Science of Magical Parties



ENGLISH SHORT SCRIPT

Portable Science Show for Kids
Age: 4-7 years old
Duration: 30 minutes

Elements of the script:
Each section should be about 5 minutes long. Interaction with the audience in italics

Intro	**Instructions:** During the show, you must stay in this area and do not approach the stage. **Story:** This is the story of a scientist named [name]. After extensive research at CERN, he/she has finally unlocked the secret of organizing scientific and fantasy parties. NAME is absolutely delighted and has decided to come and share this discovery with the children [of the Jardin des Particules, etc]. *Do you know the children [of the Jardin des Particules]?*
Garlands	**History:** First, we're going to need decorations. For example, this garland could be attached. Oh but, all triangles have the same color! It's sad. We're going to repaint it. *Are you ready?* **Experiment:** Paint the fairy lights with water, a solution of citric acid, and a solution of sodium carbonate. **Explanation:** these garlands are made of a special paper that changes color depending on the liquid you put on them. **Interaction possible if** the audience is small: it is the children who come to paint the garlands, alone or in pairs.
Balloons and liquid nitrogen	**History:** What would also be nice would be to have lots of multicolored balloons. On the other hand, I don't know where I put the balloons. Damn! *Do you have any idea where they might be?* Oh yes, they are here! To get them back, I'm going to need my goggles. **Experiment:** take out a garland of balloons from the nitrogen dewar that has been hidden there beforehand. Once out, the balloons inflate again. Then, dip a long balloon in nitrogen and take it out again, to show that the balloon was inflated originally. **Explanation:** In this vase, there is an EXTREMELY cold liquid. So cold that if we touched it, it would burn us as if it were hot. When you immerse an inflated

	balloon in liquid, the air inside takes up much less space, and that's why the balloon deflates. When it is taken out, the air takes up space again, and the balloon inflates again. **Possible interaction:** *you will show me with your hands what you think will happen before I dip the long balloon in nitrogen, and then before I take it out.*
Pink and liquid nitrogen [optional]	**Story:** Oh, and flowers! You could also decorate with flowers! Here's a pretty rose, I'm going to put it in this vase. [*Put her upside down in the dewar and wait for a reaction from the children].* Oops, I put it upside down! Now, the top of the rose is very cold. *Knock it down, or hit it against the table. Put a new flower back in the beaker of water.* **Experiment:** Dip a rose in liquid nitrogen, then take it out and break it. **Explanation:** In the dewar, the rose cooled so much that it froze. It has become extremely hard, and fragile! That's why it broke into a thousand pieces.
Water and liquid nitrogen	**Story:** now I have to take care of the drinks. So, I have a big bucket of water here, but it's a little warm. I'm going to cool it down with the liquid nitrogen. *What do you think will happen?* **Experiment:** Pour nitrogen into the bucket of water. After a little while, take out pieces of ice. **Explanation:** When liquid nitrogen is poured into water, the humidity in the air turns into a large cloud above the bucket. And when you cool it down enough, the water turns into ice cubes.
Bottle and caps	**Story:** okay, it's time to put away the nitrogen. I'm going to put a little bit of it in this bottle and close it. **Experiment:** put a little nitrogen in the bottle, then close it with the cap. The cap will pop after a few seconds.

	Explanation: when it warms up, liquid nitrogen takes up more space. This is what happens in the bottle: after a very short time, it no longer has enough space and it pushes against the cork. That's why the cork pops! **Proposed interaction:** *who would like to redo this experiment?*
Dance floor	**Story:** oh, we're missing the most important element of all: the dance floor! We're going to make a cloud again like before. And then, everyone has to get up to dance to music! **Experiment:** Put liquid nitrogen in a container of water to create a large cloud. Install colored LEDs and turn on the music. Invite the children to get up and dance.