

Lilika

×

WHAT WOULD HAPPEN IF A PLANET FELL INTO A BLACK HOLE?



#### What is a black hole?

Imagine a hole in space that absorbs all the light that reaches it. That's a black hole! Black holes swallow everything, light and celestial bodies alike. Scientists still don't know a lot about black holes but they do have an idea what might be happening inside the black hole. Everything becomes super compact and tightly packed together – just like two metres of DNA that fit into a tiny cell; but black holes make it even more compact than that!

Here is an example! A planet, roughly the size of our Earth (which we know is pretty BIG), falls into a black hole – as it falls the gravity is so strong that everything starts becoming dense and tightly packed. Soon the whole HUGE planet and everything in it are no bigger than a pea!



#### ZauberLab

Lilika

The gravitational force of black holes is many times more than what we experience on our planet Earth. The closer we are to the black hole, the stronger it pulls. The part of the planet that is closest to the black hole would be pulled stronger than the furthest.



This strong pull deforms the planet making it look like an egg. Gradually it starts getting pulled stronger until the planet turns into several strands, just like spaghetti... Funny enough, it's called Spaghettification! This stone spaghetti gets more tightly packed and thinner until it looks as if it has disappeared!





# WHAT IS GRAVITY?

### You will need:

- Magnet
- < Metal paper clips

### <u>What to do...</u>

- 1. Put the magnet on a table
- 2. Slowly bring the paper clip closer to the magnet
- 3. What happened?





Just like the paper clip getting pulled by the magnet, the gravitational force (the force that keeps us standing on Earth) of a black hole is super strong and it gets stronger as something gets closer to it!... Now onto the BIG question...

## WHAT HAPPENS TO A PLANET WHEN IT GOES NEAR A BLACK HOLE?

You will need:		<u>What to do</u>	
•	Cooked spaghetti	1.	Hold 3-4 spaghetti noodles in your hand using only the tips
•	Hungry Little Scientist		of your fingers.
		2.	Open your mouth (black hole) wide and look up at the ceiling.
		3.	Lower the spaghetti ends into your black hole from high up.

4. Now leave the spaghetti in your mouth and begin slurping it in... At the end, do a quick slurp! Slurrrrrp!

After the spaghettification of the planet, it gets pulled into the black hole just like you slurped your spaghetti into your mouth!.

**Content Created and Promoted By:** 



Lilika Zauberlab <u>www.lilikazauberlab.com</u> info@lilikazauberlab.com



Rotor Lab <u>www.rotor-lab.com</u> info@rotor-lab.com