Video worksheet: “How fast are you moving right now?”

**CONCEPTUAL PHYSICS: UNIT 1**

**Directions:** Answer the questions as you watch the video “How fast are you moving right now?”
YouTube: [https://www.youtube.com/watch?v=wIzvfki5ozU](https://www.youtube.com/watch?v=wIzvfki5ozU)

1. Are you moving right now? Explain

2. What does it mean when we say speed is “relative”?

3. Speeds only have meaning when they are referred to a ________________  ________________.

4. Why do they say that “rest is relative”?

5. How fast are you moving relative to Earth’s center? Is it the same everywhere on Earth?

6. Why do they say constant speed is **relative**, but change in speed is **absolute**?
7. Is rotational motion relative or absolute? How could you tell?

8. If you are pulled over for speeding, what is the reference point the police officer uses to judge your actual speed?

9. Name at least two reference points that would explain how someone travelling on a jetliner traveling at 600 miles/hour actually be traveling slower than you would be while just sitting at your desk right now?

10. Explain the following statement: “Speed is relative”