

## Candy Gas Giants Activity

In this activity you and your child will make two edible or non-edible models; one of the Earth and one of their favorite Gas Giant. As you and your child build your two models, help them to explore the difference in **size** and **composition of the layers**. Note that these are rough approximations of the thicknesses of the layers.

### What You Need for Edible and Non-edible:

- Various hard candies such as cinnamon disks, butterscotch disks, bubble gum balls and jaw breakers
- Various soft candies such as salt water taffy, cotton candy, tootsie rolls and caramels as well as Rice Krispie Treats, Fruit Roll-ups, etc.
- Miscellaneous craft items such as toothpicks, popsicle sticks, Styrofoam balls, play-doh, tissue paper, construction paper, yarn, pom-poms, pipe cleaners, crayons, glue and scissors
- Planet Comparison Chart

### What to Do:

- Invite your child to choose their favorite gas giant and look at the Planet Comparison Chart page to learn about the size and composition of the planet.
- Choose different craft items to represent the different layers of the planets. Remember your two models will be different sizes; Gas Giants are much bigger than Earth!!
- Make your models by helping your child estimate the thicknesses of the planets' layers using the illustration of the layers and the planet's total width on the Planet Chart.

### Parent Prompts:

As you and your child are building the two planet models, ask him or her:

Can you name the Gas Giants? Can you name them in order, from the closest to Earth to the farthest from Earth?

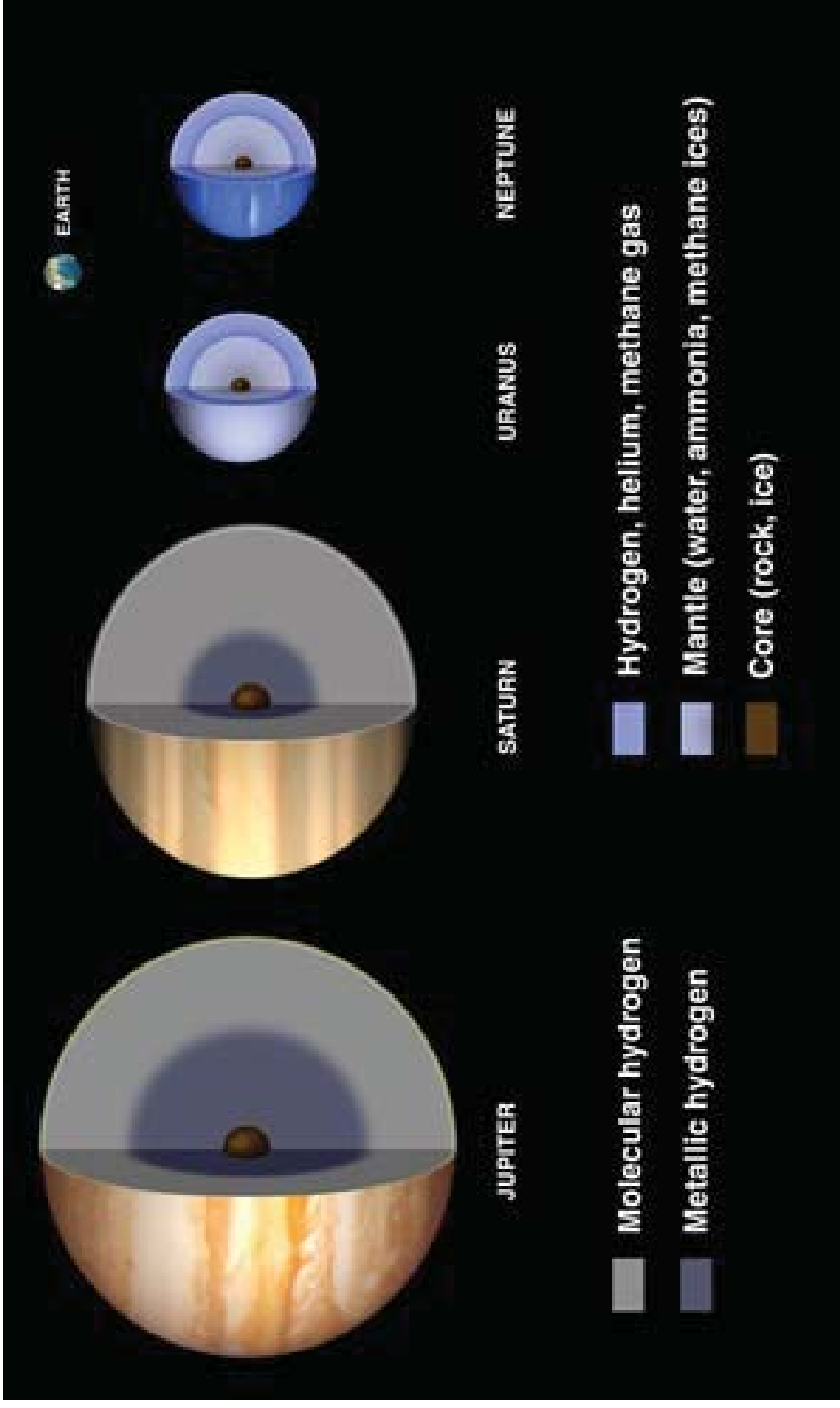
What is the difference between a Gas Giant and a rocky planet like Earth or Mars?

Why did you select this Gas Giant to create? What do you like about it?

What can you tell me about the Gas Giant you are making? What makes it special or different from the others?

How does it compare to Earth?

<b>Planet</b>	<b>Scaled</b>	<b>Composition</b>	
<b>Earth</b>	<b>1 inch across</b>	7925 miles across	
Core	A ball that is 1/2" total <i>across</i>	Iron-Nickle	Not a Gas Giant! A Rocky Planet with water.
Mantle	1/4" thick layer surrounding the core	Silicate, Iron, Magnesium	
Crust	A really really thin layer surrounding the middle	Silicate	
<b>Jupiter</b>	<b>11" across</b>	88,850 miles across	
Core	A ball that is 4" total <i>across</i>	Rocky	The largest Gas Giant.
Middle	6.5" thick layer surrounding the core	Metallic Hydrogen and Helium	
Outer Layer	2.5" thick layer surrounding the middle	Liquid and Gas Helium	
<b>Saturn</b>	<b>9 1/2" across</b>	74,900 miles across	
Core	A ball that is 4" total <i>across</i>	Rocky	The Ringed Planet.
Middle	3-1/4" thick layer surrounding the core	Liquid Hydrogen	
Outer Layer	4-1/4" thick layer surrounding the middle	Hydrogen, Helium	
<b>Uranus</b>	<b>4 inches across</b>	31,769 miles across	
Core	A ball that is 1-1/2" total <i>across</i>	Rocky	May not have layers. A Gas Giant that is tipped on its side.
Middle	2-1/2" thick layer surrounding the core	Water, ammonia, methane fluid	
Outer Layer	3/4" thick layer surrounding the middle	Hydrogen, Helium and Methane	
<b>Neptune</b>	<b>4 inches across</b>	30,775 miles across	
Core	A ball that is 1" total <i>across</i>	Rocky	The bluest Gas Giant
Middle	2-3/4" thick layer surrounding the core	Water, ammonia, methane fluid	
Outer Layer	3/4" thick layer surrounding the middle	Hydrogen, Helium and Methane	



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