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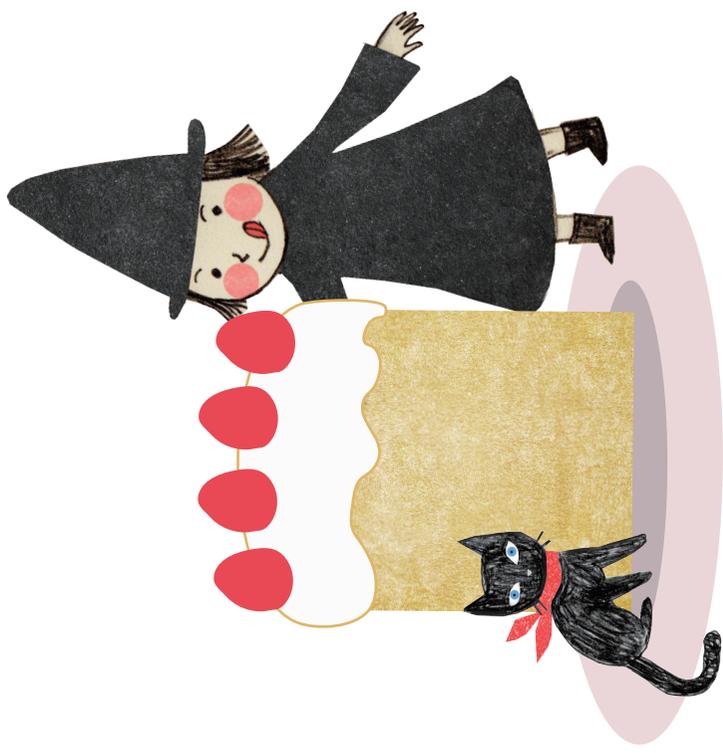
My Box Of STEAM TECNOLOGY

SCIENCE IN THE KITCHEN

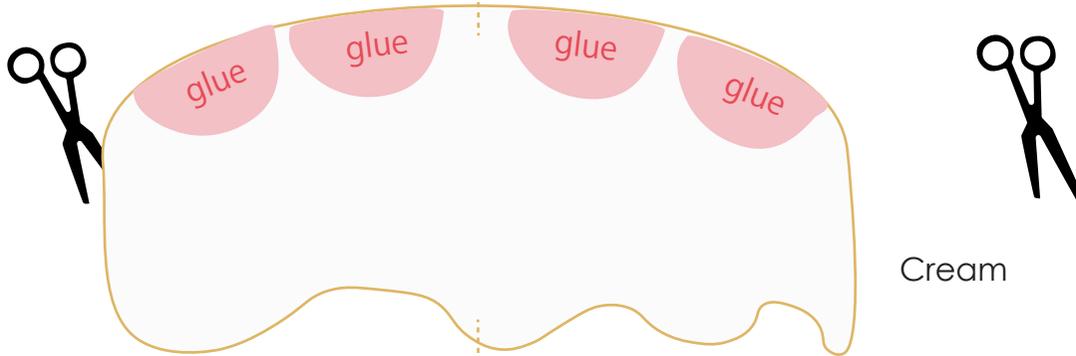
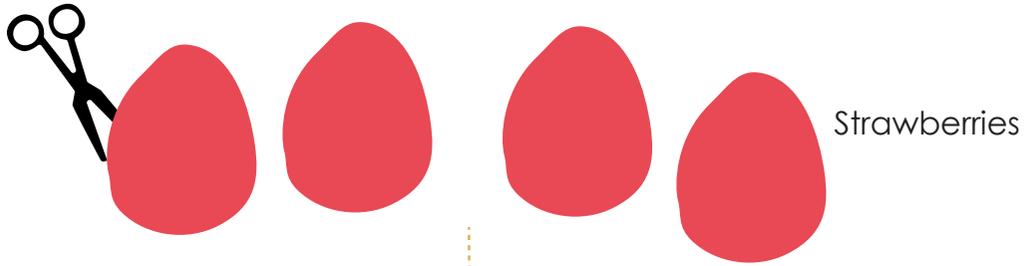
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Materials for the cake top



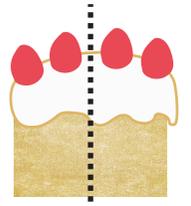
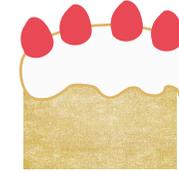
Recyclable

CREATING A POP-UP CAKE CARD!

For the cake top



2) Assemble the materials with glue.



1) Cut out all figures.

3) Fold it in half.

For the BASE

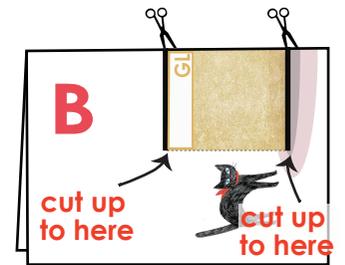
1) Cut in half.



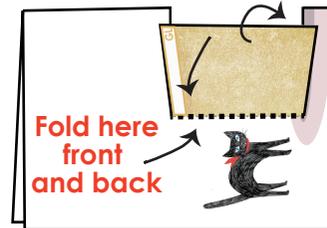
2) Fold both in half.



3) Cut the lines.



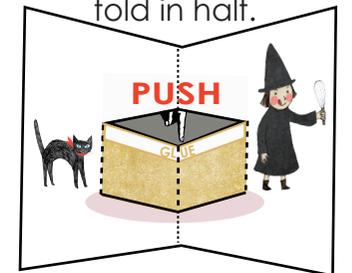
4) Fold the dotted lines.



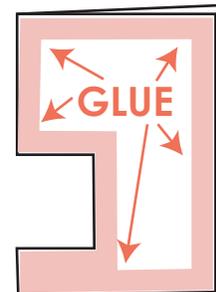
5) Open the sheet.



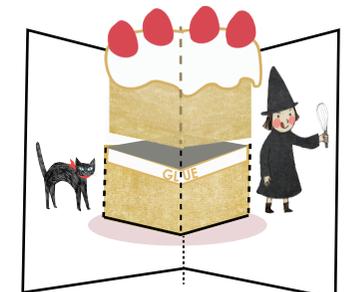
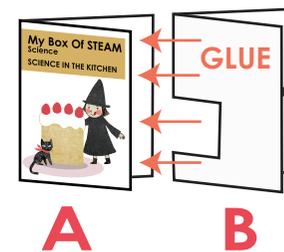
6) Pushing the part of cake from behind, fold in half.



7) Result. Put glue on the pink line and behind it.



8) Glue A and B. Open the sheet.



9) Glue the cake top.

AS LIGHT AS LIFE

At the edge of the forest lived Sofronia and her black cat. Sofronia considered the forest to be her personal larder; she knew the plants that grew there, the hopping rabbits that ran through it. She knew the fish in the creeks, with whom she stopped occasionally for conversation. For her, the forest and its creatures had no secrets. But first of forest, there was her garden where she grew numerous plants and essences. Every day at sunrise she would go out with a basket to gather everything she needed to make her decoctions, elixirs and delicious cookies.

Sofronia, who stood in front of the oven and its stills all day long, almost always wore black so that she did not have to worry about the fumes and coal that would have otherwise soiled her dress had it been white or coloured.

She wore a long black hat on her head so that even in the midst of a noisy and vociferous crowd, they could easily identify her, reach her, and buy whatever they wanted.

On full moon nights, Sofronia would climb to the roof of her house together with her cat and stand spellbound looking up at the star-studded sky. Sofronia was always busy responding to the thousands of requests, in front of her store there were always lines of customers eager to taste her delicacies.

This kneading, distilling, and rooftop climbing of hers, however, did not please everyone, especially the other bakers who did not sell as much. So, they began to spread strange rumours, that Sofronia was actually a witch, that she climbed the roof at night and took flight from there, that her distillates and cookies contained magic powders.

Sofronia didn't mind and kept kneading and experimenting. Honey, eggs, flour and cream of tartar and her cakes became fluffy, fluffy. So soft that you could have fallen asleep on them...if someone before you hadn't eaten them, bite after bite.



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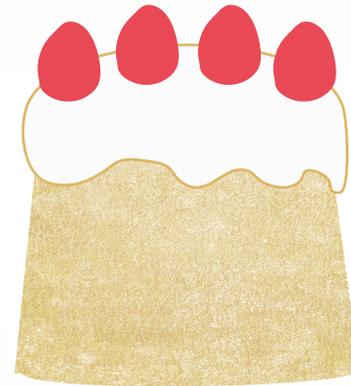
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One day as she stood all intent on kneading carefully dosing the ingredients, she heard through the woods, coming a crowd shouting, "Let's get the witch! Let's get the witch!" To her fright instead of just one spoonful of yeast, the whole sack fell into the dough.

The dough had like a gasp. A kind of sobbing and then slowly it began to swell more and more...in the meantime, however, the crowd armed with sticks, had opened the door forcing Sofronia out...the whole village was there around her saying strange things.

Meanwhile, the dough that Sofronia had put on the fire was getting bigger and bigger, growing and increasing in volume, occupying the small room, then slowly began to come out, overflowing through the door and windows, surrounding people. "Did you see that!" Some people shouted, "She is a witch! What strange magic is this?" Others said, trying to instil fear. However, some more than frightened were curious to taste that voluminous dough, from which rose a delicious and inviting aroma.

They peeled off a small piece at first, it seemed like peeling off pieces of cloud and, in their mouths, it simply melted, it was so good and so soft that they could not stop eating it. "Whoever makes such good dough cannot be a witch!" they said in chorus with their full mouths. Curiosity convinced even the opposing bakers, who, upon hearing that such delicious cake, laid down their sticks. It was the biggest and fluffiest cake they had ever seen. "It's not magic but just a little yeast!" Sofronia said. Since then, every year at the beginning of summer, Sofronia bakes the same giant cake, and the party lasts for days on end, down to the last crumb.



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THE MAN WHO DISCOVERED THE BACTERIA OF LIFE

Louis loved to observe the world around him. Above all, however, he loved to paint it: “When I grow up,” he thought, “I will be a painter or a teacher of painting.” Science subjects did not interest him, even the grades for his science diploma were not particularly good, so no one would have thought that a few years later, in 1847 he would graduate with a thesis in physics and chemistry. Louis Pasteur thus became a professor at the University of Science in the city of Lille. Louis continued to study, and his studies and discoveries revolutionised not only the scientific field but also the medical field.

One day, when he was still a student, while observing under a microscope some tartaric acid contained in grape must, he noticed that the peculiar shape of the crystals, so similar to the asymmetrical shape of the molecules, made him think that what he was observing was a living organism... A strange feeling went through his heart, like a tremor of joy and wonder: “Incredible!” he thought as he continued to observe that microscopic organism full of life. A few months passed and a distillery called him. “Good morning Mr. Pasteur, we would need your help to remove impurities from our wine; especially lactic and acetic acid.”

In those days it was still not known how the alcohol in wine and beer was generated. Louis discovered that this substance was due to special fermenting cells...yeasts: microscopic single-celled fungi that live in colonies reproducing by budding that “destroyed” the natural sugars in food by transforming them.



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Louis Pasteur

(1822 – 1895)

Louis Pasteur was a French chemist, pharmacist, and microbiologist renowned for his contributions to the understanding of yeast and its role in fermentation, including its application in bread-making.

"That's what happens!" he exclaimed all excited.

"The ferments reproduce even in the absence of oxygen, releasing carbon dioxide, which thus produces ethyl alcohol."

Louis was fascinated-that microscopic substance could be the origin of life! In the vats of the distillery where the wine was left to rest, in reality, the grapes were not resting at all: they were bubbling and fermenting - "Blurp! Blurp! Blurp!" so many bubbles were rising to the surface of the thick liquid... releasing an intense odour into the air...

"I will call the fermentation bacteria anaerobes, capable of living without oxygen. However, there are others that need to "breathe" instead-those I will call aerobes."

As he continued to study, he discovered that there were real battles among the bacteria, that there were adversaries and antagonists, and that there were even bacteria that could stop fermentation, destroying the wine yeasts.

"This is a great harm to us!" complained the cellarers in the distilleries. Louis discovered that these bacteria, unlike yeast, died simply by heating the must to 55° C for a few minutes. He gave this technique its name: "pasteurisation," which he also used for milk to allow it to last longer.

These discoveries led him to even more important ones, for microorganisms were not only the cause of life, as in ferments, but also the cause of death as in gangrene and septicemia. In his life, he was forced to face many great sorrows such as the loss of three of his five children, and perhaps that is why he worked so hard to succeed in finding a vaccine that could cure disease. Louis Pasteur discovered and invented the vaccines that we still use today...and that save many lives and eradicate deadly diseases.

Louis, throughout his life, had found the wonderful world of microorganisms, loved them and studied them. He was fond of telling his students that science laboratories are sacred places that must never be lacking. Science laboratories are the temples of science that will hold open the doors to mankind's future, because only through science and laboratories where to experiment can mankind improve, grow and prosper. By learning from nature that holds the secrets of life and harmony...while too often a man is focused on his own barbarism, fanaticism and destruction.



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