



# Logicals: Bubbles! Bubbles! And More Bubbles! Two Stories in One!



Explore your logic-based reasoning skills with this *Logical*. Figure out the answers by using the process of elimination. This puzzle is set up as a grid. There are five columns and four rows—one for each category and for each person’s name.

Each category contains several options. The goal is to eliminate all but one answer in each category under each person’s name to figure out the answers. Enjoy the fun activity at the end!

**Part 1:** It’s summertime and friends Oliver, Abigail, Joel, and Bradley are looking to have some outdoor fun! They want to make extra super soapy bubbles, the kind that makes the larger ones. With a little help from an adult, they come up with the supplies: liquid dish soap; glycerin; water; and utensils for making the bubbles (container with a lid, measuring cup and tablespoon, and a spoon for stirring). You will need to determine what each person is contributing to the bubble-making process.

**Part 2:** Bubble wands can be all shapes and sizes. Traditional bubble wands make great bubble makers, but with some creativity and household materials, you can make bubble wands in different shapes and sizes to make very large bubbles! In addition to making traditional bubbles, Oliver, Abigail, Joel, and Bradley want to try their hand at designing different wands. They plan out a list of items they will need: string, straws, sturdy sticks (or dowels), soft wire, and pipe cleaners.

**PART 1 CLUES:**

- Joel did not go shopping for container or dish soap.
- Abigail brought the dish soap.
- No glycerin for Bradley or Joel!



	Liquid dish soap	Glycerin (or corn syrup)	Container with lid	Utensils: Measuring cup, tablespoon, spoon for stirring
Oliver				
Abigail				
Joel				
Bradley				

**ANSWER**



**PART 2 CLUES:**

- Joel has a large ball of twine and long sticks.
- She brought pipe cleaners and beads to decorate.
- This person has a box of straws and brought glycerin (or corn syrup) to make the bubbles.

	Twine and sticks	Pipe cleaners and beads	Straws	Soft wire
Oliver				
Abigail				
Joel				
Bradley				



**ANSWER**

**Homemade Super Soap Bubbles**

(Adult supervision required)

- Liquid dishwashing liquid soap (like Dawn or Joy)  
If possible do not use "Ultra" dish soap
- Warm water (tap or distilled)
- Glycerin (or light corn syrup)
- Clean container with lid
- Bubble wands\*

**Step 1:** Measure about 6 cups of water into the clean container.

**Step 2:** Add 1 cup of the liquid dishwashing soap

**Step 3:** Slowly stir together until the soap is mixed in, trying to not let foam or bubbles form while you stir.

**Step 4:** Add 1 measured tablespoon of glycerin (or 1/4 cup corn syrup) to the soap solution and stir until it is all mixed together. If using an "Ultra" dish soap, double the amount of glycerin or corn syrup.

**Step 5:** Solution is ready to make bubbles. To make the best bubbles, place the lid on the container and allow the solution to set overnight.



**A note about bubble wands!** Traditional bubble wands and straws make great bubbles. Use your creativity to find other materials that would make great bubbles. Try taking a 12 inch piece of string and tie it together to make a circle. Place your fingers in the circle as you would to form a cat's cradle and dip the string into the bubble mixture. You can also make a large circle by using twine and stringing through two straws. Or, try bending soft wire such as floral wire into shapes and using beads to make handles!  
**What else can you find at home to make giant bubbles?**



**PART 1 ANSWERS:**

	Liquid dish soap	Glycerin (or corn syrup)	Container with lid	Utensils: Measuring cup, tablespoon, spoon for stirring
Oliver		Oliver		
Abigail	Abigail			
Joel			Joel	
Bradley				Bradley

**PART 2 ANSWERS:**

	Twine and sticks	Pipe cleaners and beads	Straws	Soft wire
Oliver			Oliver	
Abigail		Abigail		
Joel	Joel			
Bradley				Bradley

