

教室発、宇宙行き！

好奇心が動かす学びと未来

—2025.10.27 LE class—

講師：小川 亮（おがわ あきら）さん

本校卒業生（36期生）

JAXAに勤務されている

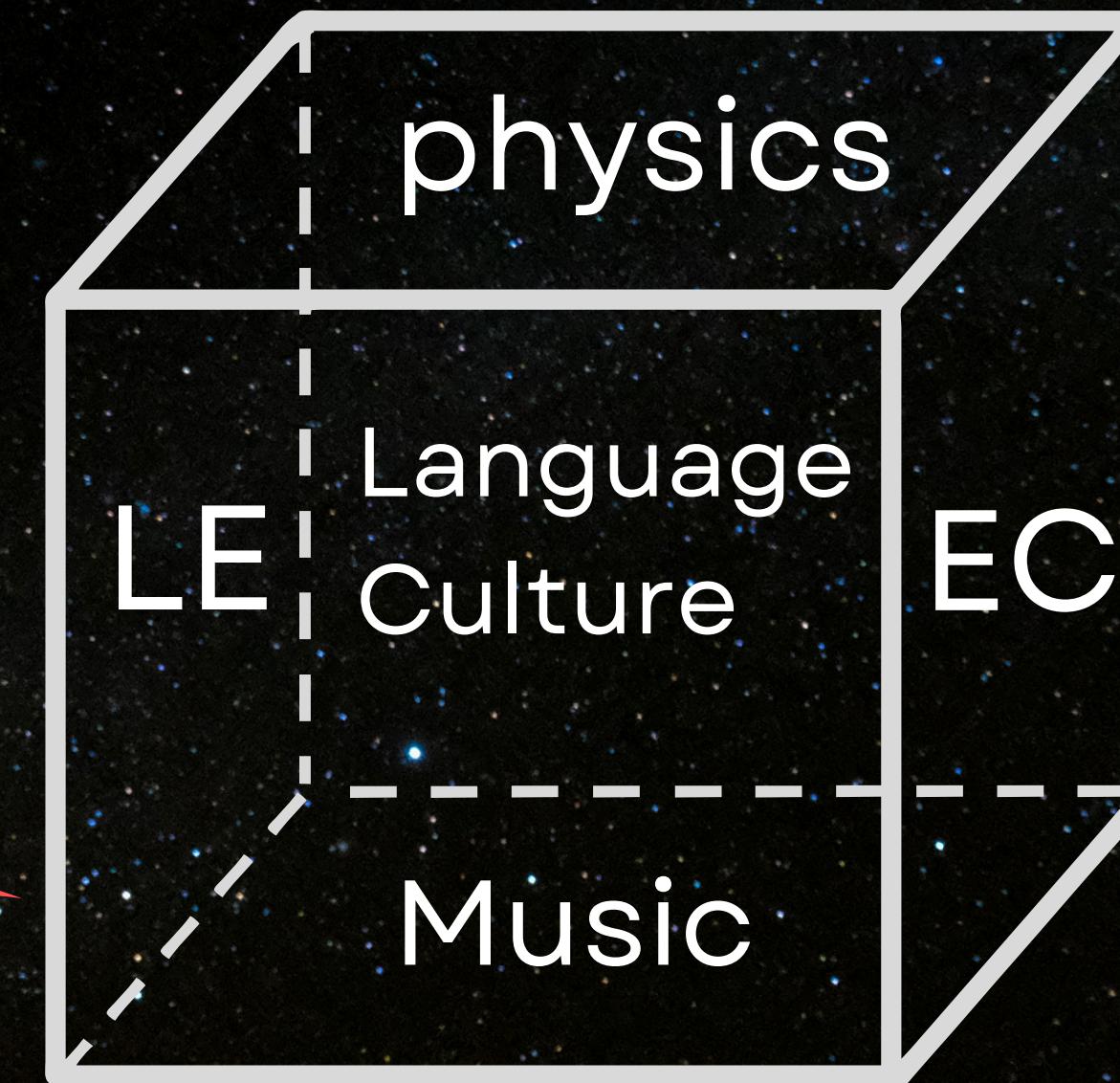
CROSS-CURRICULAR LESSONS

flat

Earth
science



3D



We can learn these in
Fuko classes!!

- learn from various angles
- apply knowledge in various situations

LE Mystery EC

Words



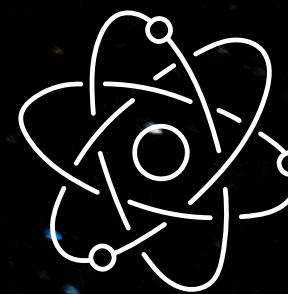
Artical



Debate

Should we promote
space development?

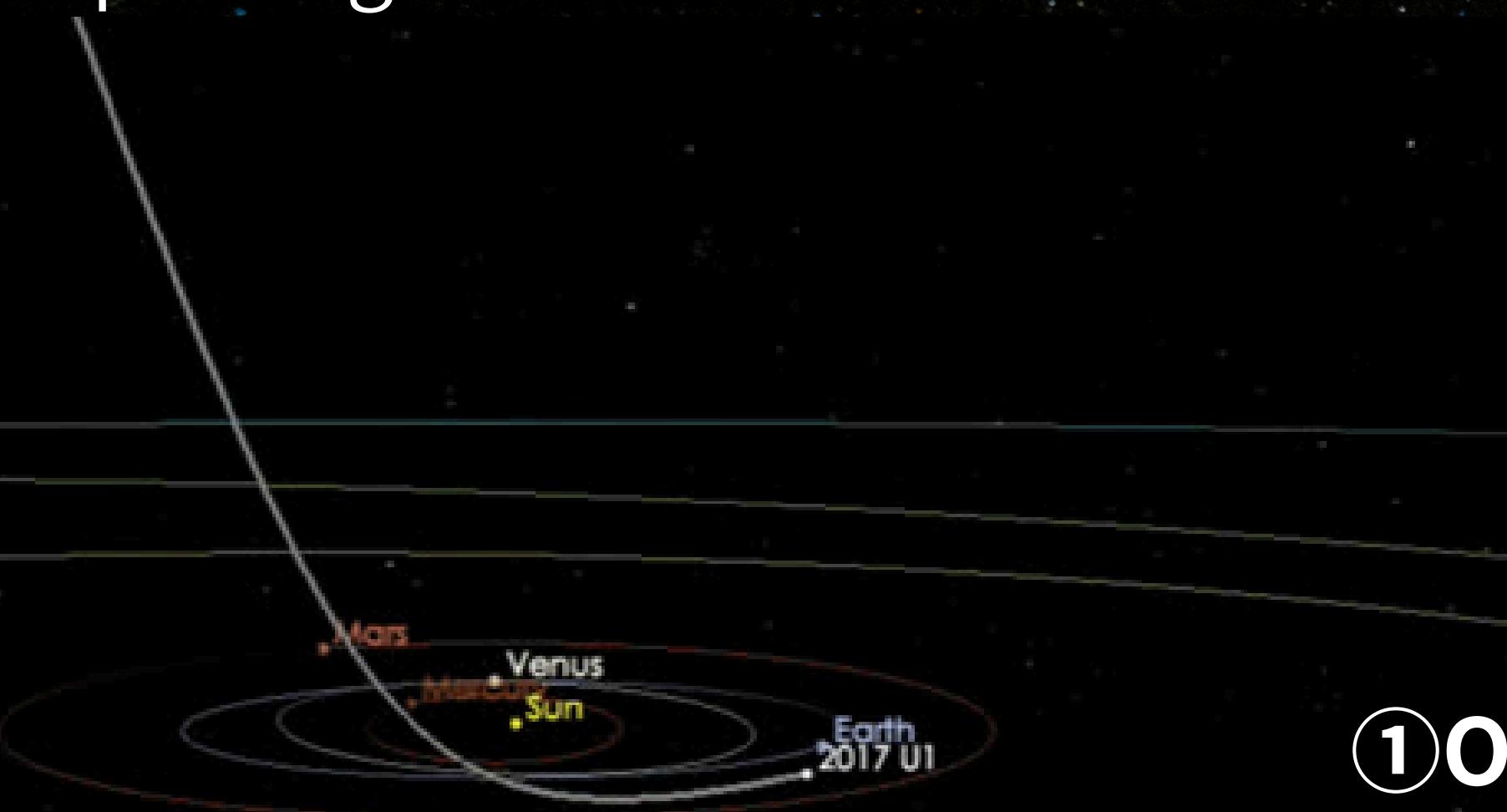




PHYSICS

the great mysteries of Oumuamua

“Oumuamua’s speed increased after passing the sun”



equation of motion

$$m\vec{a} = \vec{F}$$

$m[\text{kg}]$ mass
 $a[\text{m/s}^2]$ acceleration
 $F[\text{N}]$ force

law of universal gravitation

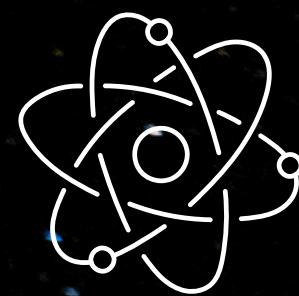
$$F = G \frac{Mm}{r^2}$$

$F[\text{N}]$ force
 $G[\text{N} \times \text{m}^2/\text{kg}^2]$ gravitational constant
 $M[\text{kg}], m[\text{kg}]$ mass
 $r[\text{m}]$ range

$$a = G \frac{M}{r^2}$$

① Oumuamua’s acceleration must get smaller as it moves away from the Sun.

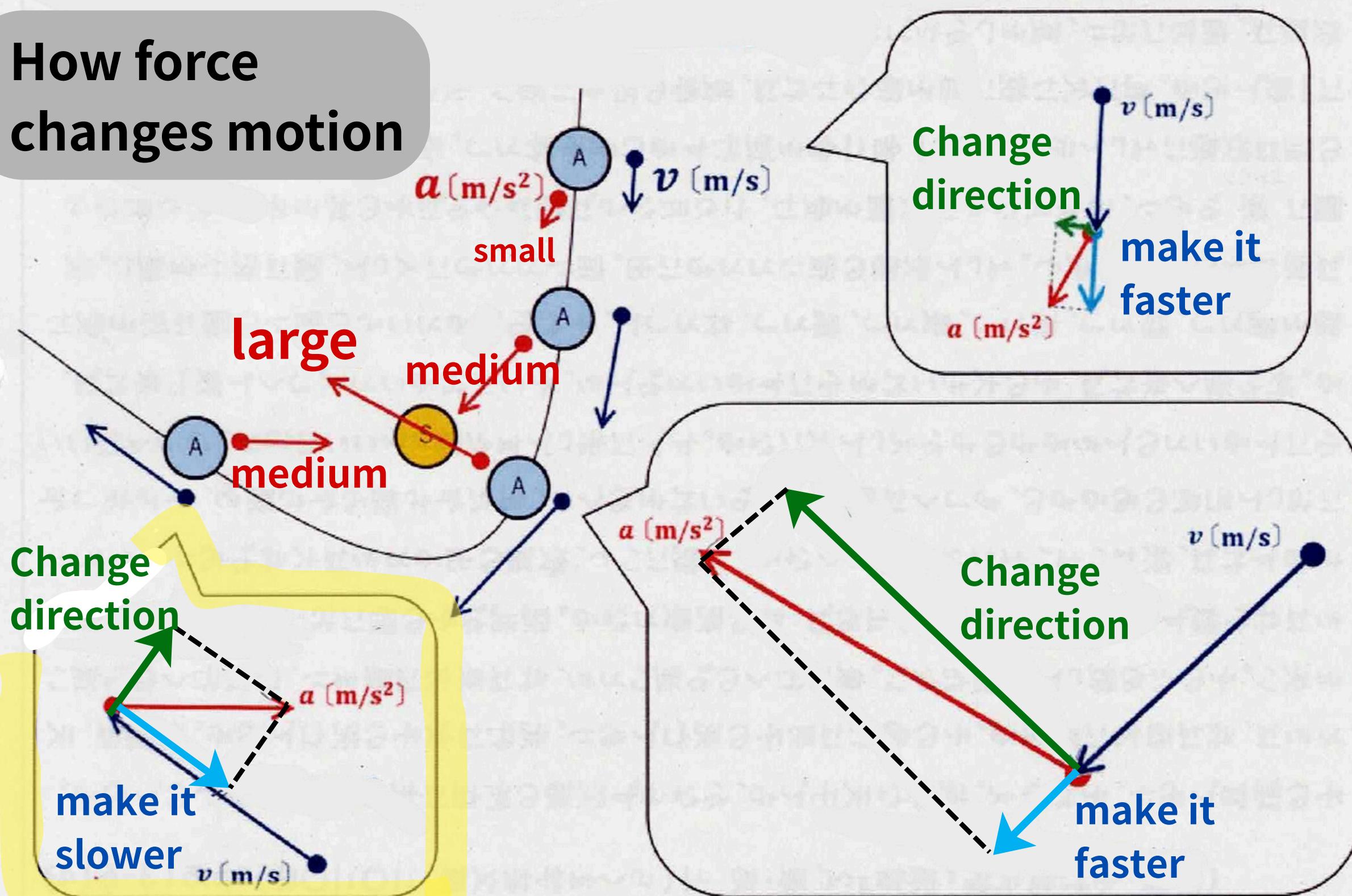




PHYSICS

the great mysteries of Oumuamua

How force
changes motion



[After passing the Sun]

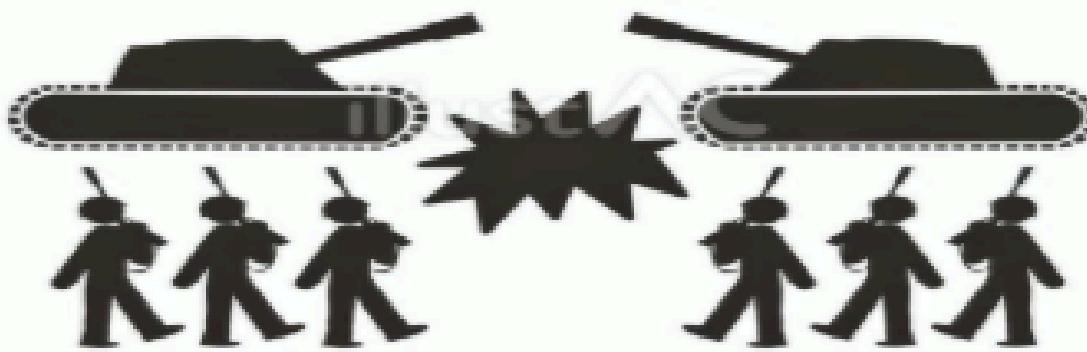
② The force that makes
Oumuamua slower
becomes stronger.

Oumuamua should
slow down.



The connection between ancient Chinese life and the mysterious motion of Mars

WARS



NATURAL DISASTERS



Tornado Flood Wildfire Earthquake

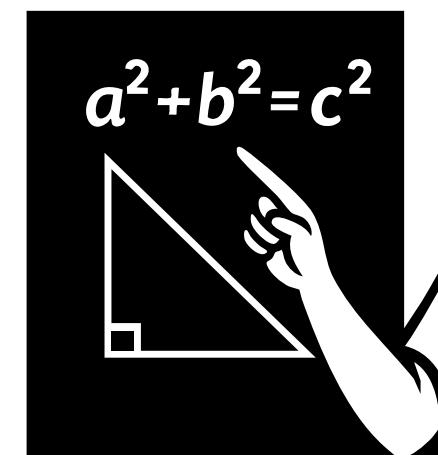
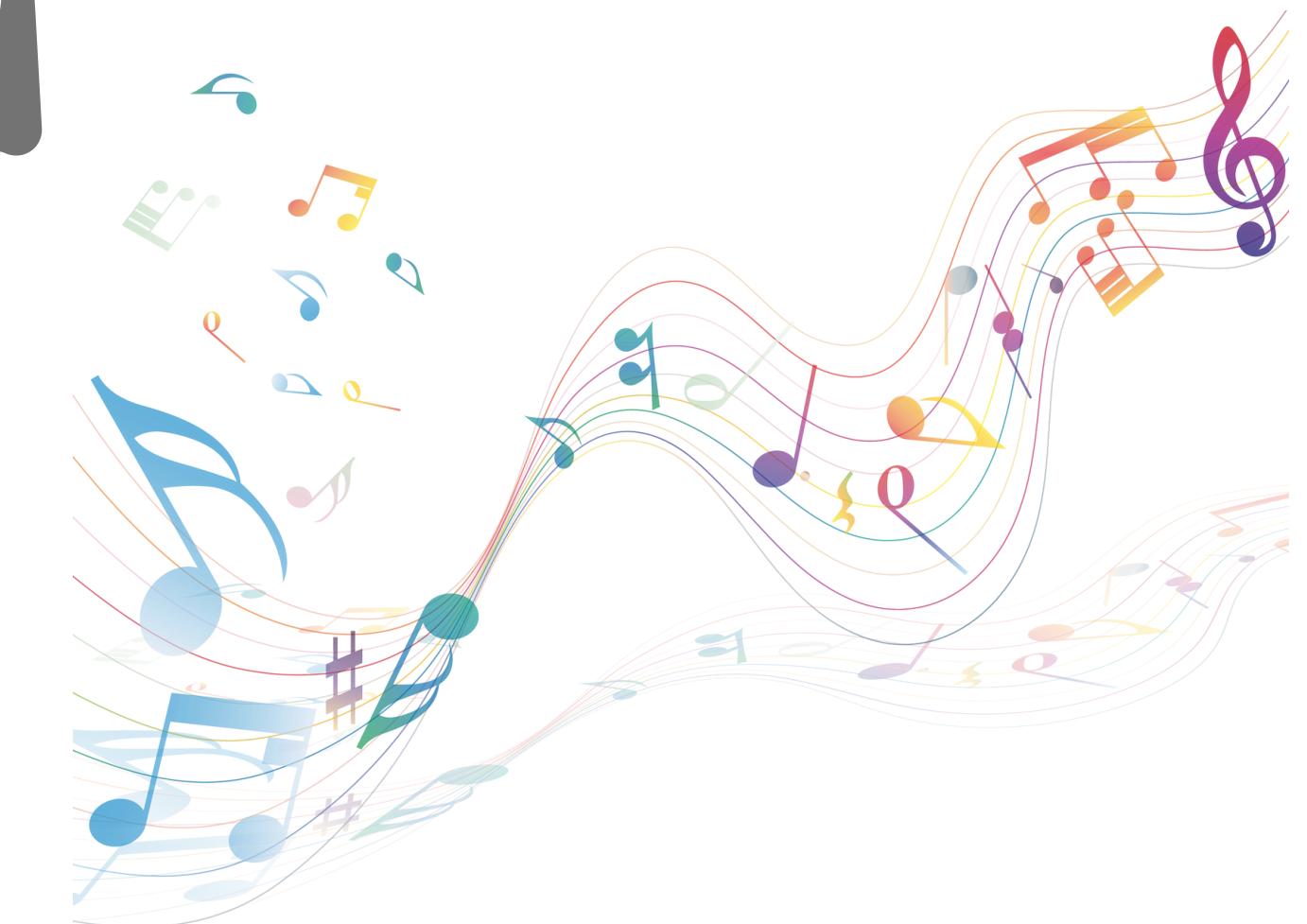
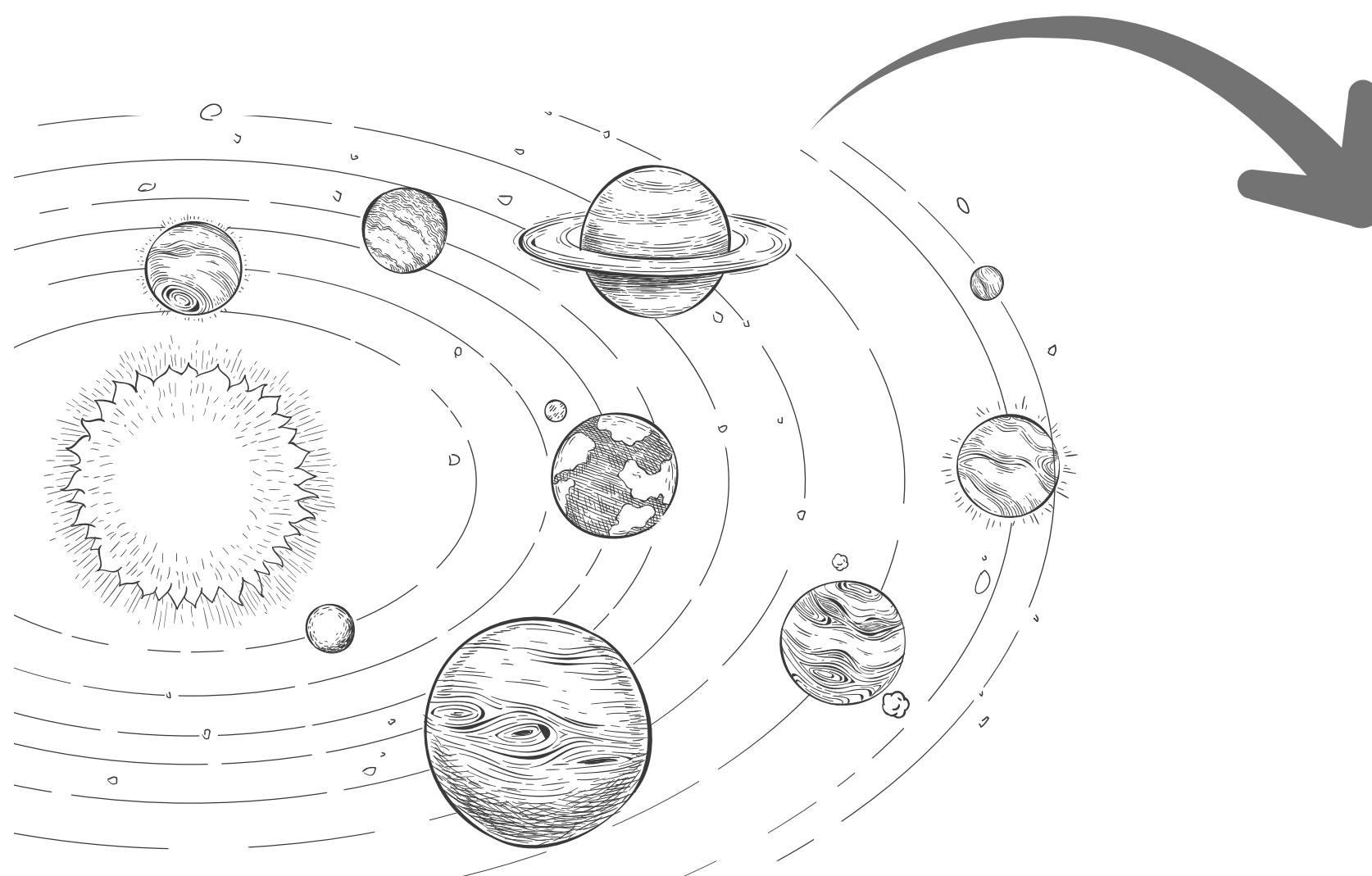
POLITICAL CONFUSION



Music

[Appreciation]

Music of the Spheres-Philip Sparke



Pythagoras



[t=0]



I wonder that...
something begins in an unknown world.

[THE BIG BANG]



I wonder that...
someone stumbles into a time hole and then
runs around in a strange, unfamiliar world.