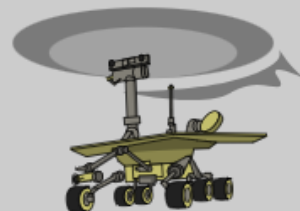




**The history
of:**

Astronomy





It all started with this
thing: the Big Bang!

Or that is what we
think now...

The first people to think about space were the Greek

Some people refuse to believe in me anymore! They think that rationalism will be their answer to how the world is created!

They have found a stone, made by disbelievers, that has the first stars and constellations, and now they believe that more than me!

They call it "astronomy", of "ἄστρον" and "νόμος", law of the stars, but it has to be the law of Zeus!
GRR GRR!!!

Zeus



Babylonians were also busy. Because of the desert, there were few clouds, so nights were very good for stargazing

I can see so many stars!
My colleagues are also looking, what can they see?



Erathostenes is smart enough to calculate the size of the earth, and he is very close to the truth...

I have heard that now in Syene, there is no shadow, and here I can measure the shadow of the tower in Alexandrië.

If I know the angle of the shadow, I will know the angle in difference between Alexandrië and Syene, and then I know the distance between those two cities.

That means I can calculate the circumference of the earth! I think it is 250 000 stadia!

That is around 39 500 km. The real circumference of the earth is 40 070 km!



During the Roman Empire science was booming business, but in the Middle Ages the church was not so happy with astronomy. Only Arrabics were doing resarch.

If I publish this manuscript, I will be punished by the church, perhaps I can flee to the Republic of the Netherlands, there I can work freely...

But I can't leave my family! I have to wait until it is safe to publish.

Copernicus



The book is published,
but the theory is not
completely proven...

I am going to
prove your
theory!

Kepler

Copernicus

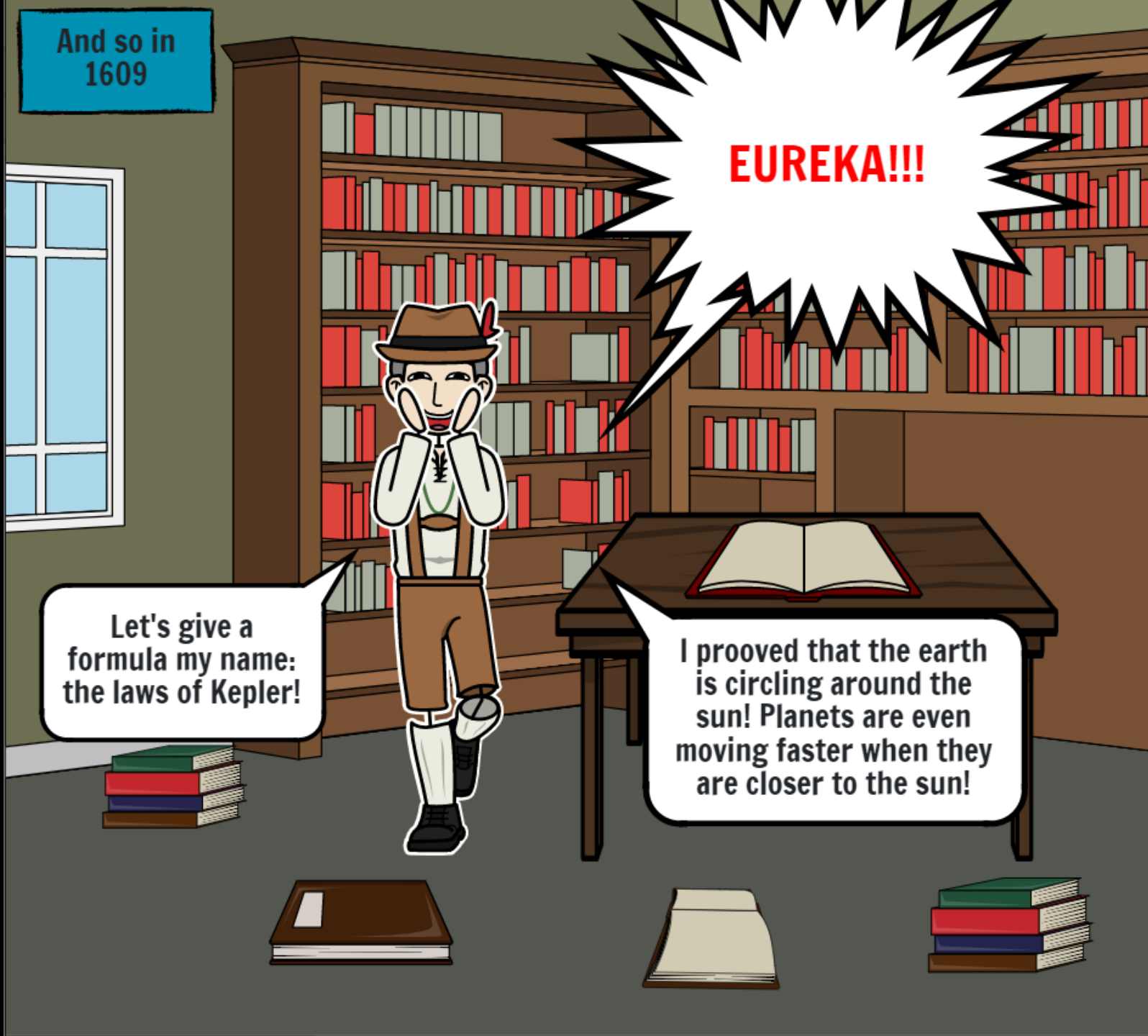


And so in
1609

EUREKA!!!

Let's give a
formula my name:
the laws of Kepler!

I proved that the earth
is circling around the
sun! Planets are even
moving faster when they
are closer to the sun!



One year before in
the Netherlands

I have made a
hugh magnifying
glass!

Hans
Lipperhey



And back
in 1609

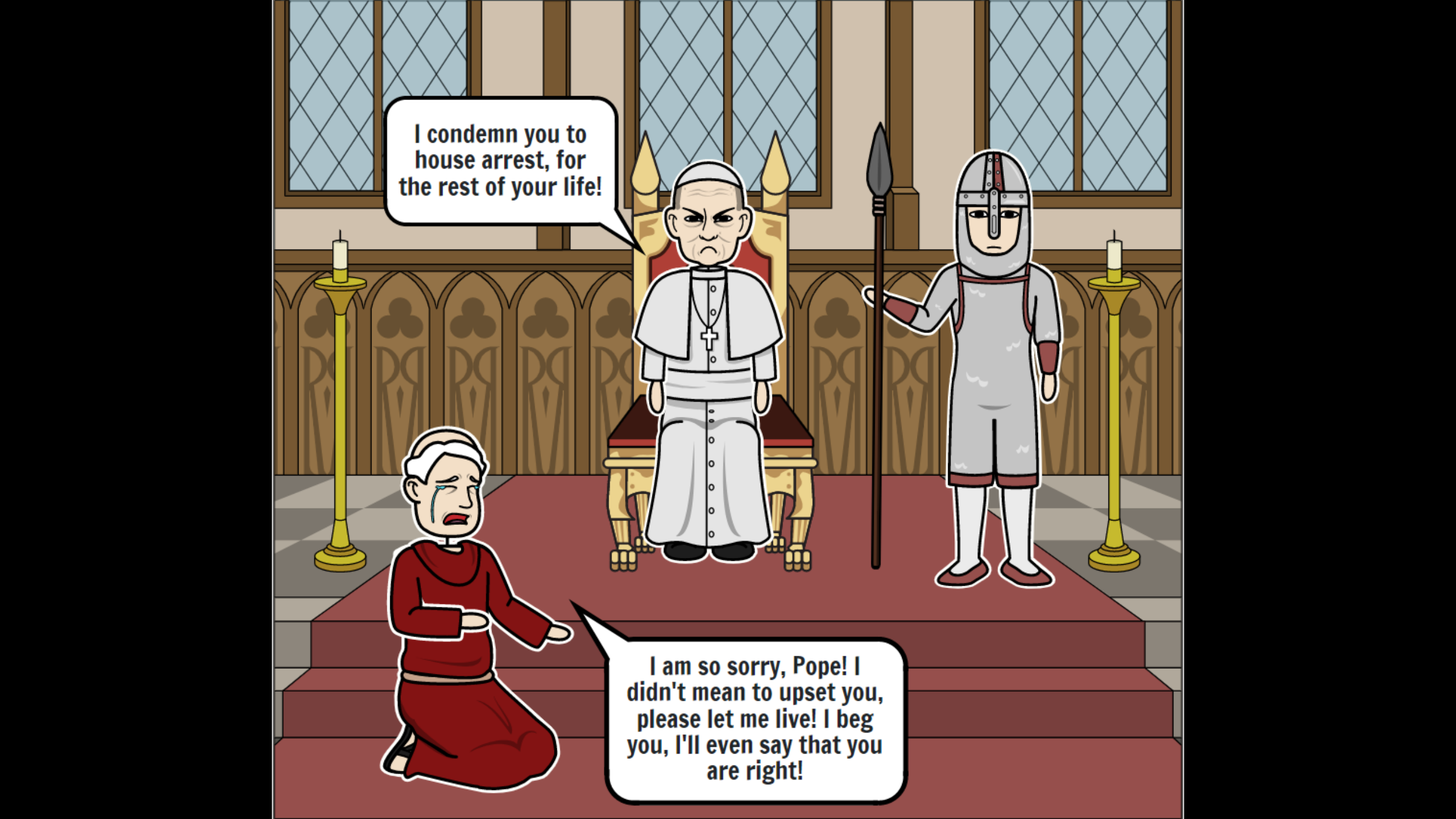
This telescope from
the Republic of the
Netherlands helps me
see so many things!

Is that a crater on the
moon?! And is the
moon itself not shining
but just reflecting?!

I can see the planets very
good, but the stars are so
far away! Does that mean
the planets are circling
around the sun, but the
stars don't?



Galileo
Galilei



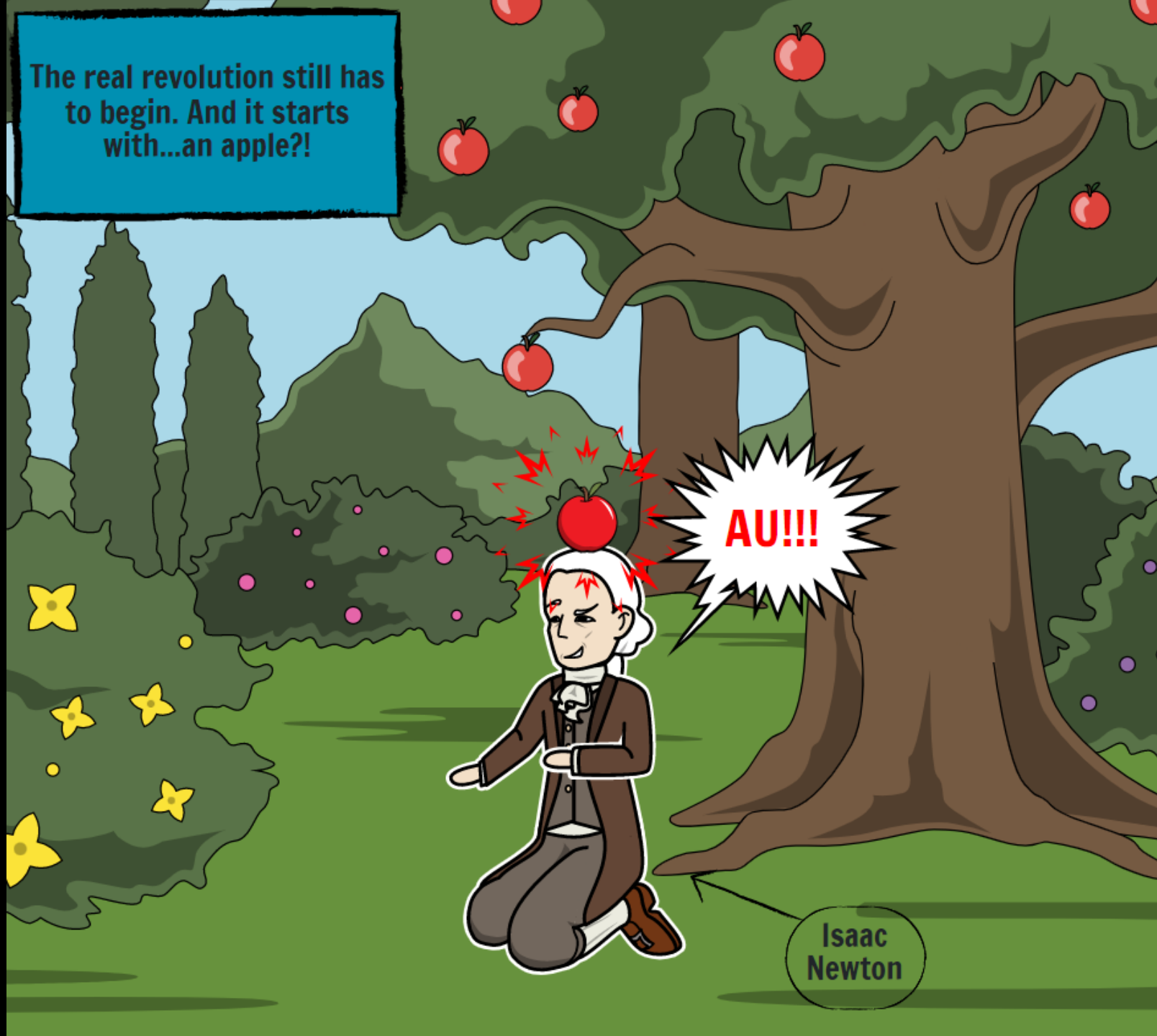
I condemn you to
house arrest, for
the rest of your life!

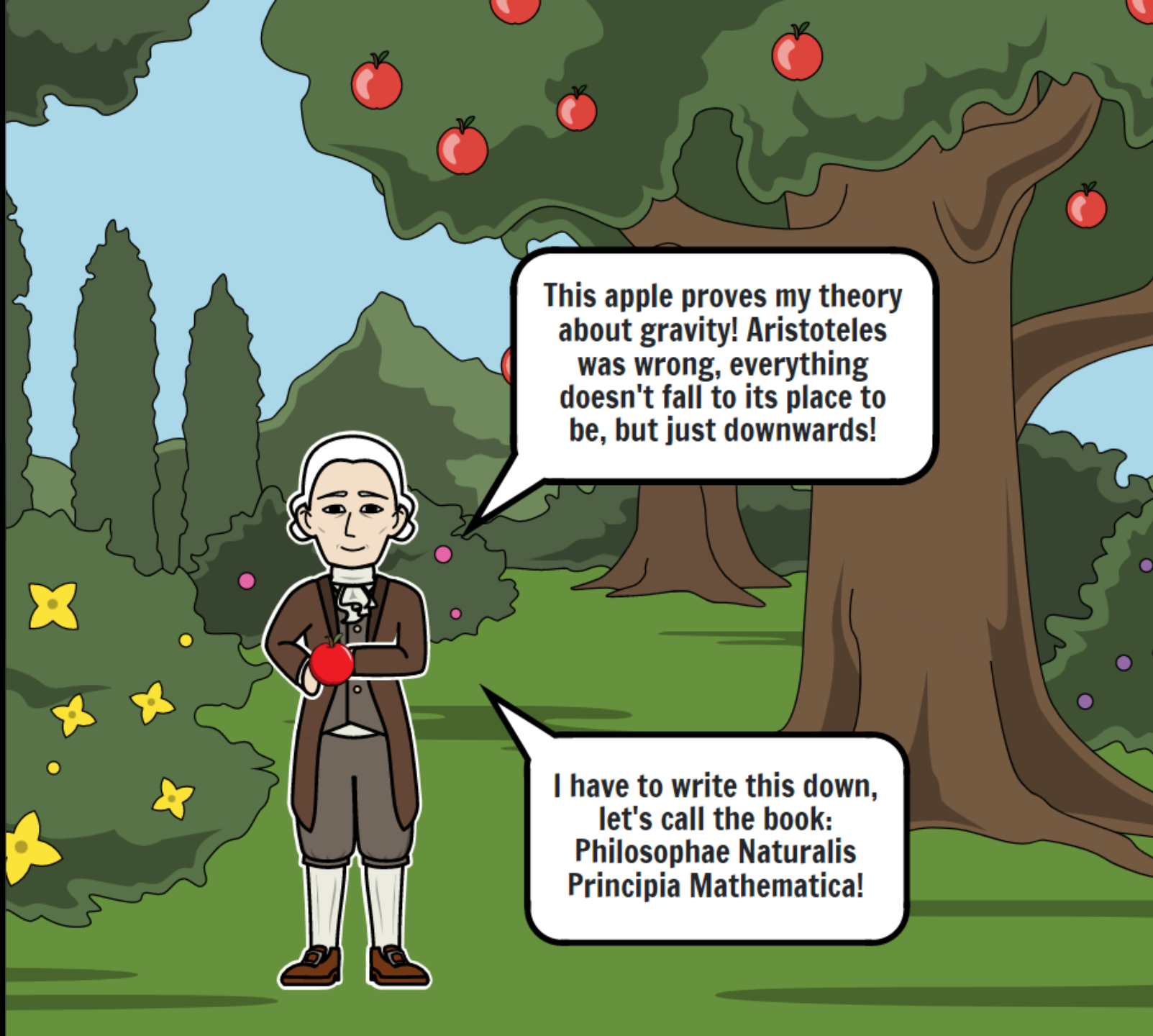
I am so sorry, Pope! I
didn't mean to upset you,
please let me live! I beg
you, I'll even say that you
are right!

The real revolution still has
to begin. And it starts
with...an apple?!

AU!!!

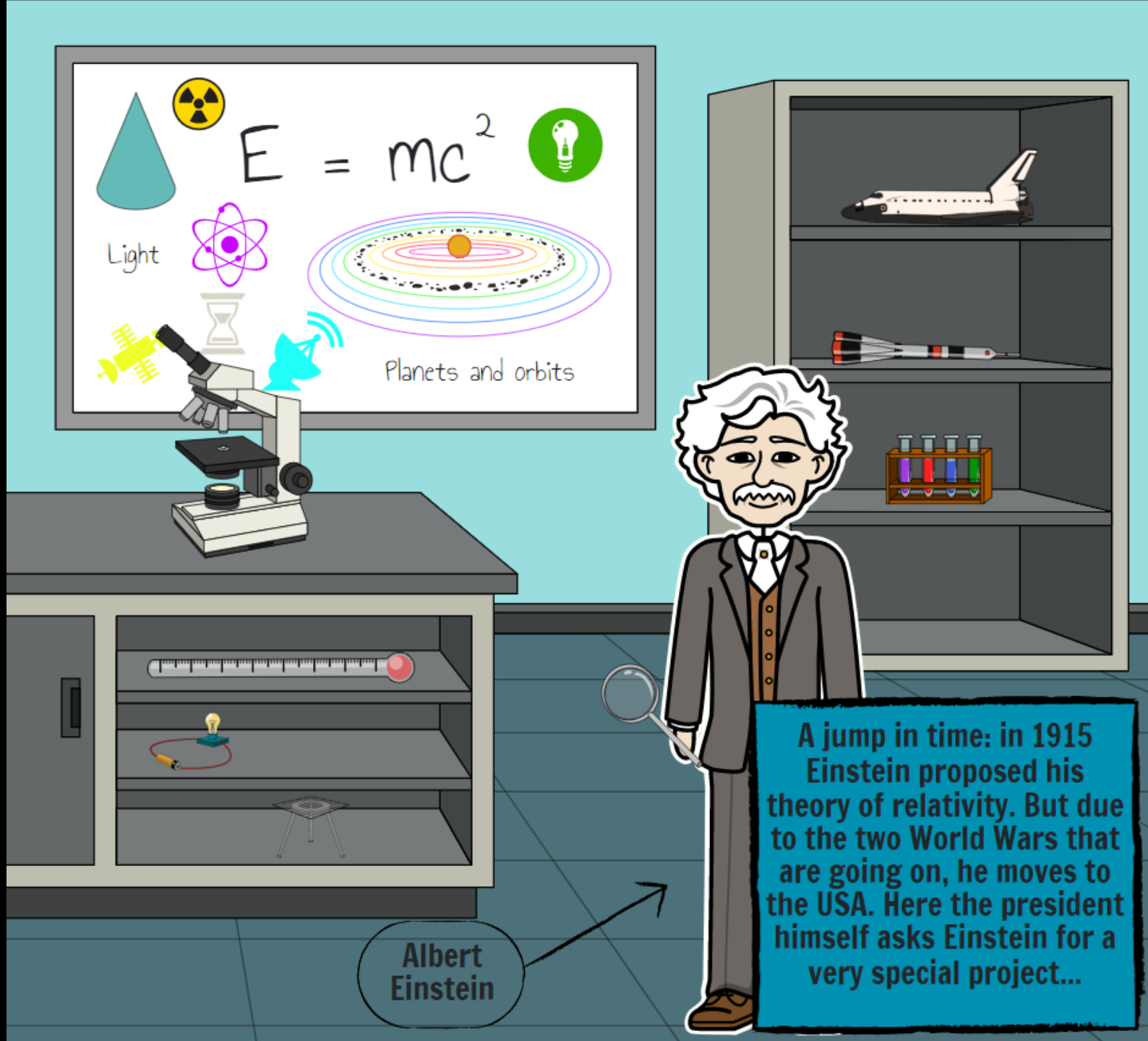
Isaac
Newton





This apple proves my theory about gravity! Aristoteles was wrong, everything doesn't fall to its place to be, but just downwards!

I have to write this down, let's call the book: Philosophae Naturalis Principia Mathematica!



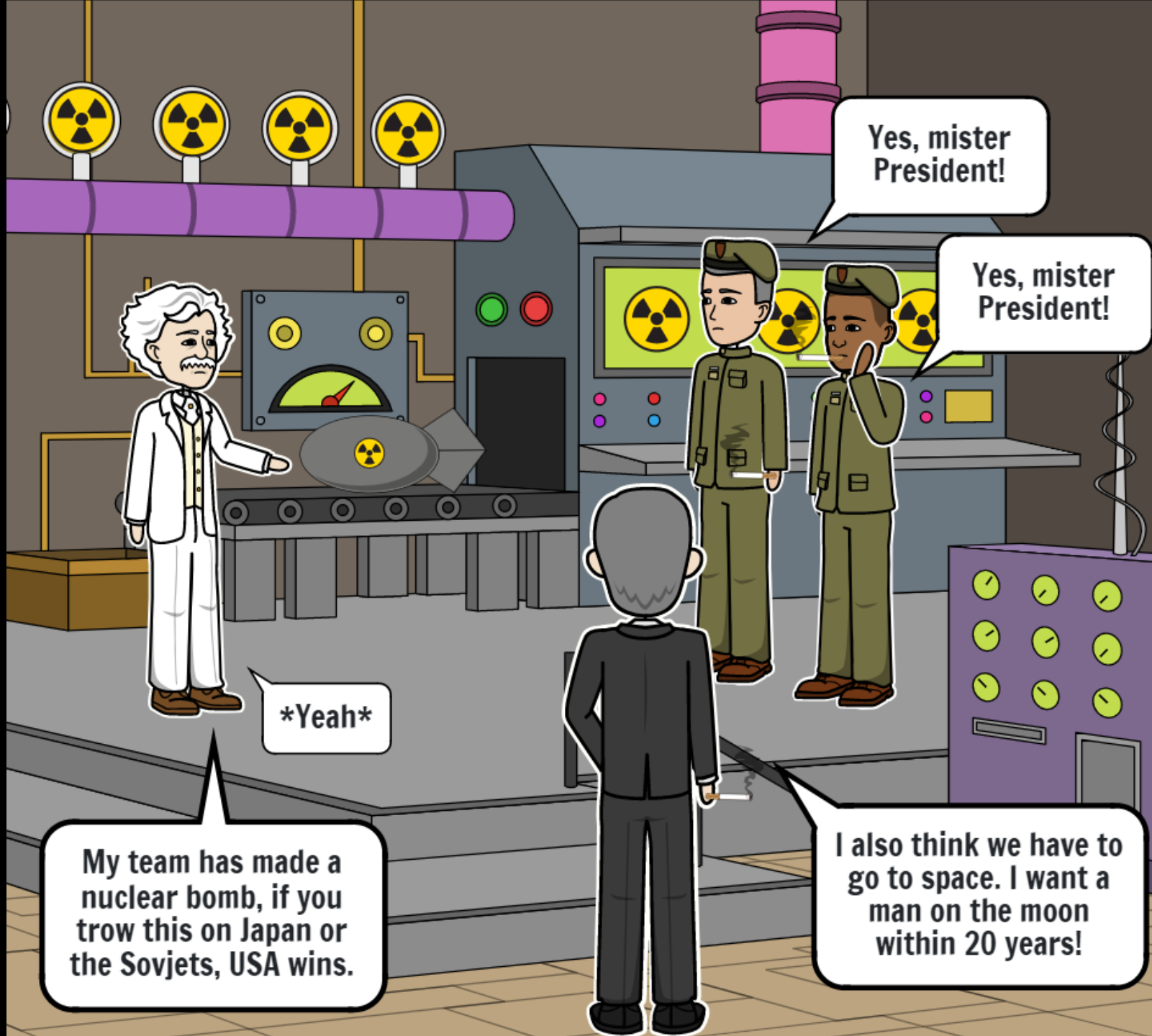
$$E = mc^2$$

Light

Planets and orbits

Albert
Einstein

A jump in time: in 1915 Einstein proposed his theory of relativity. But due to the two World Wars that are going on, he moves to the USA. Here the president himself asks Einstein for a very special project...



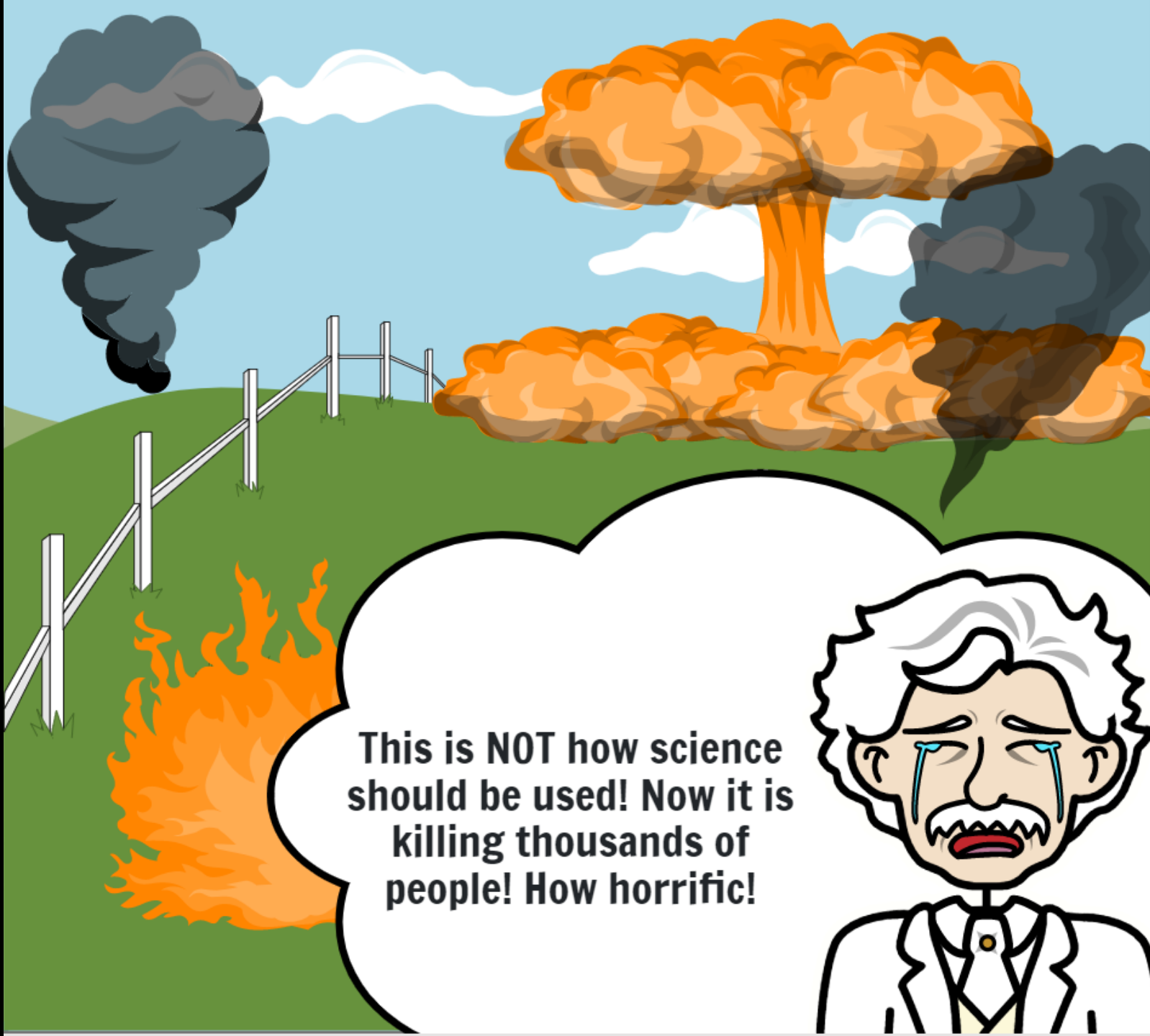
Yes, mister President!

Yes, mister President!

Yeah

My team has made a nuclear bomb, if you throw this on Japan or the Soviets, USA wins.

I also think we have to go to space. I want a man on the moon within 20 years!



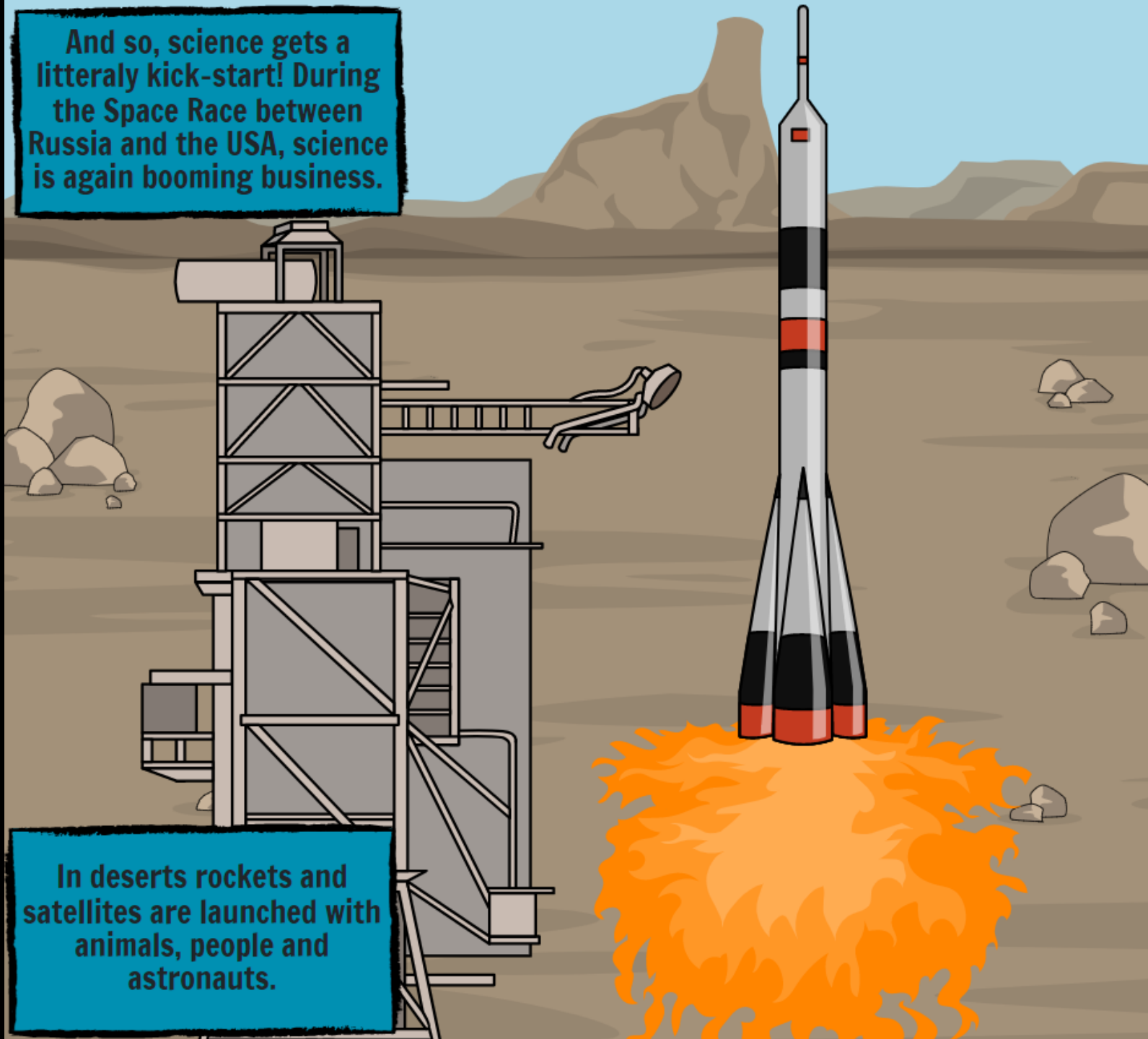
**This is NOT how science
should be used! Now it is
killing thousands of
people! How horrific!**

In my opinion we can do so many more things with science! Not just military or political stuff, I am going to make a lot of good things with science!

Hmmm, but the man on the moon-idea was kind of a good one, I'll pitch it to my students!

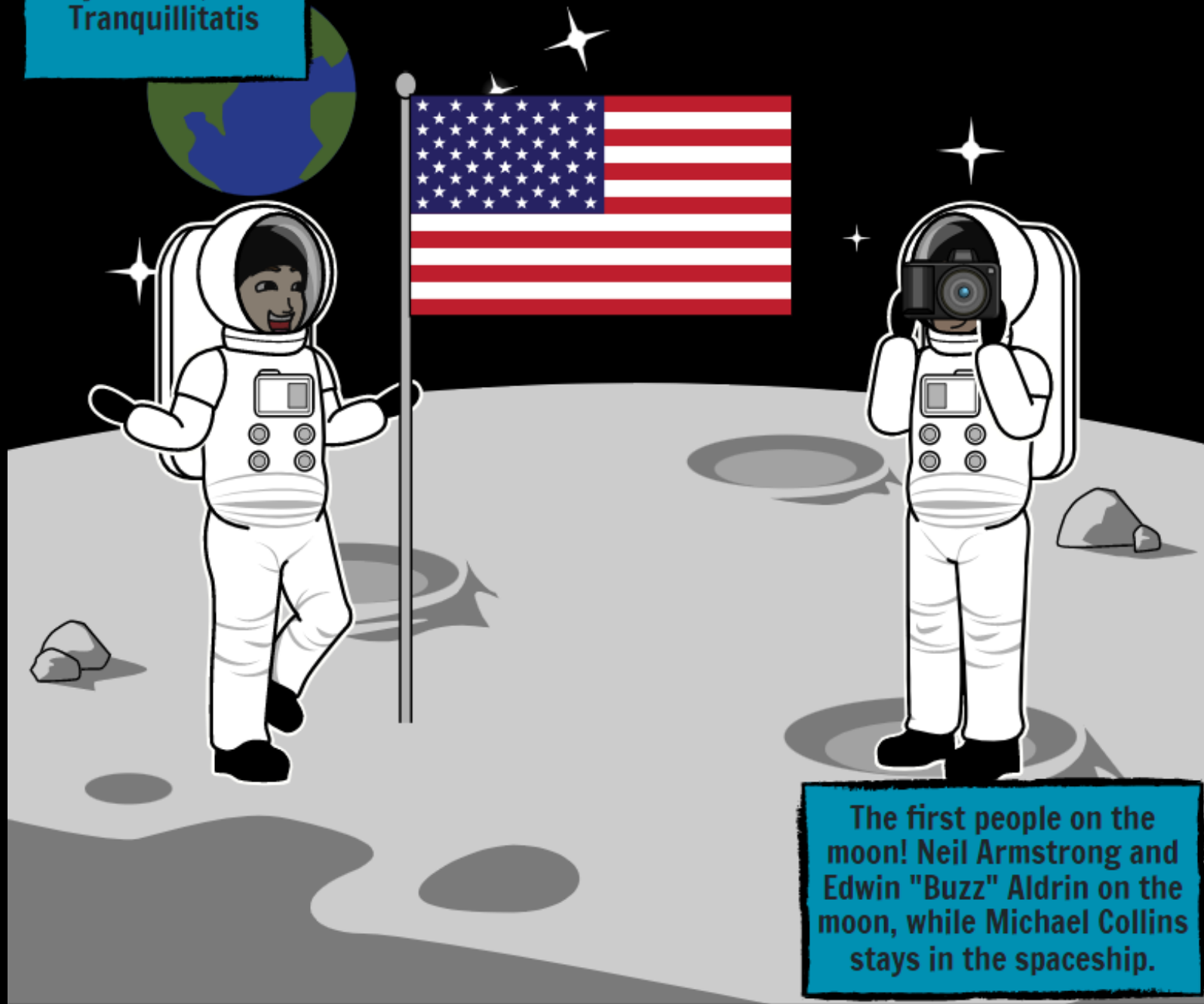


And so, science gets a
litteraly kick-start! During
the Space Race between
Russia and the USA, science
is again booming business.



In deserts rockets and
satellites are launched with
animals, people and
astronauts.

24 juli 1969, Mare
Tranquillitatis

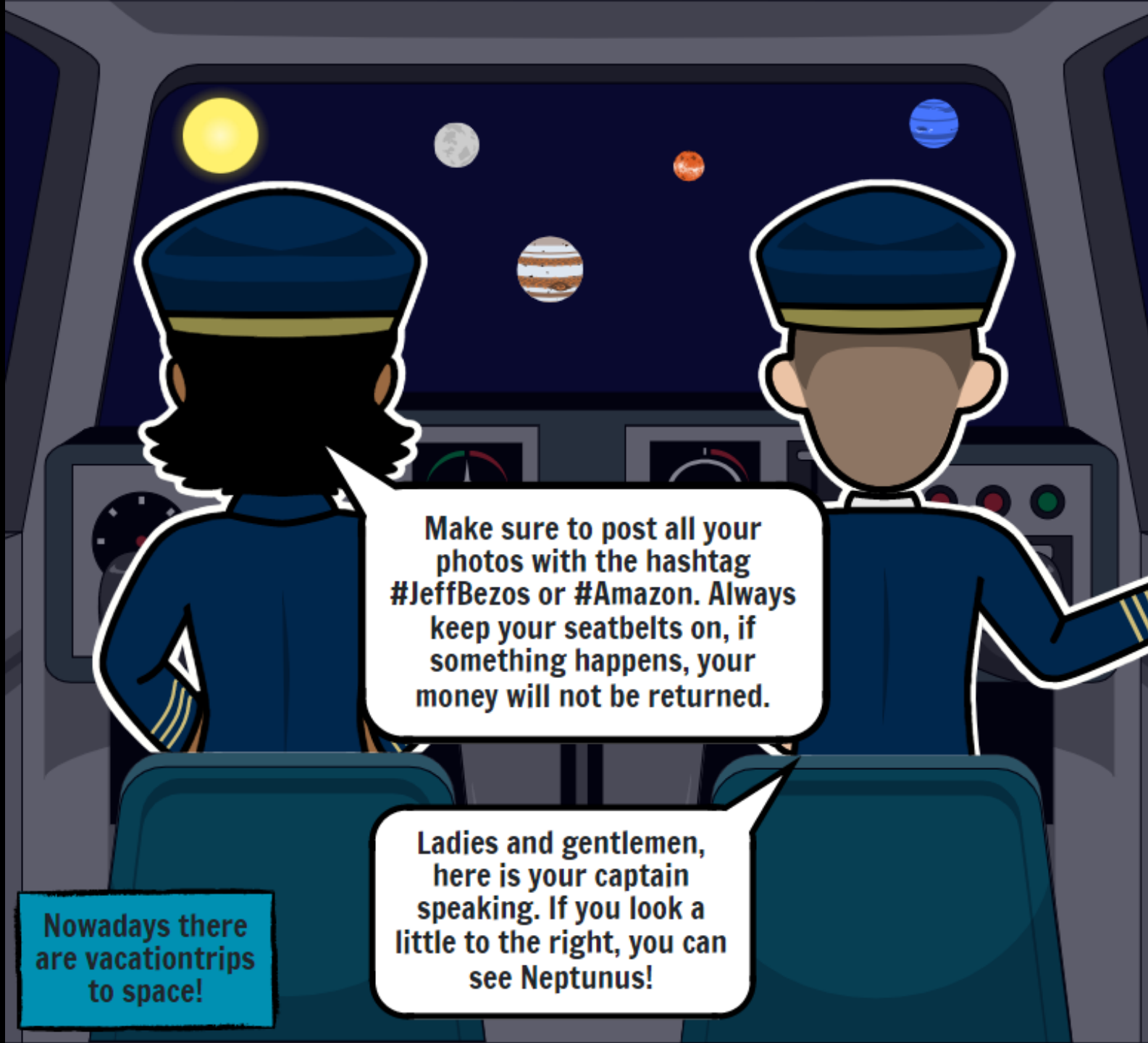


The first people on the
moon! Neil Armstrong and
Edwin "Buzz" Aldrin on the
moon, while Michael Collins
stays in the spaceship.

In 1995 Michel Mayor
discovers the first
exoplanet, the very original
name is "51 Pegasus b".

Sh*t guys!
They've seen me!



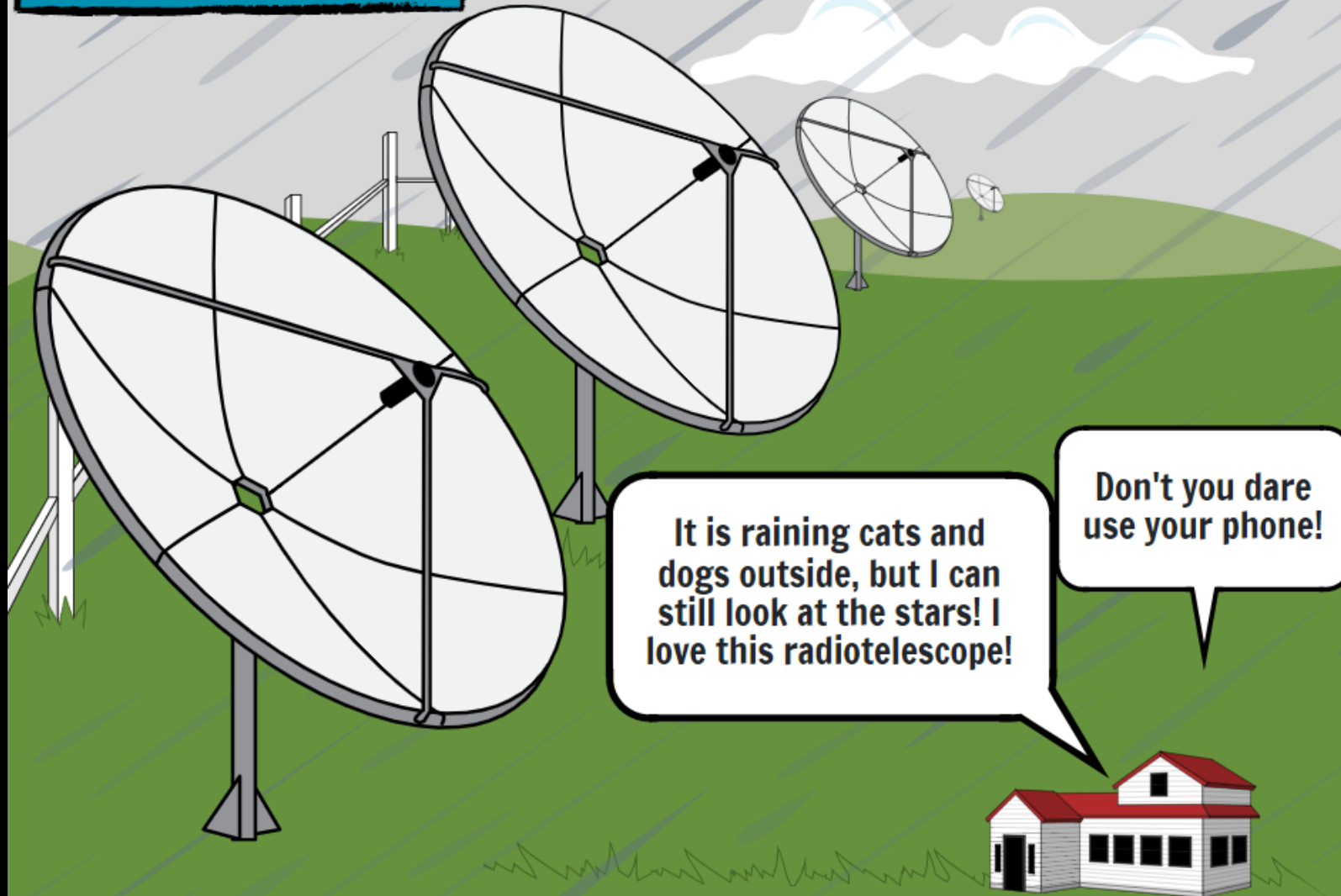


Make sure to post all your photos with the hashtag #JeffBezos or #Amazon. Always keep your seatbelts on, if something happens, your money will not be returned.

Ladies and gentlemen, here is your captain speaking. If you look a little to the right, you can see Neptune!

Nowadays there are vacation trips to space!

With new techniques we
can do astronomy even
when the weather is bad or
on a bright and sunny day!



It is raining cats and
dogs outside, but I can
still look at the stars! I
love this radiotelescope!

Don't you dare
use your phone!

Sometimes there
are bad ideas, or
wierd ones...

Party people
in da house!!!

What do you
say?! I can't
hear you!

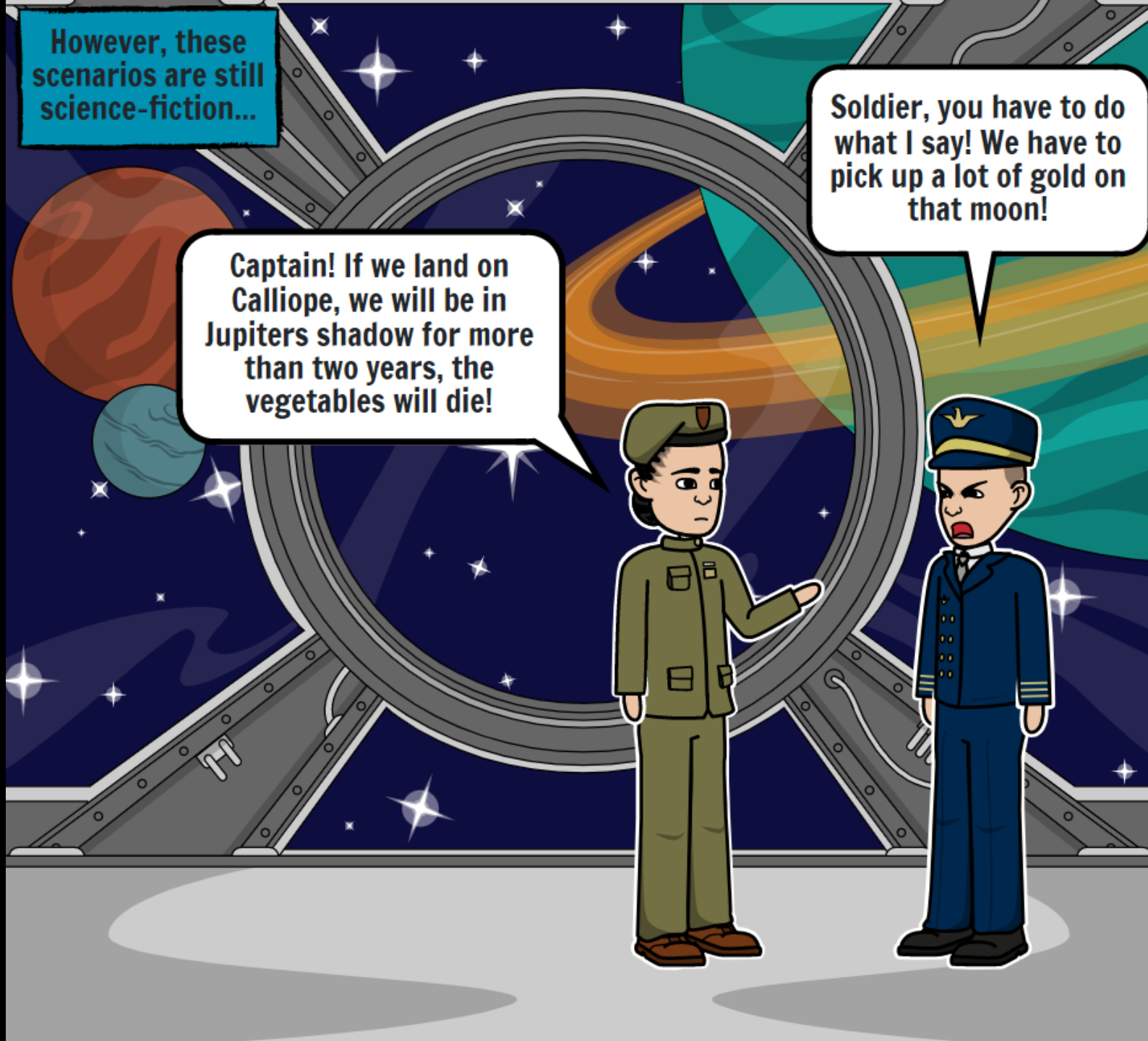
Let's make a
song for in
space!



However, these scenarios are still science-fiction...

Captain! If we land on Calliope, we will be in Jupiters shadow for more than two years, the vegetables will die!

Soldier, you have to do what I say! We have to pick up a lot of gold on that moon!



We know for sure that it started with this, that we don't know everything about the universe and that it might end with this...



The End

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Pre-Class
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