

# Wacky Science

## SPOTLIGHT

The Spotlight for the Wacky Science Activity is for children to engage in creative Science activities that allow for them to have fun, learn, and engage with hands-on Science experiments.

## KEY FOCUSES:

1. Create opportunities for children to be HANDS-ON with the Science experiment(s)
2. Challenge the children to think creatively and use problem solving skills with the experiment at hand
3. Provide an engaging environment that allows children to work together and utilize teambuilding skills

## ACTIVITY #1: Magic Milk

### Set-Up:

- Set up 2-3 rectangular tables with plastic table cloths over them
- Have the children break up and spread out to the rectangular tables
- At each table, place the supplies needed for this experiment
  - Full fat milk, food coloring, dawn dish soap, cotton swabs, shape cookie cutters, Styrofoam plates, plastic cups
- Each child will get a Styrofoam plate, cotton swabs, cup of milk
- In the middle of the table, children will share the dawn dish soap, food coloring, and cookie cutters

### Instructions:

1. Start by having the children pour the milk into their baking dish or a paper plate. They will just need enough to cover the bottom of the dish/plate and then some.
2. Next, children will fill the top of the milk with drops of food coloring! Once the colors are dropped in, have them mix them all up! Also, have them sprinkle in their favorite color of glitter!
3. Now, the children will pour of little of dish soap into the bowl. They will then touch their cottons swab tip to the dish soap to coat it.
4. Children will bring the cotton swab over to the milk dish and gently touch the surface of the milk with the soapy cotton swab!
5. Watch the amazing reaction that happens! Ask children why they think that happens or how it works?
  - a. Science Explanation: Milk is made up of minerals, proteins, and fats which are susceptible to changes. When the dish soap is added to the milk those molecules run around and try to attach to the fat molecules in the milk.
  - b. Without the food coloring, you wouldn't see this! The soap heads for the fats creating the busting of color.
  - c. When there is no more movement, all the fat molecules have been found. Are there any more hiding?

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## Helpful Tips:

- Be careful not to use too much dish soap on the cotton swab – only use a little!
- Give each group of children some shape cookie cutters to use in their milk dishes. They can put food coloring on both sides of the shapes.

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## ACTIVITY #2: Balloon Powered Race Car

### Set-Up:

- Make sure to have some open floor space free for children to test out their Balloon Powered Race Cars
- After the Magic Milk experiment, remove all of the supplies from that experiment and set out the following supplies needed:
  - Tape, wheels (CDs, bottle caps, other round objects), axles (wooden skewers, pencils, straws, etc), straws, balloons, rubber bands, duct tape, scissors, binder clips, gold medal
- Each table will have a few children and the supplies listed above. Children are free to use any and all supplies they choose.
- Create a “racetrack” in the open space using masking tape by making two long lines of tape with a finish line

### Instructions:

1. Instruct the children to review the supplies laid out in front of them. Explain to them that the goal is to design, construct, and build a Balloon Powered Race Car.
  - a. The car that goes the furthest will win a special surprise!
2. Give the children 20 minutes to use the supplies to construct their Balloon Powered Car.
  - a. In order to construct the “balloon engine”, children will unscrew the cap of the water bottle, place a straw through the opening and a hole cut in to the middle of a side of the bottle, then tape the balloon opening around the straw.
  - b. When they are ready to “drive” their constructed Balloon Powered Car, the children will blow up the balloon using the straw.
3. Once all of the Balloon Powered Cars are built, create a fun race atmosphere and one by one have the children launch their car down the racetrack.
4. To finish, ask children what the following questions to get them thinking how they could have improved their Car:
  - a. What would you have done differently to your car?
  - b. Why do you think your car went as far/not as far as it did?
  - c. Do you think a lighter car or heavier car would go further?



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## Helpful Tips:

- This is an engineering experiment so use any office/camp supplies that you think would work – don't stick to just the list above!
- It may be helpful to construct a Balloon Powered Race Car to use for example for the children
- Introduce the different parts and uses of the supplies:
  - Pencils, dowel rods, straw for the axles
  - Bottle caps, CDs, round items for the wheels

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## ACTIVITY #3: Floam Slime

### Set-Up:

- On each table, set out the following supplies:
  - glue, water, mixing bowls, mixing cups, liquid starch, foam beads, and food coloring
- Each child will have their own mixing bowl in front of them to make slime in so they can all be hands on with the experiment.

### Instructions:

1. Children will start by mixing **½ cup of glue with ½ cup of water** in their mixing bowl.
  - a. Have campers mix well to incorporate the two ingredients.
2. Next, have the children select the color they want for their slime. When using the white glue, you may need extra food coloring for deeper colors, but start with a few drops at a time.
3. Once the food coloring is added, allow campers to choose the type of beads they want to use. Once the beads are chosen, have children add their foam beads to the slime to make the floam! (See 'Helpful Tips' for a good ratio)
4. Now, time to **add ¼ cup liquid starch!** This may be a good time for you or a volunteer to assist children with measuring out how much is needed.
5. Lastly, give each of the children a spoon to begin stirring. The slime will begin to form immediately as you add the starch to the glue mixture.



### Helpful Tips:

- Adding water to the glue will help the slime ooze more once the activator is added. The slime will gain volume but also will flow more easily.
- Children won't need to use colored foam beads if food coloring is used so white beads will work just as well.
- A good ratio for the floam is anywhere from 1 cup to 2 cups of foam beads. All dependent on how the child wants the foam slime to feel.

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## HUDDLE

### **Activity Verse: 2 Corinthians 5:17**

“Therefore, if anyone is in Christ, he is a new creation. The old has passed away; behold, the new has come.”

### **Activity Truth: In Christ, I am a New Creation**

What did everyone think of the activities we did today?

One thing I loved was how we took normal household, everyday items and were able to create something AMAZING with them! It was so cool seeing the creations each one of you made. Give examples of the different things you created in the activities.

Did you know that each one of you are a creation of God? God has created each one of you in HIS image. And if you know God and live a life for him, you are a new creation in Christ. The old “me” and the old “you” pass away when we accept the Holy Spirit into our lives. We are a NEW creation that has the same power in us that raised Jesus from the dead.