

Actualise Academy

Teachers' Resources Edition 1

"RESEARCH SHOWS... IF YOU WANT YOUR CHILD TO GET THE BEST EDUCATION POSSIBLE, IT IS ACTUALLY MORE IMPORTANT TO GET HIM ASSIGNED TO A GREAT TEACHER THAN A GREAT SCHOOL" – BILL GATES

Introduction



A short reflection on the summer of 2018

It's hard to believe that the new school term is already upon us and well underway! It feels like only yesterday that we were all online beavering away at the Summer Courses in the Actualise Academy. It was a truly enlightening experience for the Actualise Academy staff, and we were overwhelmed by the response to our courses.

Thank you to all of you for your patience and feedback, and for choosing to stay in touch. We hope you enjoy the content we have prepared for you.

In this first edition of Teachers' Resource for you, we have asked Michael to tell us about some top tips and resources which he finds useful in the teaching context. He has given us some interesting activities you can do in the classroom, as well as the science of what is happening in the brain. As always, if you have any feedback for us, we are always delighted to hear it.

You can phone us at (01) 6533155, email info@actualise.ie, or fill in the form on www.actualise.ie/summercourses/

About the Actualise Academy Top Tips



The Big BEN Approach

The Actualise Academy uses the “Big BEN” approach to teaching and learning:

Behaviour – **E**motion (Psychology) – **N**euroscience

As such, we structure our activities to help children and adults understand issues related to behaviour and our interactions with each other using a prescribed formula. We first begin with some **Neuroscience**, to understand the mechanisms of human behaviour. We then move to **Psychology**, to understand patterns of human behaviour, both as individuals and as groups. We then move to **Behaviour**, analyzing and understanding behaviours and how we might work to promote positive behaviours in the classroom, at home and in society in general. Below are some interesting games/exercises/topics you can use with learners in the classroom. They can help structure some fun interactions as children learn.

As part of active learning, these exercises and tips encourage the “involvement of the child in the active exploration and investigation” – a core aim of the Science, Environmental and Scientific Education (SESE) element of the Primary School Curriculum.

We have aimed to make our resources match the SESE pillars of Exploration and Investigation, and Integration. In particular, our resources are aligned with the explicit aim, as articulated in the SESE Curriculum document (see [here](#)):

“To enable the child to acquire knowledge, skills and attitudes so as to develop an informed and critical understanding of social, environmental and scientific issues”

About Dr. Michael Keane



Michael is a Behavioural Neuroscientist, Founder and CEO of the Actualise Clinic, and a former Lecturer in Psychology. He was recently accredited as Ireland's Thought Leader in Neuroscience, pushing the boundaries of research and practice in the area of Neuroscience.

He is an expert in linking brain function to behaviour and is a regular Academic Reviewer for a number of scientific journals.

Michael's Top Tips For Teachers

When I was in school, we read "Lord of the Flies" in our English class. I spoke with my English teacher about it, interested in what had happened to a group of boys when they were left alone on the desert island. This was where my original interest in Neuroscience began. I wanted to know why these "civilized" boys did those horrible things to each other. I was interested in how they behaved of course, and that drew me to Psychology. But once I had finished my Psychology degree, I really wanted to understand why people are the way we are, and why we do the things we do. I always return to word "why".

Why do we get shaky when we're nervous? Why do we find it so difficult to lose weight? Why do we keep going back to Facebook, even though it often makes us feel bad? Why do people act in a crowd in a way they would never act one-on-one? Why did the boys on the island turn on each other in such a brutal and callous fashion? Why do I feel a vibration in my pocket, but when I take out my phone, nobody has called?

When I am explaining brains to children in the clinic, they often reply with the one-word "why?" or the slightly more elaborate "but why?" It is fun and engaging to help them understand how their brains influence their behaviour, and how that learning can help us in our daily lives.

Resource 1: The Stroop Experiment

You can do this in groups, with individuals or with the whole class. It works as well with printed out cards or on a computer or laptop.

The Stroop experiment relates to the idea of selective attention. It requires you to look a word and name the colour of the word (i.e. the ink colour) while ignoring the word. Simple right? It is until the word itself is an actual colour word!

This is easy:

CHAIR

The correct answer is red. Simple!

But now we can complicate it...

In this sample:

GREEN

The correct answer is green.

In this sample:

RED

The correct answer is blue!

In the second sample, you are asking your brain to ignore the word (i.e. don't read it) and just say the colour the word is printed in. This requires quite a bit of "mental control" or "selective attention" ability. It shows that our brains like to do the automatic thing – in this case reading – and it finds it difficult to do something different.

You can discuss automatic brain actions with your learners in the classroom. Examples include driving, cycling, taking a shower, climbing stairs – and think how hard it is to not fall into auto pilot! You can encourage the children to come up with their own examples, and to discuss why our brains like to do the same thing over and over.

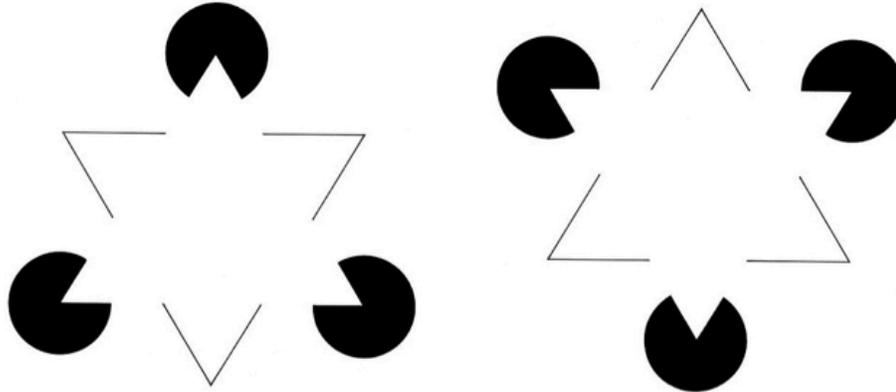
You can take the Stroop Test here: https://www.psytoolkit.org/lessons/experiment_stroop.html

And you can print out the cards here: <http://faculty.washington.edu/chudler/pdf/ministroop.pdf>

You will also notice if you teach children who cannot read but know their colours, they will have no problem. Or if you present the colour words in a language your students do not understand, they will have no problem either. Only when reading is automatic will there be an issue.

Resource 2: Optical Illusions

Optical illusions are a fun way to help children understand how our brains work. What can happen with an optical illusion is that brain is expecting to see one thing, but the input is quite different. A good example is the Kanizsa Triangle:



Here, the parts of brain that deal with perception feed back to the part that deal with sensation. Normally things work the other way around – sensation happens first (brain perceives lines and colour) and then perception happens (those lines and colours are the face of my dog!). With optical illusions like the Kanizsa Triangle, the perceptions parts of the brain expect to see a triangle between the Pacman characters, and “feed back” that expectation to the sensation areas. Thus, our brain “sees” the triangle!

Here are some short articles on the neuroscience of optical illusions:

<https://neurosciencenews.com/visual-system-optical-illusions-3941/>

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Here are some interesting optical illusions which you can use with your learners:

<https://www.optics4kids.org/illusions>