Order-of-Magnitude Estimation
Earth Runner (Level 1)

The Question

How long would it take to run around the world?

Background

This is a straightforward OoM question that requires very little background knowledge beyond the fact that the time taken to travel some distance is that distance divided by the speed of travel.

The Solution

Education Standards

This OoM Estimation problems meets the following standards in **bold**:
Next Generation Science Standards (NGSS)*:*

- Physical Sciences
  - Matter & Its Interactions
  - **Motion and Stability: Forces and Interactions**
  - Energy
  - Waves and Their Applications in Technologies for Information Transfer
- Life Sciences
  - From Molecules to Organisms: Structures and Processes
  - **Ecosystems: Interactions, Energy, and Dynamics**
  - Heredity: Inheritance and Variation of Traits
  - Biological Evolution: Unity and Diversity
- Earth and Space Sciences
  - **Earth's Place in the Universe**
  - Earth's Systems
  - Earth and Human Activity
- Engineering, Technology, and Applications of Science
  - Engineering Design

Common Core Standards (CSS)*:*

- **Counting & Cardinality**
- **Operations & Algebraic Thinking**
- Numbers & Operations in Base Ten
- **Number & Operations — Fractions**
- Measurement & Data
- Geometry
- **Ratios & Proportional Relationships**
- The Number System
- **Expressions & Equations**
- Functions
- Statistics & Probability