





Dear Detectives!

For the Children's Day I would like to give you this mini e-book full of **inspirations** to spend your **time together with kids**, at home and outside..

Experiment together and isolate **DNA from a strawberry** in your home lab. It's not difficult, the whole instruction is on the next pages.



I also want to show you three **detective-spy games** that you can play inside or outside. Go through the spy's web, make your own detective phone from cups and a string, and check how strong your senses are.

Maybe you will find some **mysterious evidence** while playing at home or outside. Animals' prints, cones, hairs, shoe-prints. Tag them with a number and take a picture. **Name tags** can also be found in this e-book. Print them, excise them and fold so one side has a white background and the other one black. The background of the number tag should contrast to the surroundings.



If you have any questions or want to send a detective message, mail: [info@detectiveyou.com](mailto:info@detectiveyou.com)

Check out **Detective You's** website and Facebook:



[www.detectiveyou.com](http://www.detectiveyou.com)



[www.fb.com/detectiveyou.poland](https://www.facebook.com/detectiveyou.poland)

## What is DNA?









This is a special genetic code. It can be found in your body and it determines eg. the eye or hair color. Every person has different DNA just like fingerprints.

This code is very long, it forms a double, twisted string, and its elements can't be seen with a bare eye. But the whole DNA can. Today you will see a strawberry's DNA!

## How detectives use DNA in investigations?

Every person's DNA is unique and it is present in different parts of our body, eg. in saliva, blood or hair, that can be found at the crime scene. When detectives find a mysterious object, they look for the trace of DNA. If they find it, they compare it with the DNA of the suspects..

### Prepare:

-  1 strawberry
-  3 glasses
-  2 plastic bags
-  spoon
-  coffee filter or gauze
-  a toothpick or a skewer
-  shampoo (a few drops)
-  alcohol (at least 60%) or sanitizer with alcohol



**Remember about safety!**  
**You can wear gloves and protective goggles/visor. Like Pingi :)**



### How to make the "cell destroyer"?

Dilute a few drops of shampoo in 1/4 of a glass of water. Stir. This liquid will destroy the cells and let the DNA go out.



# DNA TRUSKAWKI



1. Put a strawberry in a big plastic bag. Close it tightly..

2. Mash a strawberry. Finish when it has the smooth consistency.



3. Add 1/4 glass of the cell destroyer. Squeeze gently.

4. Pour the red mousse through the coffee filter (or gauze) to a glass.



5. You can squeeze it gently. Be careful to not damage the filter. .

6 Add 5 spoons of alcohol or sanitizer



7. Wait until a slimy layer appears on top. It's DNA!!!

8. Take the DNA out, using a skewer, put it in a small plastic bag. **Don't eat it!**





# DETECTIVE GAMES

## Spies' phone

Prepare two paper or plastic cups and a string. Make a hole in the bottom of each cup, Insert two ends of the string inside the holes and tie them. Remember that a string has to be stretched and strained, this is the way how the sound can be moved across the string. Have fun talking to each other.



## Spy's web

Prepare a string, if its color is fluorescent, it will look like a laser beam. Wrap the string around trees or furniture. Now every detective has to walk between the laser beams and touch them the fewest times possible. Remember to wrap the string around stable objects to not cause the accident.



## Detectives' senses

Prepare a few products that have a characteristic smell or taste. The rest of the detectives need to be blindfolded. They taste, smell and try to guess the name of the product. Make sure if none of the detectives are allergic to anything. If yes, exclude those products from the game.



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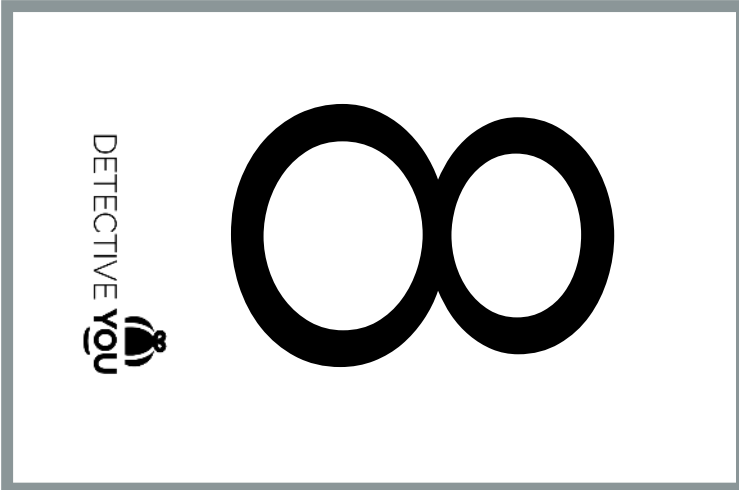
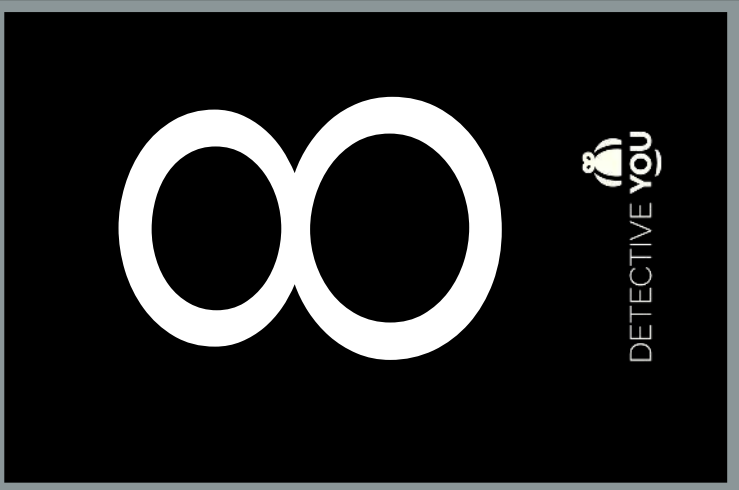
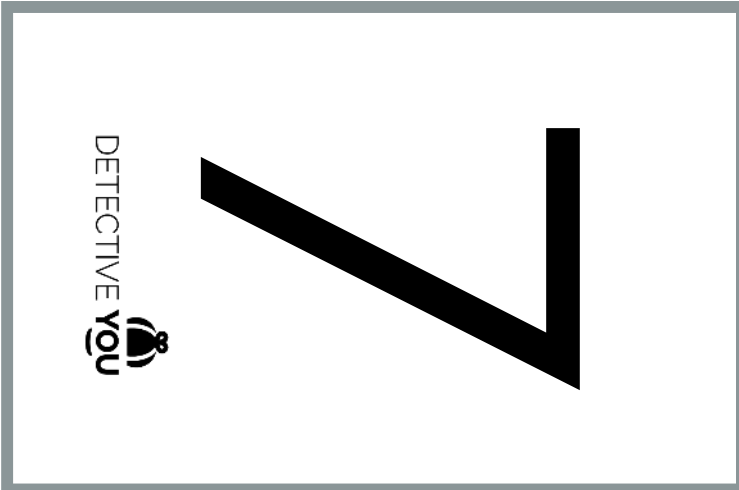
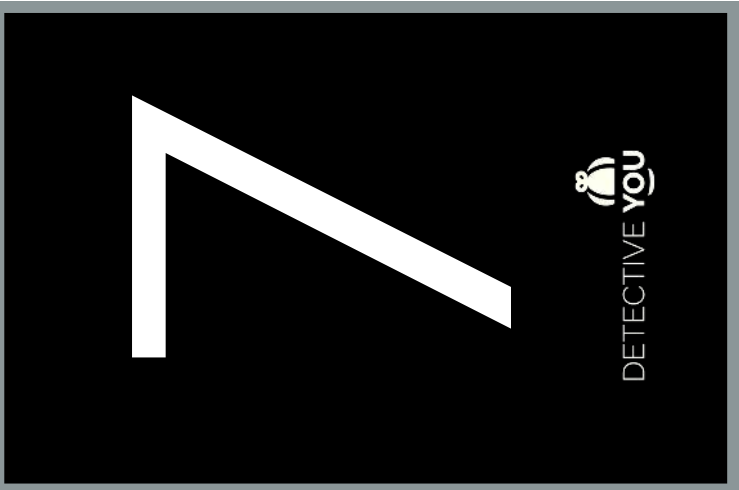
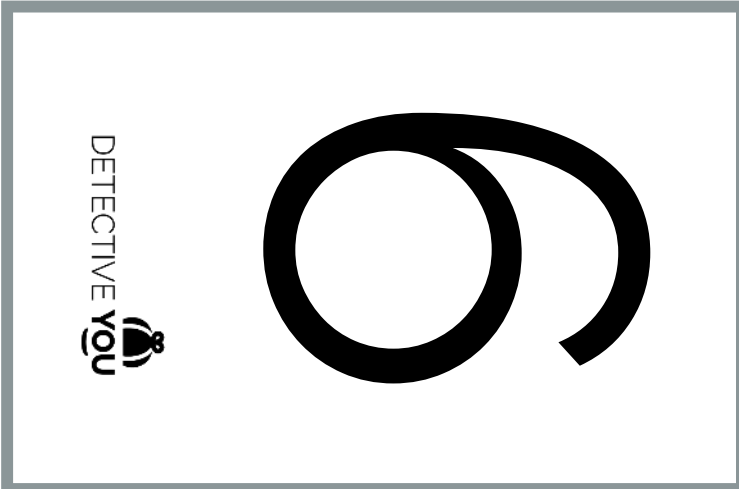
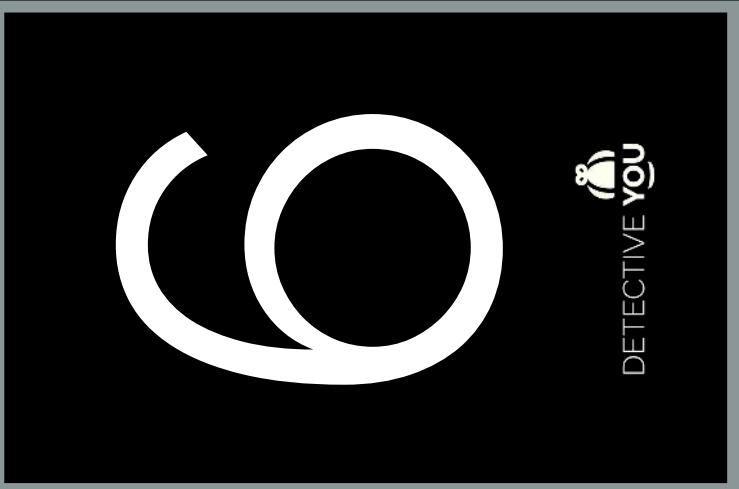
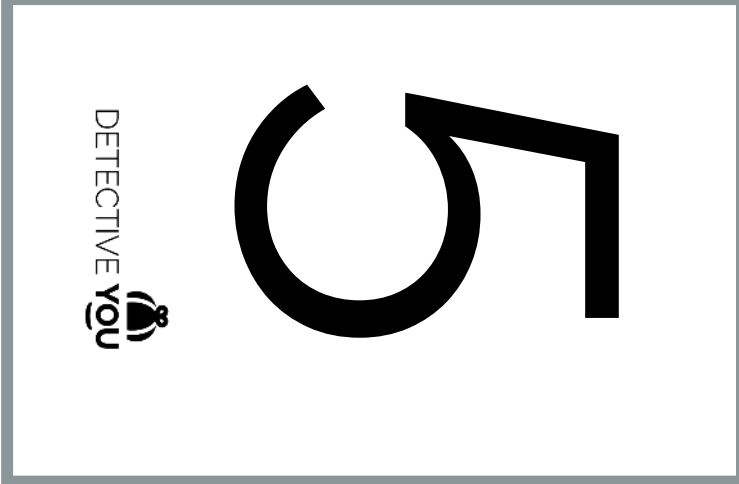
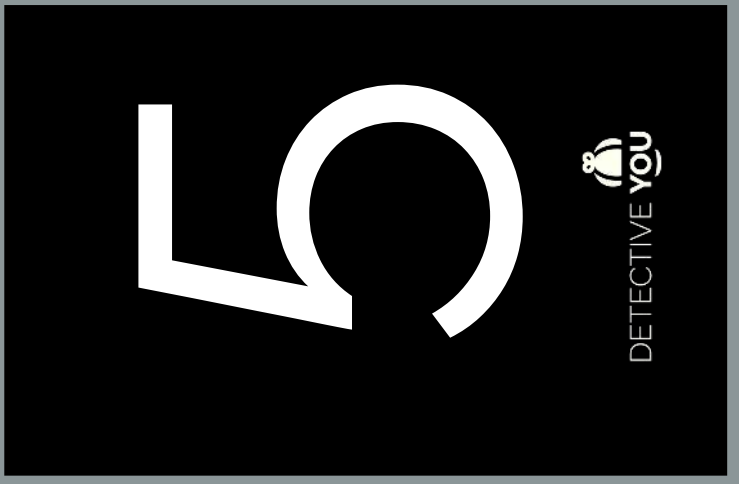
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