

Misconceptions in Astronomy

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View a private universe

 http://youtu.be/TrXaQu_qGeo

We just talked about
differentiation...

• How was the solar system created?

What does the data tell us?

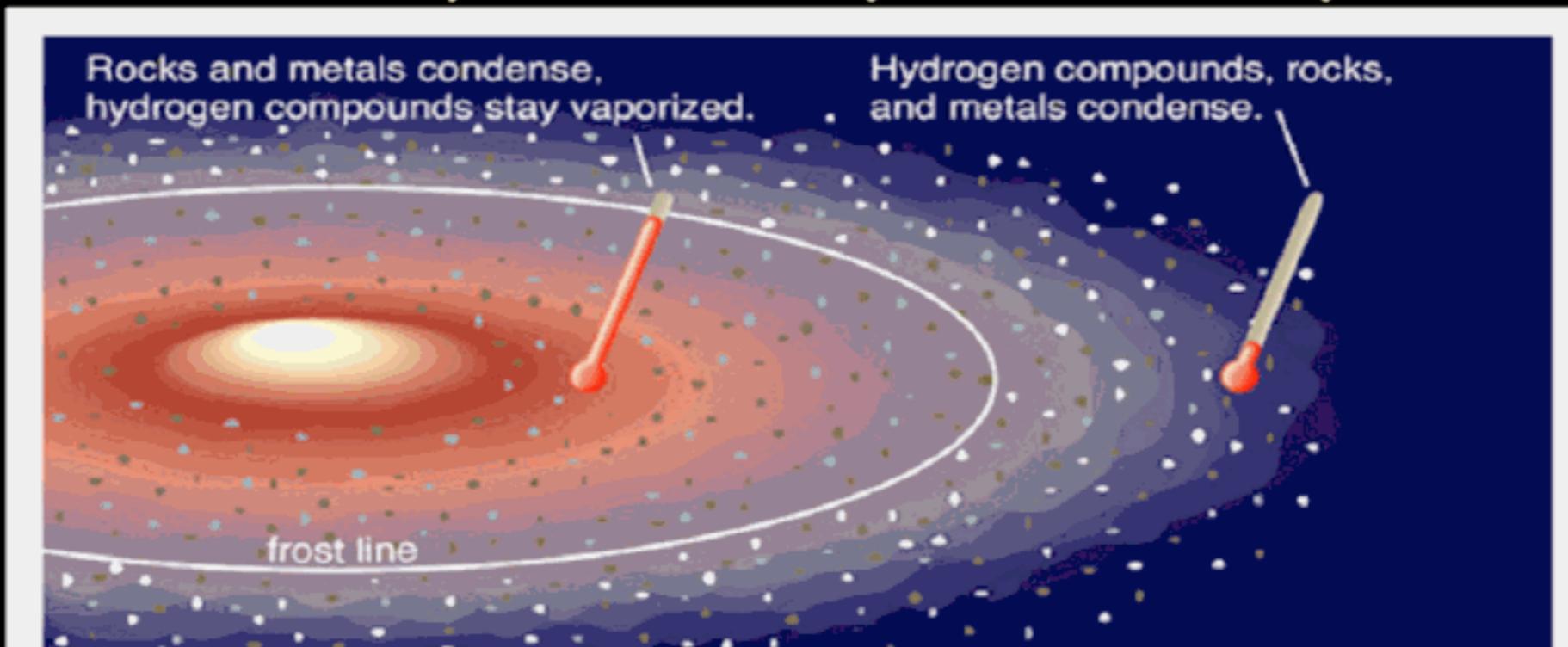
Planet	Mean Density	Uncompressed Density	Distance from Sun (AU)
Mercury	5.4	5.3	0.39
Venus	5.2	4.4	0.72
Earth	5.5	4.4	1
Mars	3.9	3.8	1.5

• Units in g/cm³

Misconceptions you didn't mean to create

The Solar Nebula Theory

- Dust, rock and ice condense and stick together to make small bodies called planetesimals.
- Heat from the forming sun only allowed certain elements to condense nearby. Ices could only condense far away.



What are some common misconceptions you've encountered with students?

- Think-pair-share

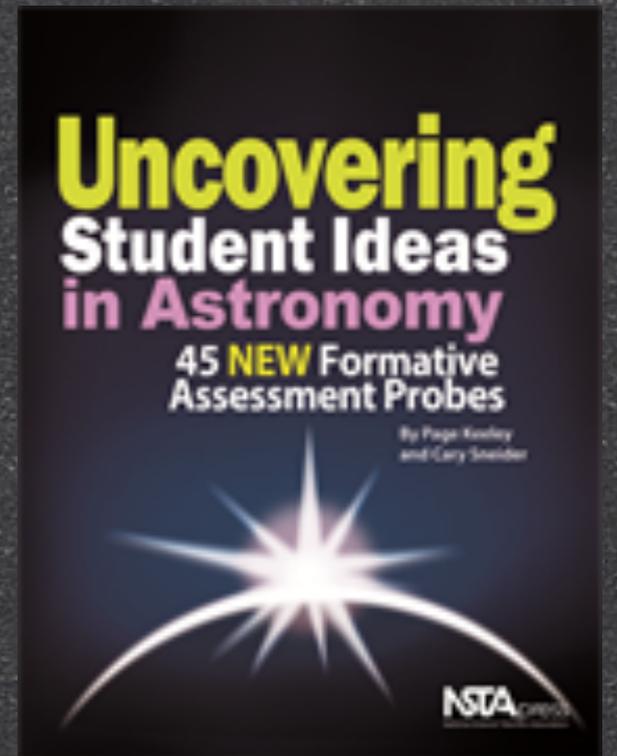
- 1 minute to think

- 1 minute to write

- 3 minutes to talk with a neighbor

- Share out!

Research-Based approach



- Assessment probes... Let's try one out!

What strategies do you use to tease out student misconceptions?

- Think-pair-share

- 1 minute to think

- 1 minute to write

- 3 minutes to talk with a neighbor

- Share out!

Creating group understanding

- 📌 Present the probe
- 📌 Encourage discussion
- 📌 Flipped classroom model-friendly