



STEC@UKZN

“Lock Down”



City, Country, River

DEAR FAMILIES

Welcome to the third issue of the Stec@UKZN “Lock Down”. We hope that you enjoyed the first issues and had a great time with all the activities.

City, Country, River is a paper and pen game for an unlimited number of players.

How to play

Everybody participating gets an empty piece of paper and a pen.

Divide the paper into columns (1 column for each category and an additional column for the points). You should have at least 3 categories (e.g. city, country, river), but you can include more categories if you want (e.g. animal, plant, famous person etc.). See example below.

City	Country	River	Name	Animal	Points

Choose a letter of the alphabet that every word in each category has to start with. You can do this for example by citing the alphabet in your head and somebody says “stop”. The letter reached will be your starting letter. Once you have the letter the time starts. You have 2 minutes to write down one answer in each column. Once the time is up, you compare the list. If you have the same city, country or river listed as someone else, you get 1 point. If your answer is different from everybody else’s answer you get 2 points. If you are the only one with a correct entry in the category you earn 3 points.

Example: Letter C

Player 1

City	Country	River	Name	Animal	Points
Cape Town	China	Caledon river	Charles	Camel	9

Player 2

City	Country	River	Name	Animal	Points
Cape Town	China		Chuma	Cat	6

Join us next Thursday for our “live” workshop on Candy Science!  
For more information contact us via email on: [stec@ukzn.ac.za](mailto:stec@ukzn.ac.za)



WHAT ANIMAL AM I?

I have eight legs.  
I hunt in the dark and mainly eat insects.  
I can survive several months without food.  
I glow when you shine a UV light on me.  
I survive temperatures ranging from freezing to desert heat.  
I even appear as a 435 million years old fossil.  
I can be found on all continents except Antarctica.  
I use pincers to catch my prey.  
I can sting, but only about 25 of my species can kill humans.



WHAT FRUIT OR VEGGIE AM I?

I am a berry.  
You know me as a yellow fruit. But I can also look green, red, purple, or brown.  
I can float in water.  
I come with my own packaging.  
I am usually long and curved when ripe.  
I contain Potassium that makes me slightly radioactive. But don’t worry I am safe to eat.  
I grow in bunches.  
I am famous because I am on an album cover designed by Andy Warhol.



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## CHALLENGE

### Detective T and the Stolen Handbag



At about 10h00 in the morning, Dudu’s handbag got stolen at the bus stop in Westville. The thief passed Dudu and pulled the handbag out of her hand. Dudu remembers that the thief drove off in a red car. The very next day Detective T investigates the case. He takes 3 suspects into custody and impounds their cars. All suspects denied being involved in the theft, but one of them must be the culprit. The question is to whom does the red car belong? Who stole the handbag?

Can you help Detective T? Look at the evidence, fill in the table below and identify the culprit!

	Suspect 1	Suspect 2	Suspect 3
Name:			
Car type:			
Car colour:			

#### Evidence:

1. The name of one suspect is Sam.
2. Another suspect drives a VW.
3. A Toyota stands right next to the VW.
4. A Renault stands on the left side of the table.
5. The Renault is not white.
6. Mike’s Toyota is white.
7. The suspect Paul is in the middle of the table.
8. Sam drives a blue Renault.

Adapted from: <https://www.raetseldino.de/detektivraetsel-kinder.html>



## “ESSENTIAL GOODS” EXPERIMENT Sink or Swim

#### You will need:

- 2 glasses
- 1 tablespoon dishwashing liquid
- Water
- Paper



### Participate and Win

*“THINGS THAT I WANT TO DO  
AFTER THE LOCKDOWN”*

For more information visit [www.stec.ukzn.ac.za](http://www.stec.ukzn.ac.za)  
or e-mail us [stec@ukzn.ac.za](mailto:stec@ukzn.ac.za)  
Competition ends 31 May 2020

#### What to Do:

1. Fill both glasses with the same amount of water.
2. In one glass, add about 1 tablespoon of dish washing liquid and gently stir the solution. (Try different amounts of dishwashing liquid later and see if it will make any difference).
3. Make two identical balls of paper. They need to fit into your glasses of water.
4. Gently drop one paper ball into the plain water and drop the other paper ball into the glass with the dishwashing liquid. What do you think will happen?
5. You will quickly see that the paper balls react differently in the 2 glasses. One paper ball begins to sink while the other sits on the water surface. (If none of the paper balls are sinking what do you think you have to do?)

#### What's Happening?

Although one paper ball is floating on the water while the other ball sinks it is not only about density. What you see is a difference in the surface tension of the water. Dishwashing liquid is a compound that lowers the surface tension of a liquid.

This lower surface tension has two direct effects when it comes to the paper ball. First, the reduced surface tension means that the paper can't sit on the water's surface, allowing more of the water to come in contact with more of the paper. Secondly, it changes the property of the water. Water is more likely to soak into the porous paper, making the paper much denser and causing it to sink.

Adapted from:  
<https://www.stevespanglerscience.com/lab/experiments/sink-or-swim-surface-tension/>

#### Solution:

What animal am I: Scorpion  
What fruit or veggie am I: Banana  
Challenge: Paul is the culprit.