area of every circle

•No matter the size of the circle—tiny or huge—the ratio
circumference ÷ diameter = π
This constant relationship lets us:
•work out **circumference** ($2\pi r$)
•work out **area** (πr^2)
•Without π, you couldn't measure or calculate anything accurately involving circles.

•2. Pi appears in hundreds of real-world jobs

•People use π when they deal with:
•**wheels** (mechanics, automotive designers)
•**pipes and cylinders** (plumbers, engineers)
•**roundabouts** (civil engineers, architects)
•**cables and coils** (electricians, electrical engineers)
•**circular machines** (manufacturing, CNC machining)
•If a shape is round, curved, or rotates, π is involved.

•3. Pi is essential for science and the physical world

•π appears naturally in formulas for:
•**waves**, e.g. light waves, sound waves
•**planetary orbits**
•**electricity and magnetism**
•**probability and statistics**
•**circular motion** (motors, gears, turbines)
•Scientists can't model these accurately without π.

TUTOR LITERACY: WORD Of the WEEK Activities

- **Why is Pi important?**

4. Pi helps with technology and computers

•π is used in:
•computer graphics (drawing circles, arcs, curves)
•game design (collision detection for circular objects)
•simulations and modelling (physics engines)
•signal processing (music, video, communication systems)

•5. Pi is a fundamental part of mathematics

•π isn't just about circles. It appears in:
•algebra
•trigonometry
•calculus
•statistics
•complex numbers
•This tells us π is a *deep mathematical constant*, not just a number we memorise.

•6. Pi helps explain and model rotation and cycles

•Anything that rotates or moves in a repeating cycle involves π:
•the hands of a clock
•Ferris wheels
•planets orbiting
•engines turning
•sound vibrations
•This makes π essential for understanding motion.

TUTOR LITERACY: WORD Of the WEEK Activities

- **In which careers, might you use calculations involving Pi?**

•1. Engineering careers

•• **Civil engineers** – Designing roundabouts, pipes, tunnels, columns, water tanks.
• **Mechanical engineers** – Working with gears, wheels, pistons, bearings.
• **Electrical engineers** – Calculating cable coils, circular components, cross-sectional areas of wires.
• **Aerospace engineers** – Jet engine turbines, circular cross-sections of fuselages.

•2. Construction & trade jobs

•• **Plumbers** – Pipe diameters, pipe cross-sectional area (affects water flow).
• **Carpenters/joiners** – Cutting circular holes, designing curved structures.
• **Bricklayers** – Circular patios, curved walls.
• **Roofers** – Circular roofs, domes.

•3. Design, architecture & planning

•• **Architects** – Designing circular windows, columns, rotundas, towers.
• **Landscape designers** – Circular flowerbeds, fountains, patios.
• **Urban planners** – Roundabouts, circular plazas.

•4. Medical & science fields

•• **Radiologists** – Scan areas measured in circular regions.
• **Lab technicians** – Petri dishes, circular samples.
• **Biologists** – Measuring circular growths, colonies, cells.

TUTOR LITERACY: WORD Of the WEEK Activities

- **In which careers, might you use calculations involving Pi?**

•5. Manufacturing & machining

•• **CNC machinists** – Cutting circular parts precisely.
• **Metalworkers** – Pipes, discs, flanges.
• **Quality control inspectors** – Verifying diameter/tolerance of circular products.

•6. Transport & automotive

•• **Vehicle mechanics** – Tyre size, brake discs, cylinders.
• **Railway engineers** – Wheels, tunnels.
• **Maritime engineers** – Pipes, portholes, circular tank openings.

•7. Tech & digital fields

•• **Game designers** – Collision detection using circular hitboxes.
• **Graphic designers** – Logos, circular layouts, scaling circular shapes.

•8. Sports & leisure industries

•• **Sports coaches/groundskeepers** – Running tracks, circular pitches (e.g., archery targets).
• **Fitness equipment designers** – Wheels, pulleys, circular motion devices.

Pi Day Challenge!

How many words can you write with the word Pi in 1 minute?

Come to M6 Friday, 13th March break 1 or 2 to have a go!

The winners will receive merits, a certificate and a prize.