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SNC1D1 Assignment 1.1: Found: A World that's -200C

Read the following questions, then answer them using the newspaper article on the other side. Some questions will require additional research or note from class. Answer all questions on another sheet of paper. To obtain full marks, you must show your thinking. Make sure to write your name (first and last) in the top right corner. You must answer these questions in sentence form.

1.	What new planetoid was discovered in 2004? What was it named after, and why?	/2
2.	What does the planetoid look like? (2 things)	/2
3.	How far away from the sun is the planetoid?	/1
4.	How did they discover the planetoid?	/2
5.	What are its periods of rotation and revolution?	/2
6.	Why do the scientists think it takes so long to rotate?	/1
7.	Why isn't it reasonable to consider it a planet? (2 things)	/2
8.	This article was written in 2004, when Pluto was still a planet. Why did Marsde and Brown feel that Pluto should not be considered as a planet?	en /2
9.	What did the International Astronomical Union (IAU) decide two years after thi	is /2

discovery and why? /2

When answering questions, paraphrase the question in your answer. Do NOT begin answer with "It is..."

SNC 1

Found: A world that's - 200C

'Planetoid' twirls around sun slowly

Tinier than Pluto, nearly red as Mars

DEBORAH ZABARENKO REUTERS NEWS AGENCY

WASHINGTON – Astronomers have discovered the coldest, most distant object yet found in the solar system, a dark and frigid world a bit smaller than Pluto and more than twice as far away.

The new "planetoid" — named Sedna for an Inuit goddess that created Arctic sea creatures — is at its closest point more than 12.8 billion kilometres from the sun and never gets warmer than about minus-200 C, astronomers said yesterday.

"The sun appears so small from that distance that you could completely block it out with the head of a pin," said Mike Brown, an astronomer at California Institute of Technology, who led the research team. Sedna is one of the reddest objects in the solar system, after

Mars, and takes 10,500 years to travel its highly elliptical path around the sun.

"We think it's not reasonable to call Sedna a planet," added Brown, who noted that astronomers do not have an official definition of what constitutes a planet. Formally, the designation for Sedna is 2003VB12.

Brown and the other astronomers detected Sedna on Nov. 14 during a survey of the outer solar system. As they peered into space, they saw stationary stars and other cosmic bodies, and a very slowly moving object that turned out to be Sedna.

"Anything that moves very slowly across the sky, we know it's something in the solar system: a satellite, a planet, an asteroid," Brown said at a telephone news conference.

"But this is the most slowly moving object we've ever seen moving across the sky, and we knew it must be something very far away."

As distant and cold as Sedna is now, its orbit around the sun takes it more than 10 times farther, to a distance of 135 billion kilometres out.

Sedna rotates once every 40 days, a slow rotation that suggests it might have a moon slowing its twirl, Brown said.

To check this, he and his team plan to use the Hubble Space Telescope to determine whether they are separate.

Sedna is part of the solar system but Brian Marsden, director of the minor planet centre of the International Astronomical Union, said, "It would be misleading to call it the 10th planet. Just as I think it's misleading to call Pluto the ninth planet."

Marsden said astronomical objects must be a certain size to be considered planets, and Pluto is at the lower limit of planetary dimensions.

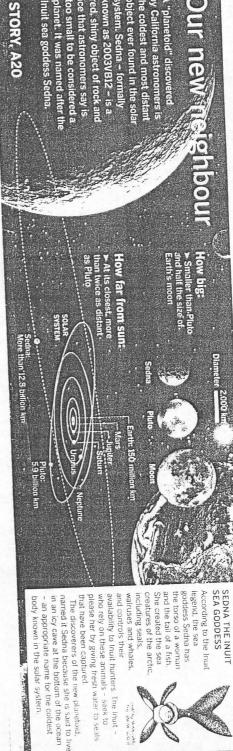
They also must "participate" in the solar system. There again, he feels Pluto does not qualify — its orbit is neither circular nor in the same plane as the other planets.

Because Sedna is smaller and far more eccentric in its path than Pluto, Marsden questioned its potential planetary status. Brown echoed this assessment and agreed Pluto is no planet.

First detected with the Samuel Oschin Telescope near San Diego, Sedna was observed within days on telescopes from Chile to Spain, Arizona and Hawaii.

NASA's orbiting Spitzer Space Telescope indicates Sedna has about three-fourths the diameter of Pluto, making it the biggest solar system discovery since Pluto in 1930. WITHFILESFROMASSOCIATED PRESS

Toranto Star, April 26,2004.



ntroducing Sedna: It's red, frigid and oh, so far away but is it a planet?