

Intermediate 3
Unit 3, Reading
Presented by Mohammad Rajabpur



Galileo



The Leaning Tower of Pisa

Galileo

Born on February 15, 1564, in Pisa, Galileo showed, at a very early age, an unusual talent for science. His father was a skillful musician and mathematician, but believing that music and science would never make his son rich, he resolved that Galileo should become a cloth-dealer. But Galileo had not the least taste or ability for business, and he soon persuaded his father to let him study medicine and philosophy at the University of Pisa.

February 15 = February Fifteenth

1564 = fifteen sixty-four

Pisa ⇒ s is pronounced as /z/

Pizza ⇒ zz is pronounced as /ts/

Pisa = a city in Italy especially known for its leaning tower

talent (noun) = aptitude = what you can do well in the future

talented (adjective) = having or showing talent

skill (noun) = what you can do well now

skillful (adjective) = having or showing skills

- Your skill is what you do, but your talent is what you are potentially capable of.
- You achieve a skill after you work on your talent.

resolve = decide, make a decision

cloth = fabric = material made by weaving cotton, wool, or other fibers, or a piece of such material

dealer = agent

taste = interest

persuade = convince

medicine = medical science and profession

Very soon Galileo found himself in trouble at the university. He was a sturdy young man with red hair, a cheerful face, and a very short temper. So often did he disagree with his teachers that his friends nicknamed him "the Wrangler". The professors at Pisa took a strong dislike to him because he was so determined to think for himself. As a true scientist, he tested all the theories they taught him by practical experiments. They were content to teach what the ancient Greek philosophers had taught, and it seemed to them ridiculous for a young student of seventeen to question ideas that had been taught for a thousand years.

sturdy = strong, powerful

cheerful = happy

have a short temper = get angry easily

wrangler = a person who argues too much

take a strong dislike to somebody = hate somebody

determined = wanting to do something very much and not allowing anyone or any difficulties to stop you

think for oneself = think independently

as = in the position of

Point:

- experiment = a scientific test
- experience = the lessons that we learn in our life

Point:

content (adjective) = happy, satisfied

⇒ The second syllable is stressed.

content (noun) = the information inside a book, a movie, a website, etc. = what something includes

⇒ The first syllable is stressed.

ridicule (verb) = make fun of sb

ridiculous (adjective) = funny

question (verb) = cast doubt on sth

The Famous Philosophers of Ancient Greece:

- Socrates
- Plato
- Aristotle

Galileo had learned no mathematics until, when he was nineteen, a famous teacher of mathematics, named Ricci, visited Pisa, and one day Galileo chanced to hear him lecturing to his pupils. Seeing that Galileo was a young man of great talent, Ricci gave him all the help he could, and very soon Galileo began to make a name for himself as a mathematician. On leaving Pisa, he went to live in Florence. At this time Galileo was very poor, and he was just on the point of

leaving for the East to seek his fortune when the Grand Duke of Tuscany made him a professor at the University of Pisa, where he had once been a student. His salary was a mere five shillings a week, but it was an honorable post for so young a man.

chance (verb) = to have the chance
pupil = student



Michelangelo Ricci

on leaving Pisa = after leaving Pisa
make a name for oneself = become famous
on the point of = at the threshold of = be about to do something
seek one's fortune = try to become rich
Duke = a man of very high rank in a country, or the ruler of a small independent country
grand Duke = the most important Duke
Tuscany = a region in central Italy
 ➤ Florence is the most important city in Tuscany.
a mere five shillings = only five shillings
honor = glory
honorable = respectable, prestigious
for so young a man = for such a young man

Once again Galileo found himself at odds with the professors at Pisa. Like most other scientists of their time, they believed the scientific laws taught by the famous Greek philosopher, Aristotle. According to Aristotle, a hundred-pound weight would fall a hundred times as fast as a weight of one pound. But Galileo declared that two objects of different weights but of the same size and shape would fall at the same rate.

at odds with somebody (over something) = in disagreement with somebody (about something)
1 pound = 0.453 kilogram = 453 grams
declare = announce, say something publicly
rate = the speed at which something happens or changes, or the amount or number of times it happens or changes in a particular period

$$h = -\frac{1}{2} g t^2$$

h = height

g = gravity constant = 9.8 m/s²

t = time

To prove this, he dropped a heavy ball and a light one from the top of the famous Leaning Tower of Pisa. Though his opponents tried to argue that the experiment had failed, it was clear that Galileo had proved he was right.

Though = although

opponent = a person who disagrees with something and speaks against it or tries to change it

opponent = rival

In 1609, when Galileo was staying in Venice, he heard of a telescope which a Dutch spectacle-maker named Hans Lippershey had made in his shop, and he worked all day and night to make one of his own. His telescope was a piece of an organ pipe with a convex spectacle glass fixed on one end, and on the other end a glass that was concave. It magnified three times and showed objects twenty-two miles away. Instead of showing objects upside down, as the Dutch telescope had done, it showed them the right way up. Soon Galileo was making even more powerful telescopes.

Dutch = from the Netherlands

spectacle = glasses = eye-glasses

spectacle-maker = optician

pipe = a tube for carrying water

spectacle glass = lens

magnify = make something look bigger

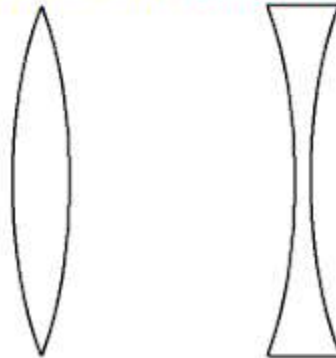
magnifier = a simple tool for making things look bigger

upside down = inverted



Hans Lippershey

convex lens concave lens



convex = curved outwards

concave = curved inwards

Galileo's telescope was an enormous success. It was the wonder of Venice. With great pride Galileo wrote and told a friend all about it. "Many noblemen and senators," he wrote. "though of advanced age, mounted to the top of the highest bell tower in Venice to spy out ships at sea making sail for the mouth of the harbor, and have seen them clearly, though without a telescope they would have been invisible for more than two hours. For it makes a thing fifty miles off as near and clear as if it were only five." When the Doge of Venice heard of Galileo's telescope, he summoned Galileo to his palace and desired to possess one. Galileo at once gave him the best he had made, and in return his salary at Padua was doubled and he was appointed a professor for life.

enormous = immense = very big

noblemen = important people

nobleman = a man from an important upper-class family

senator = a member of the senate

though of advanced age = although they were very old = despite being very old

mount = go up, climb

spy out = look at

sail (noun) = a sheet of material attached to a pole on a boat to catch the wind and make the boat move

sail (verb) = move at sea

make sail for = move at sea toward

harbor = port

for = because

a thing 50 miles off the coast = a thing that is 50 miles far from the coast

as if = as though

doge = the chief magistrate of Venice or Genoa

magistrate = the most important judge

summon = call, invite

desire = want

possess = have

in return = in exchange

appoint = give somebody a job or a position

for life = for ever

Full Text:

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his friends nicknamed him "the Wrangler". The professors at Pisa took a strong dislike to him because he was so determined to think for himself. As a true scientist he tested all the theories they taught him by practical experiments. They were content to teach what the ancient Greek philosophers had taught, and it seemed to them ridiculous for a young student of seventeen to question ideas that had been taught for a thousand years.

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Sample Summary:

Galileo was a smart man born in Pisa, Italy, on February 15, 1564. His dad wanted him to sell cloth, but Galileo loved science more. He went to the University of Pisa to learn about medicine and philosophy. He liked to think for himself, which made his teachers unhappy because he didn't always agree with them.

When he was 19, he started to love math after listening to a teacher named Ricci. Later, he became a math professor in Pisa, even though he didn't earn much money. He didn't agree with some old ideas about science that the other teachers believed in. For example, he showed that a heavy ball and a light ball fall at the same speed by dropping them from a tall tower in Pisa.

In 1609, Galileo made a special tool called a telescope. It helped him see things far away very clearly. People in Venice were amazed by it. Because of his telescope, he got a better job and more money at the University of Padua, and he could stay a professor as long as he wanted. Galileo's work helped change the way we understand the stars and the laws of nature.

Source:

<https://www.anglophone.ir/classes/0331inter3/>