Azorcan Information for PISA

Websites

Italy National Tourist Board	https://www.italiantourism.com
Tuscany Region	https://www.discovertuscany.com/tourist-info/
Tuscany Region	https://www.visittuscany.com/en/index.html
Pisa, Italy	https://www.aboutpisa.info

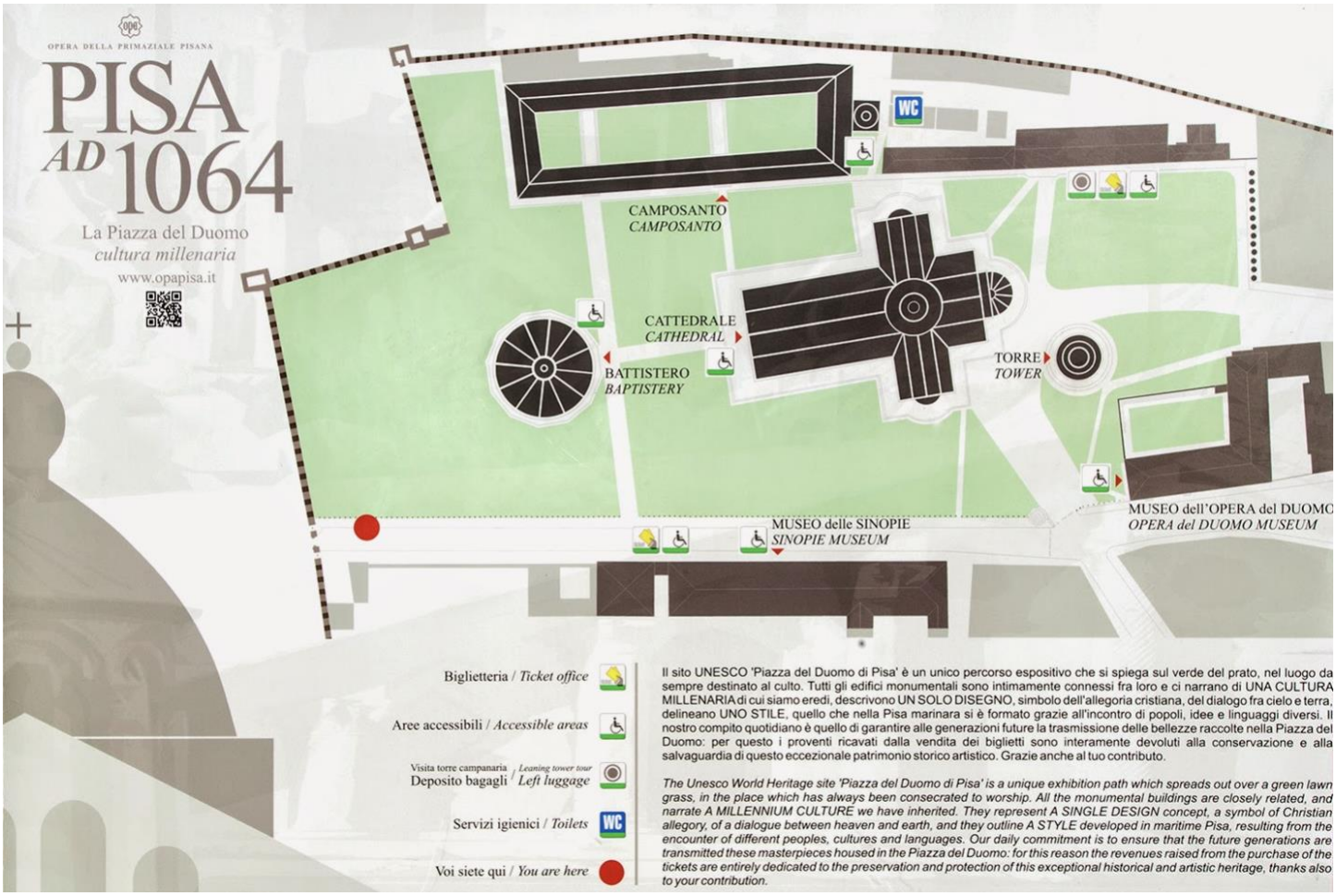
General Information

Italian Phrases https://storylearning.com/learn/italian/italian-tips/basic-italian-phrases
Tipping in Restaurants 10-12%
Pisa population - approx. 90,500
Voltage 220Voltz/50Hz
Emergency Number – 112

Must Things to See

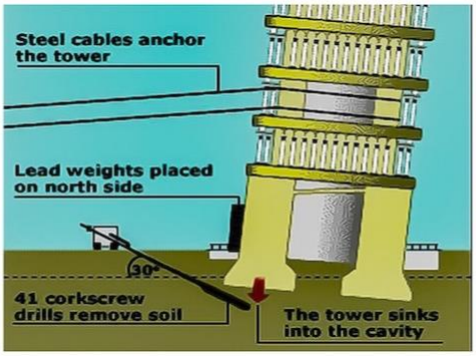
Square of Miracles	https://www.opapisa.it/en/
Square of Miracles YouTube video	https://youtu.be/7HeO3KSCMjo
Cathedral	https://www.opapisa.it/en/square-of-miracles/cathedral/
Leaning Tower of Pisa	https://leaningtowerpisa.com
Leaning Tower of Pisa	https://www.opapisa.it/en/square-of-miracles/tower/
Baptistery	https://www.opapisa.it/en/square-of-miracles/baptistery/
Camposanto	https://www.opapisa.it/en/square-of-miracles/camposanto/
Opera Del Duomo Museum	https://www.opapisa.it/en/square-of-miracles/opera-del-duomo-museum/
Sinope Museum	https://www.opapisa.it/en/square-of-miracles/sinopie-museum/

Galileo dropped two spheres of different masses from the Leaning Tower of Pisa to demonstrate that their time of descent was independent of their mass. In the movie Superman III, evil Superman straightens the tower. https://youtu.be/Vvz6MTymE-U



About the Square Of Miracles

The Piazza del Duomo ("Cathedral Square"), known with this name in the past, is called also Piazza dei Miracoli ("Square of Miracles"). This name was created by the poet Gabriele D'Annunzio, who, observing it from above on a plane, called it "Prato dei Miracoli" (Meadow of Miracles), because of the beauty marble monuments which stand out on the surrounding green garden.
The Square lies at a northern area of the city, that once was a graveyard and the seat of an Early Christian cathedral. Differently from other cities, Pisa's Cathedral Square is not inside the walls nor in the old town.
The Duomo was the first monument to be built, followed by the construction of the Baptistery and of the Leaning Tower (the famous Pisa's Tower). Two sides of the square (which represent the northern and western parts) are enclosed in walls that date back to 1154.



Stabalizing the Leaning Tower

From https://leaningtowerpisa.com/facts/how-pisa-leaning-tower-was-stabilized

The Leaning Tower of Pisa was stabilized with a massive engineering operation that took place in the 90s, in the attempt to stop the monument from falling. In fact, by the end of the 80s, the Tower was slowly heading toward its catastrophic collapse.
The Monument was closed to the public for the entire duration of the works (over a decade: 1990 - 2001).
In the year 1350, the lean was reported to be 1.4° and it grew over time until it reached an alarming threshold in 1993, passing the 5° marker. The Tower is leaning because the soil underneath the foundation is not strong enough to carry its weight.
The monument began to lean in 1178 when the construction works were barely started. During the course of 800 years, the lean constantly increased, so much to become a cause of concern by the end of the previous century.
The solution to this problem was then to reinforce the soil under the foundation and to make room for the Tower to compress some of the soil and straighten back up towards the North (the Tower leans to South).
They did this in the frame of a project launched in 1990. The project total cost was over 30 million EUR and it lasted 10 years!
This was the not the first attempt to fix the inclination of the Tower, but it was the first successful one.
There were two previous attempts (in 1838 and 1934) which resulted in increasing the inclination of the Tower.
The project went through the following phases:

1. placing **counterweights** on the base of the Tower, on the North side, to move its barycenter lower and back to the North, slowing down its tendency to lean towards the South;

2. **harnessing** the monument with gigantic steel cables (the kind of cables you find on a suspended bridge) to prevent it from collapsing during the works and to "pull it back" once the soil was prepared for this operation;

3. **digging wells** under the foundations of the Tower (60 cubic meters of clay were removed);

4. **draining water** from the wells;

5. **reinforcing the foundations** with concrete (15-meter concrete pillars were inserted into the ground);

6. **pulling the steel cables** to begin the straightening motion.

These engineering solutions proved to be successful as the stabilization works **recovered over 50cm of lean**, bringing back the Tower around 4° inclination (like 200 years ago).
The works ended in 2001 and the Tower was proclaimed **out of danger** of falling. It was then reopened to the Public.
After that, no other stabilization work was performed. However, in the year 2013, engineers that are monitoring the Tower reported that the straightening motion hadn't stopped yet and the monument **leaned back additional 2.5cm** (from 2001 to 2013).