

## Nebulae and Black Hole Class Supplies and Setup

Before class starts, you will need the following items near you.

Items in kit	Items not in kit
2 black balloons	three 14" (approx.) sheets of aluminum foil
1 pushpin (from Saturn ring model in Planets class)	Spaghettification booklet (print from website)
glitter (about 1/2 tsp.)	colored pencils
1 sequin	stapler
1 chopstick	cell phone with Pocket Black Hole app created by Laser Labs - Android & Apple (look for "Education" version in App Store) (phone app is optional, but fun)
	clear tall, smooth-sided plastic or glass bottle with a tight-fitting lid (Sparkling Ice bottle (17 oz.) or similar works well), label removed
	about 30 cotton balls
	funnel
	old towel/paper towels
	10 drops of red and blue food coloring
	cake pan/rimmed cookie sheet to catch water overflow
	3 cups with 1-1/2 c. water in each

### Preparation Instructions:

1. Get the pushpin from your Saturn's Ring model. If you have a sewing needle or pin, that will work, too.
2. Print the spaghettification booklet from my website ([handsonsciencefun.com](http://handsonsciencefun.com)). Cut out each page, stack them in order (Page 1 on top) and put two staples at the top to connect the pages.
3. Empty, remove label, and rinse out the clear tall, smooth-sided plastic or glass bottle with a tight-fitting lid. Sparkling Ice bottle (17 oz.) or similar works well for the nebula in a bottle activity.
4. Optional: Install Pocket Black Hole app (Apple & Android) on a cell phone. This app simulates how light is distorted by a black hole and is very fun.
5. Fill three cups with 1-½ c. water in each. Put on a cookie tray/cake pan to catch spills. Have paper towels/old towels handy in case of spills
6. Gather remaining items listed above and put them where you will be sitting for the class.