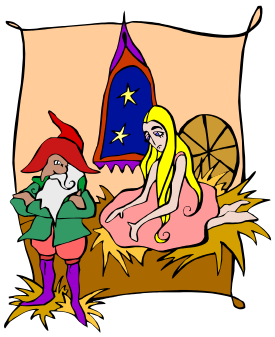


RUMPLESTILTSKIN
retold and illustrated
by
Paul Galdone

When a miller boasts to the king that his daughter can spin straw into gold, a strange little man offers to help her *if* she will do something for him in return. First he asks for her necklace, and then for her ring. When she runs out of jewelry, he agrees to help her if she will give him her first born child if she becomes the queen. When the king sees all the gold, he marries the miller's daughter and she does indeed become the queen.

A year later Rumplestiltskin comes for the child; the queen is devastated. He says he will give her three days to discover his name. If, at the end of the three days she cannot guess his name, she will have to give up her child. As we now know, the little man's name was Rumplestiltskin. The queen was able to discover it, and they all lived happily ever after except Rumplestiltskin.

To transition to these activities, remind the children of Rumplestiltskin's special talent, the ability to turn straw into gold! Tell them, "A famous toy company will give us "gold" if we can create a toy a child can make using ordinary household materials. Practice with either or both of the recipes below. Encourage the children to think up a name for their creation/toy (my personal favorite is "Magic Muck"!).

MATERIALS: Activity #1. 1 box cornstarch for groups of four children (or one box per class, if you'd prefer to demonstrate this one). Adjust the size of the bowl/bowls accordingly), half a box for each pair (you could do this as a demonstration and have the children experience it in pairs), 1 small plastic/foam bowl per pair, water (amount may vary), cups to pour water with (using measuring cups would provide a useful need for measuring skills), metal spoons (or very strong plastic -- they tend to break!) Hands are the best, but it does get messy.
Activity #2: Per child: 1 Tablespoon liquid starch, 2 Tablespoons white glue, food coloring (optional), plastic Easter egg or zip bag.

ACTIVITY #1. When my children were in preschool, we called this concoction "pud", a nonsense words for really odd-acting stuff. I think you will be surprised by the mixture you make; I had as much fun with it as my children did. Try it ahead of time yourself so you won't act surprised. (***I have described its behavior below. Try it yourself before

you peek!! Don't be afraid to get your hands in it.) Have the children work in pairs. This is a good activity to do outdoors if you can; stirring the water and cornstarch together can get VERY messy! Have them mix the cornstarch and water together in the small bowls. Cornstarch and water can be hard to mix; it becomes lumpy very easily. Have them add the water very SLOWLY. Have them experiment with their mixture. Take them through the steps below after you have given them enough time (at least 5-10 minutes) to try things on their own. Keep the bowls in the classroom for a few days and have them observe changes, if any. You might wish to try the activity the way it is described in the accompanying article from the LA Times, but the element of the surface tension will be lost. Maybe it would be fun to do both. This article also provides the reason why the "pud/goo" acts as it does.

***If the mixture is right, there may be a thin film of water on top. If you touch it with a spoon, it will feel very hard, and almost impossible to break through. This is some form of surface tension. When you can finally break through, you will actually be able to see a fissure for a little while. Put some in your hand and let it run through your fingers. Pick up some more, and wrap your fingers into a fist around it; it will become dry and powdery but if you put it back in the bowl it will become "liquid" again and blend back in.

ACTIVITY #2. Try the "Funny Putty" activity as described on the accompanying page.

STANDARDS:
BSL: 1.1, 1.3, 1.5, 1.7, 6.2, 11.3, 12.1, 12.3, 12.6
NCTM: 4d, 10a, 10b
SCS: A1, B1, D1, H3, H4

Rumplestiltskin. Retold and illustrated by Paul Galdone. NY: Clarion Books, c1985. ISBN#08991 92661

The Los Angeles Times has a column in their Education Section called **California Classroom**. In the March 22, 2000 issue this experiment was offered as a learning link to the Discovery Science Center in Santa Ana, www.discoverycube.org. Here is the explanation for what happened:

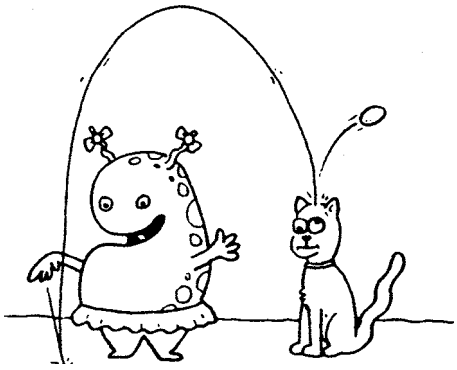
"Cornstarch and water do not mix completely. The cornstarch rides around, attached to the water, but not part of it. While this is happening, the mixture is a slushy goo.

When pressure is applied to the mixture, the water molecules are forced in between the starch particles. The starch particles can then touch each other and link together to form a solid.

When the pressure lets up, the starch rides on the water again and returns to goo."

FUNNY PUTTY

This stretchy, rubbery putty bounces like a ball and picks up newspaper comics.



WHAT YOU WILL NEED:
1 Tbs. liquid starch
Food coloring
2 Tbs. white glue
Plastic Easter egg or zip bag

HOW TO CONCOCT IT:

1. Mix white glue and food coloring together in a small bowl.
2. Pour liquid starch into a second small bowl. Slowly pour the glue mixture on top of the liquid starch.
3. Allow the concoction to stand for 5 minutes or until the glue absorbs the liquid starch.
4. Remove putty from bowl and knead. (Note: *At first this mixture may look as if it's a mistake. but it isn't. The more you knead the putty, the better the consistency will be.)*
5. Store Funny Putty in a plastic Easter egg or zip bag.

CONCOCTION TIPS & IDEAS:

♦ Press Funny Putty down on newspaper comics or pictures printed with an ink jet printer. Slowly pull the Funny Putty off of the paper. The picture will transfer magically onto the putty.
♦ Roll your Funny Putty into a ball and bounce it!

Taken from The Ultimate Book of Kid Concoctions by Danita Thomas, John E. Thomas, and Danita Pagel, c 1998, p.16.