

This selection was originally published in 1992. Pluto is no longer classified as a planet.

## Pluto

by James Trefil

Pluto is in many ways the strangest of the planets. It is small and has a large moon (called Charon). Its orbit is eccentric, which may cause it to have seasons in the sense that when it is close to the sun, the liquid methane on its surface boils to form a kind of atmospheric haze. When the planet moves farther away from the sun, it starts to snow solid methane.

Pluto is not dark. Despite its great distance from the sun, the surface of Pluto is probably as bright as a moonlit night on Earth. The reason is all that methane, which is as white as newly fallen snow.

The discovery of Pluto was more accident than design. The American astronomer Percival Lowell had predicted

the existence of a ninth planet (he called it Planet X) based on what he took to be irregularities in the orbit of Neptune. Today astronomers argue that these "irregularities" weren't real, but the result of instrumental error. Nevertheless, Lowell produced predictions about where Planet X ought to be (although, to be honest, the predictions changed occasionally when he redid the calculations). In any case, in 1930 Clyde Tombaugh, doing a systemic sky survey that would have found the planet no matter where it was, discovered the planet we now call Pluto. By coincidence, its position was pretty close to where Lowell's last prediction said it should be. Was it just luck? We'll never know.

The planets' "days" and "years" are approximate.

Planet	"Day"	"Year"
Mercury	59 Earth days	3 Earth months
Venus	243 Earth days	7 Earth months
Mars	1 Earth day	1 Earth year, 10.5 Earth months
Jupiter	10 hours	12 Earth years
Saturn	10 hours	29.5 Earth years
Uranus	1 Earth day	84 Earth years
Neptune	1 Earth day	165 Earth years
Pluto	6 Earth days	248 Earth years

Notice that since its discovery, Pluto has had time to cover only about 20 percent of its orbit, and that the last time it was in its present position was before the Revolutionary War.

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1. What contributes to the brightness of Pluto?
  - A light from its moon, Charon
  - B its great distance from the sun
  - C liquid methane on its surface
  - D its closeness to the sun
  
2. On Pluto's surface, liquid methane boils to form an atmospheric haze. The haze would be **most similar** to which of the following?
  - A darkness
  - B light
  - C liquid
  - D steam
  
3. On which planet is a day **almost** as long as an Earth week?
  - A Venus
  - B Mars
  - C Jupiter
  - D Pluto
  
4. According to the chart, in what way are Uranus and Neptune similar?
  - A Both have a year equal to a year on Pluto.
  - B Both have a day equal to a day on Pluto.
  - C Both have a day equal to a day on Earth.
  - D Both have a year equal to a year on Earth.
  
5. What effect is produced by including the question "Was it just luck?" at the end of the selection?
  - A The question suggests that all discoveries are luck.
  - B The question encourages the reader to think about how planets are discovered.
  - C The question suggests that other planets were found in different ways.
  - D The question encourages the reader to think about why Pluto is a strange planet.

### End of Set

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