UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

STEC@UKZN

Issue 6

"Lock Down"

DEAR FAMILIES

Welcome to the sixth issue of the STEC@UKZN "Lock Down". Missed the first issues? Find them at http://www.stec.ukzn.ac.za/lockdown_activities.aspx

Join us this Thursday for our "live" workshop on "Balloony Science!"
For more information or to register contact us via email on: stec@ukzn.ac.za

WHAT ANIMAL AM I?

I have six senses: sight, taste, smell, hearing, touch and electro-reception.
I don't have bones.
I appeared around 450 million years ago.
My skin feels like sandpaper.
I live in every ocean in the world, some of me can even survive in freshwater.
I can have many rows of teeth.
We have names like, angel, carpet, saw, goblin, hammerhead, bull, lemon and many more.
I am a celebrity and feature in many films.
A famous Durban sports team is named after me.

WHAT FRUIT OR VEGGIE AM I?

I am part of the grass family.
My colours are mostly blackish, bluish-gray, purple, green, red, white and yellow.
I was first domesticated around 10 000 years ago.
I can be made into plastics, fabrics, adhesives, and many other chemical products.
My ear is wrapped in a husk.
You can find me in more than 3 000 products, including cereal, peanut butter and soft drinks.
My popped version is a favourite food in cinemas.
I am the samp in the samp and bean recipe.

Beetle game

In turn, the players roll a die to determine which body part of a beetle they are allowed to draw. And of course, the first player to finish drawing their beetle wins.

What you need.

- One six sided die
- Paper and pen/ pencils for each player

How to Play:
The part of the beetle that can be drawn is decided by the roll of a die:

6 is for the body, you have to draw one.
5 is for the head, you have to draw one.
4 is for the wings, you have to draw two.
3 is for a leg, you have to draw six.
2 is for an antenna, you have to draw two.
1 is for an eye, you have to draw two.

Just to make it a bit more complicated… You need to draw the body before any other part can be drawn. You can attach the head, legs or wings to the body. But before you can draw the antenna and eyes, you need to draw the head.
You threw a six but you already drew a body, or another 4 but you already drew both wings? Sorry, it is the other player's turn. The winner is the first player who draws all the required parts.

Adapted from : https://en.wikipedia.org/wiki/Beetle_(game)

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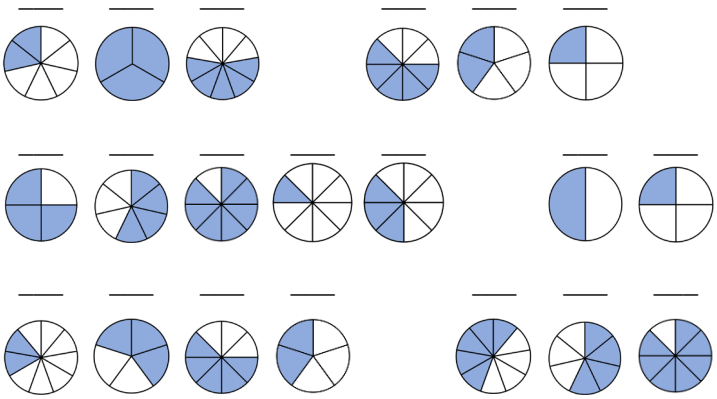
MATHEMATICS CHALLENGE

Match the fraction picture to the written fraction
Can you crack the code?

A	B	C	D	E	F	G	H	I	J
$\frac{3}{3}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{3}{5}$	$\frac{4}{5}$

K	L	M	N	O	P	Q	R	S	T
$\frac{1}{6}$	$\frac{1}{7}$	$\frac{2}{7}$	$\frac{3}{7}$	$\frac{4}{7}$	$\frac{5}{7}$	$\frac{6}{7}$	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{5}{8}$

U	V	W	X	Y	Z
$\frac{7}{8}$	$\frac{1}{9}$	$\frac{2}{9}$	$\frac{4}{9}$	$\frac{5}{9}$	$\frac{7}{9}$



Example: =  6/7➔ Q

Idea: https://www.teacherspayteachers.com/Product/Fraction-codes-36-distance-learning-worksheets-for-Numeracy-5324117

"ESSENTIAL GOODS" EXPERIMENT

Floating egg

You will need:

- 1 large tall glass (large enough for 250 ml of water)
- 250 ml warm water
- 1 egg
- 3 Tablespoons salt
- 1 Tablespoon

What to Do:

1. Fill the glass with lukewarm water and carefully use the spoon to drop the egg into the water. *Will the egg sink or float?*
2. Remove the egg and add 4 Tablespoons of salt to the warm water. Stir until the salt dissolves.
3. Use the spoon to drop the egg into the salt water. *Will the egg sink or float?*

Can you make the egg float in the middle? How would you do that?

What's Happening?

If you put the egg in the glass of water, it will sink to the bottom. This is because of the difference in density of the egg and the water. The density of the egg is higher than the density of tap water, so it sinks. Density is the mass of a material per unit volume. For example if an object is small and heavy it has a high density.
If you add salt to the water, the water solution will become more dense than the egg, and the egg will actually float back up to the surface! By adding salt to the water you increase the density of the solution because the salt increases the mass without changing the volume very much.

Can you think of ways to make an egg float in the middle?

Try and change the amount of salt in the 250ml water. *What is happening if you add less salt?*

What happens if we add fresh water on top of our salt water?

Adapted from: https://www.scientificamerican.com/article/salty-science-floating-eggs-in-water/

Solution:

What animal am I: Shark
What fruit or veggie am I: Maize, corn
Mathematics Challenge: