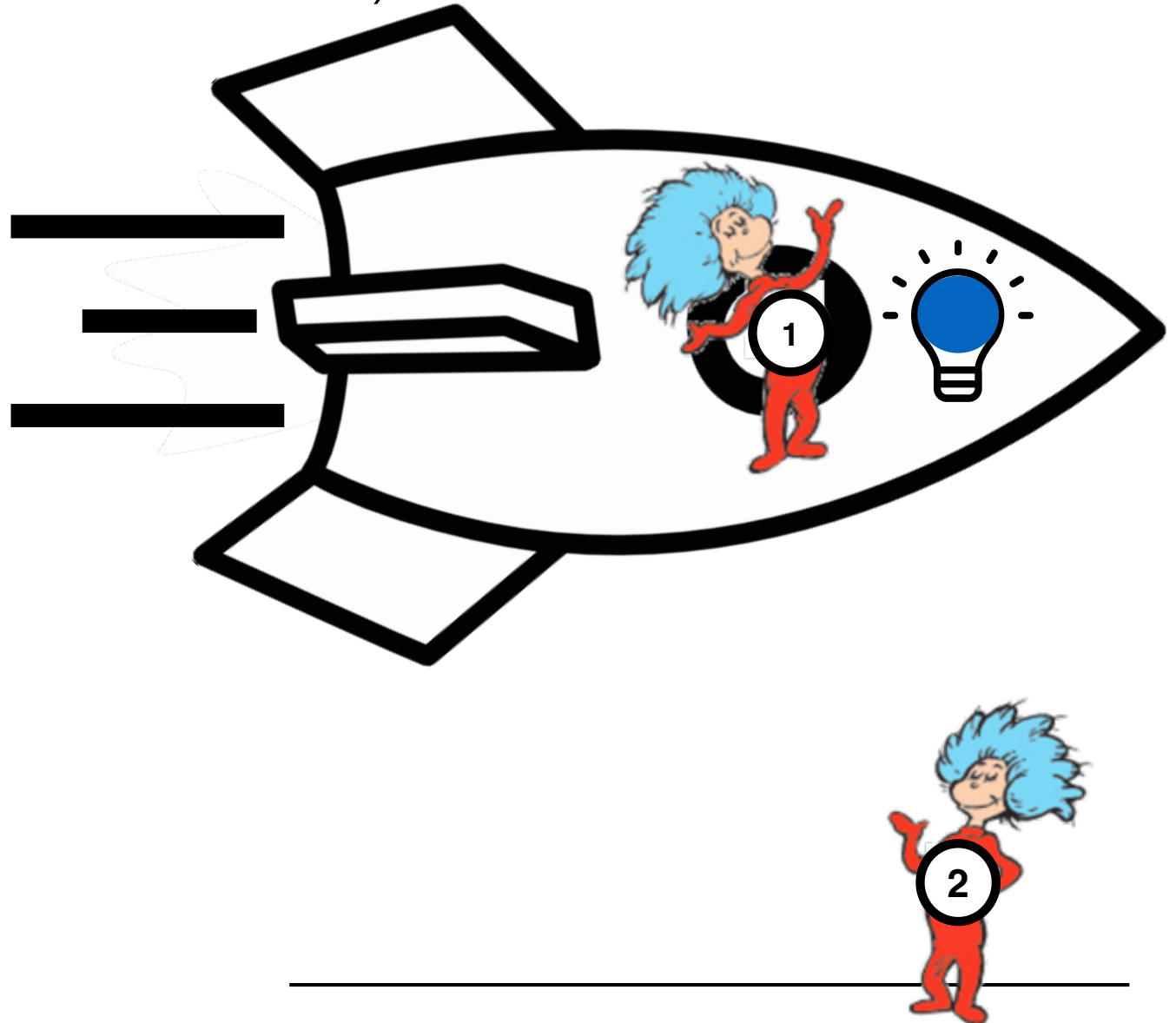


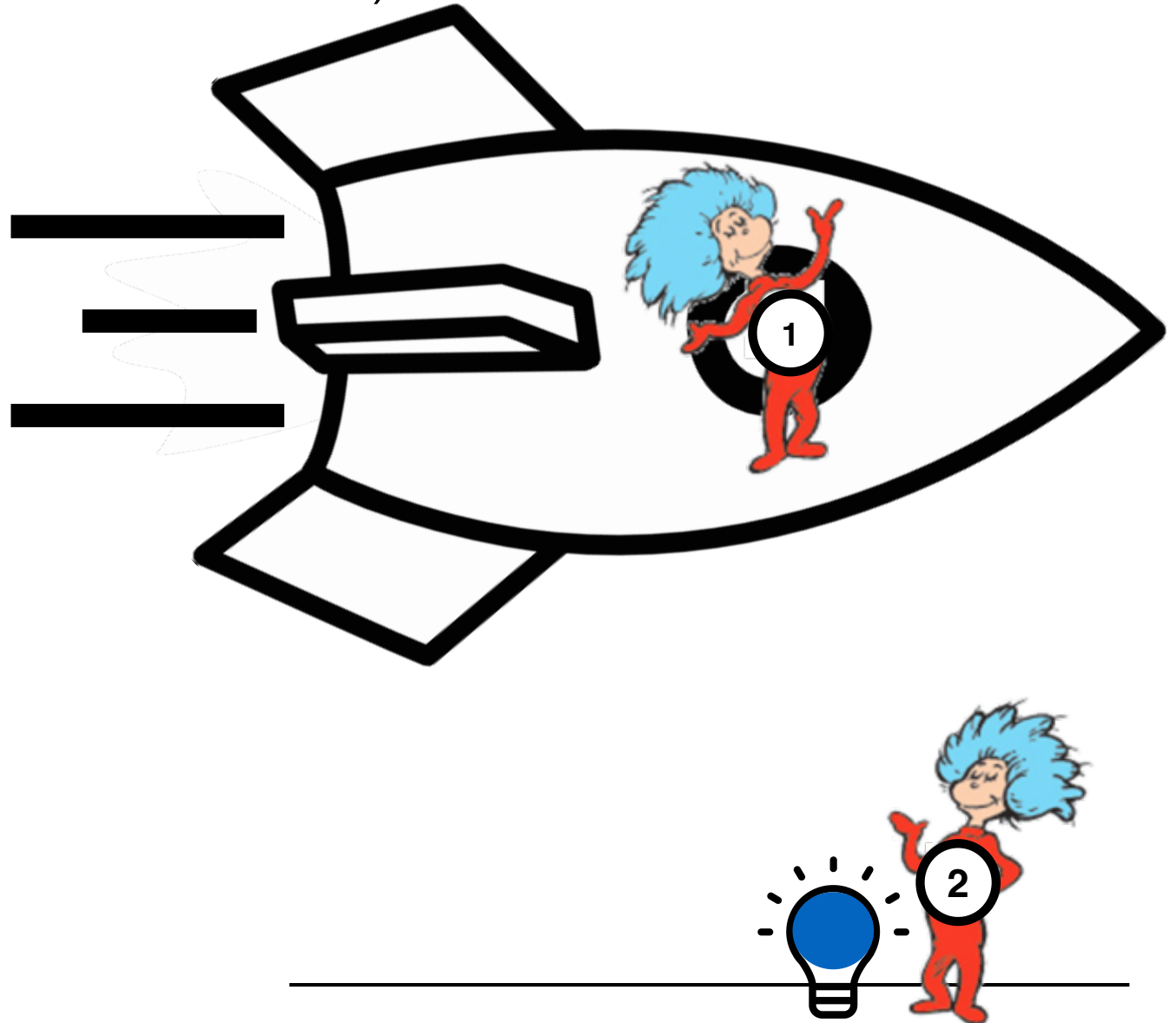
Imagine a light that flashes alternating red and blue light every second (in its own frame)

Who measures proper time of the flashes?



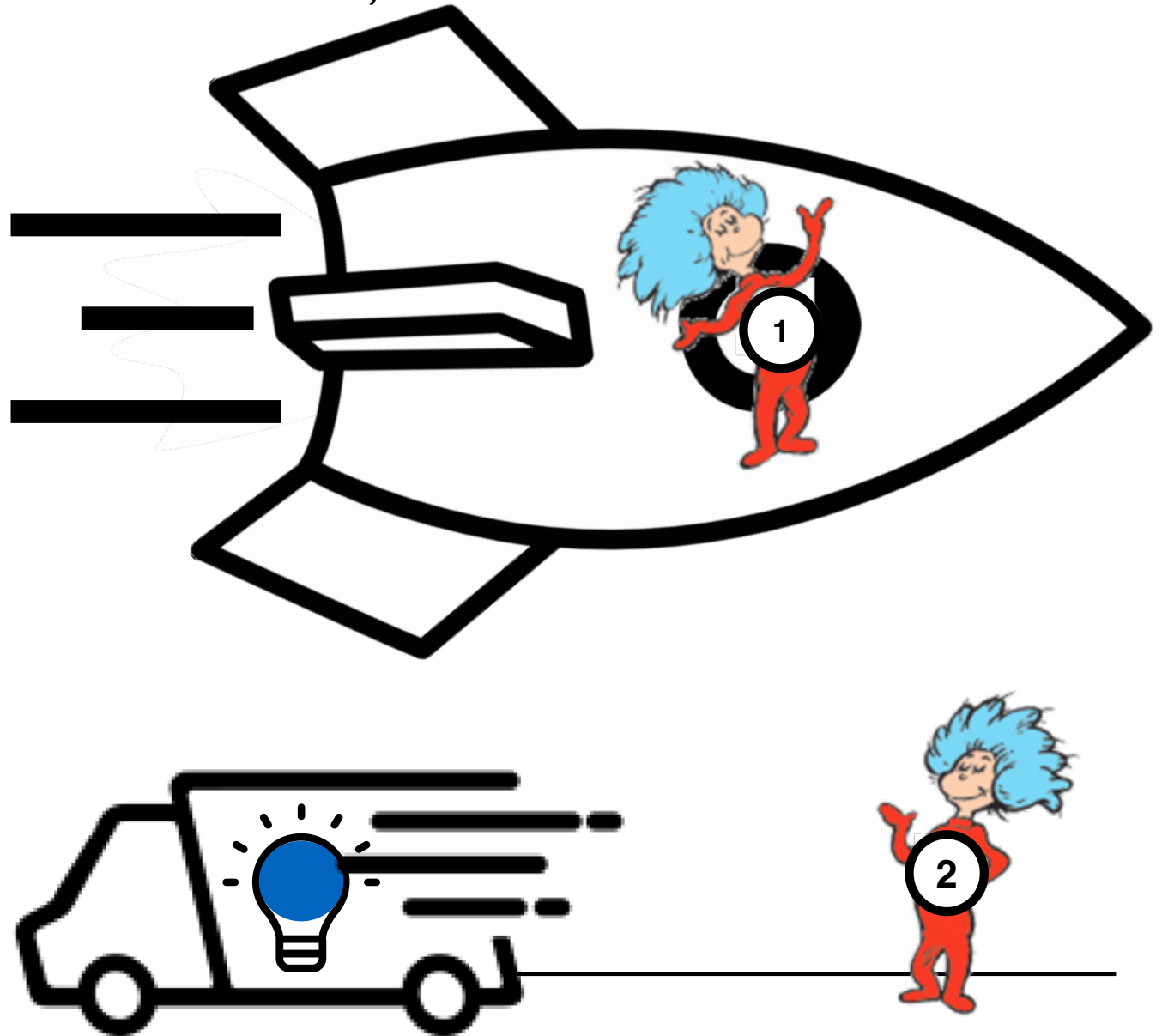
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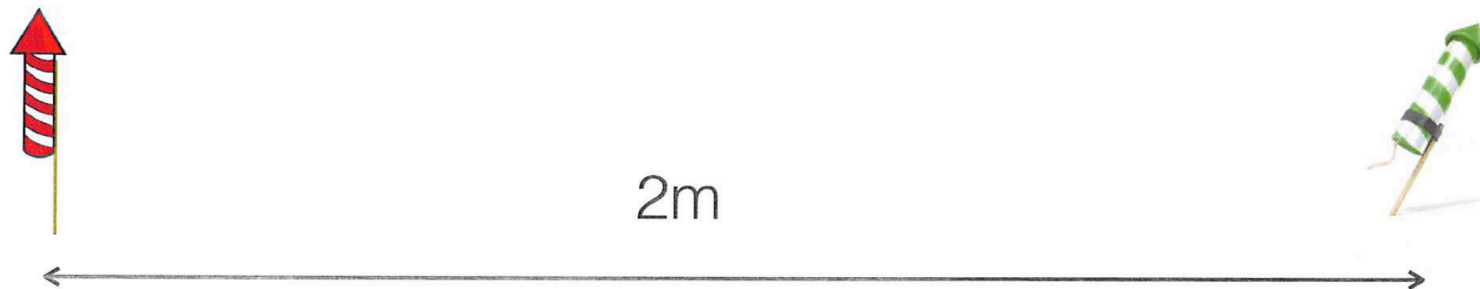
Lois Lane is standing on the streets of Metropolis and observes that a little girl jumping rope and measures that the time between jumps is 0.5 seconds.

Superman carefully flies by at a really high speed and observes that the time between the little girls' jumps is 1 second.

Who is correct?

A person sitting on the ground sees two fire crackers that are two meters apart. They see the red fire crackers explode first and then 1 second later, the green fire cracker explodes.

In what frame would an observer measure the proper time interval of the explosions?



An asteroid passes the earth at 25 km/s.

A probe has landed on the Earth-side of the asteroid to perform tests. In one test, the probe shines a very bright light for 27 seconds according to its own clock.

To an Earth-based scientist, how long does the light shine?