

KJHS

Name

Use the following words to write a definition of FRAME OF REFERENCE. You may write more than one sentence if you need to.

Background

moving

compare

Stationary

object

FRAME OF REFERENCE: UNDERSTANDING THE MAIN IDEA

Identify the frame of reference in each of the following scenarios:

1. The sun rises over the horizon:

Frame of reference: _____

2. A bus moves past people standing on the sidewalk

Frame of reference: _____

3. A passenger on a train sees a ball rolling down the aisle

Frame of reference: _____

4. Two subway trains traveling at the same speed on parallel tracks whiz past passengers waiting on the platform of a local station

Frame of reference: _____

5. A passenger on one of the subway trains looks out the window and sees another train standing still

Frame of reference: _____

6. A person standing near a railroad track sees a train pass by, then notices an airplane fly overhead in the same direction as the train, but at a much faster speed.

Frame of reference: _____

7. A passenger in the plane looks down and sees the train moving backwards ***

Frame of reference: _____

A star-tling Discovery: Extending Main Ideas (back when Pluto was a planet...)

Until 1930, scientists thought that Pluto was just another star. Then they looked at two photographs of this "star" that were taken 24 hours apart. What they saw led them to the discovery that Pluto is a planet, not a star. Look at the illustrations and then answer the questions. (In 2006, Pluto got demoted from being a planet, to being a dwarf planet - sorry Pluto)

Photo A

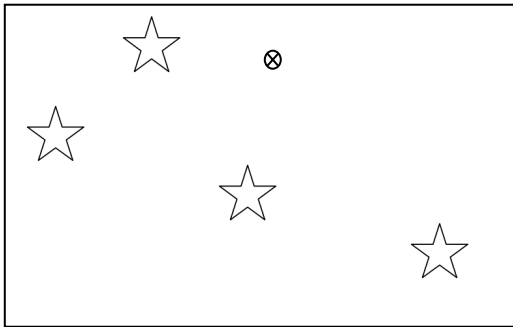
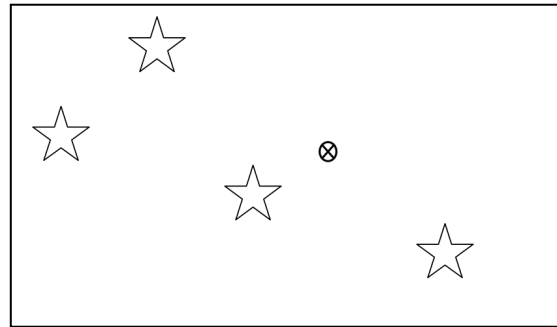


Photo B



8. What has happened to Pluto from the time of photo A to photo B?

9. What frame of reference did you use to describe the change in Pluto?

Use your iPad for the following:

10. Is the frame of reference also moving? (Do stars move?) _____

11. What are some of the constellations that you see at night? (name and try to draw 3)