

It's all a matter of positivity and a growth mindset!

Introduction

How many times do you hear students saying "it's too hard, I can't do it" or "I don't like the subject, it's boring"? These are some of the issues that teachers face on a daily basis and are often contributing factors to why students display poor behaviour, attendance or attainment in a subject. It seems so obvious that if you overcome these barriers to learning then students are far more forthcoming and make much more progress. So how do I aim to achieve this?

1. Rapport

I can't remember the number of times that I have heard a teacher saying that a student, or even a class, are impossible to teach. Let me ask you this: is it the student at fault or the teacher? Why is the student disengaged in that lesson? One of my top priorities when meeting a student or class for the first time is getting to know them on an individual basis. For example, what makes them tick? What interests do they have? Do they have a sense of humour? By acquiring this knowledge I am then able to build a rapport with each of the students so that I can engage with them on an individual basis. This means that students feel more at home in the learning environment, gaining in confidence and feeling like they are valued. Think back to when you were at school - did you prefer the lessons with the teacher that constantly shouted at you in the classroom or the one that made you laugh; spoke to you on an individual basis and valued you as a person?

2. Aspirational

As teachers, it is all too easy to pre-judge a student or a class based on something that has been heard in the staffroom. When dealing with middle ability boys or difficult to reach students I have seen staff set less challenging targets or become more generous when maintaining standards in the classroom. This only adds to the issue and can often lead to a downwards spiral in terms of behaviour and attainment. My philosophy is to actually do the reverse. Students are set aspirational targets both in terms of their attainment and their behaviour. Students are expected to raise their own personal standards to reach, or even exceed, these targets and are challenged when they fall below the necessary standards. It's quite simple really - students should be raising their game to meet the teacher's standards and not the teacher lowering their

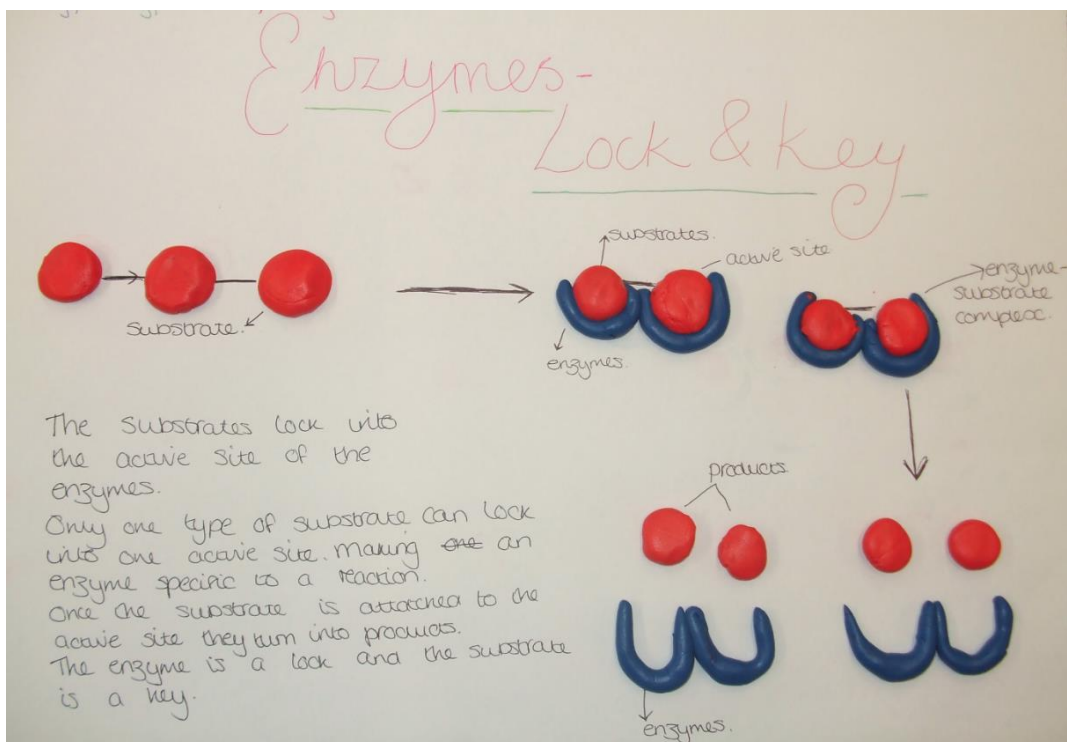
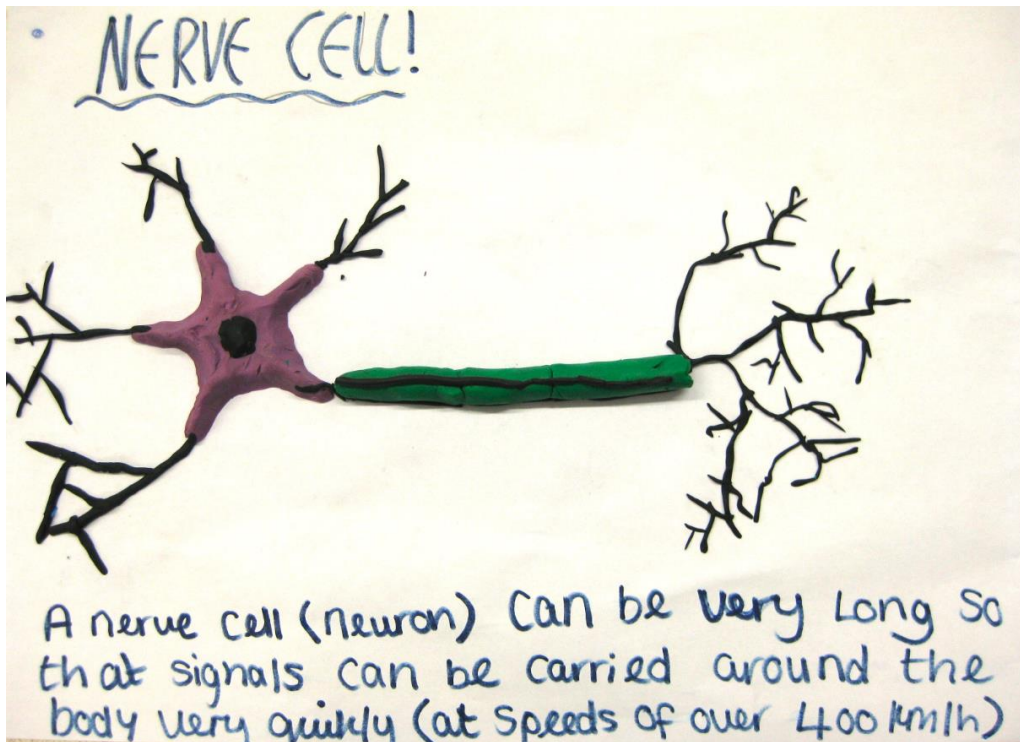
standards to suit the student. This can sometimes take a long time and be wearing on the teacher but when a challenging student eventually steps up to the mark the rewards are boundless. For this reason I ensure that I have a 'no limits, no cap' philosophy by which all students are able to maximise their progress within the lesson whether they are the most or least able.

3. Engagement

It seems obvious but students will never make much progress in a lesson unless they are actively engaged. This is where time well spent planning and producing resources is invaluable. By thoroughly planning lessons and using a blend of teaching styles and range of activities, I am able to deliver lessons that are engaging to all students. This means that they need to be challenging as well as differentiated so that all of the students are included in the lesson and are able to make progress. Here are some of the methods that I use to do this:

- Using "hooks" - it is important to start the lesson using a "hook" which instantly draws students into the lesson. This could be passing students an object to look at, a demonstration like an explosion, a video clip, asking students to infer the lesson from an image or setting the scene to the lesson using an alternative context.
- Cooperative learning - this is a key strategy that I use in my lessons and staff within the faculty are encouraged to follow the Kagan cooperative learning strategies. My students really enjoy learning in this way and it has not only helped to re-engage difficult to reach students but has also enabled other students to develop their teamwork and leadership skills. Studies show that cooperative learning 'consistently produces academic gains, improves race relations, develops social skills, educates for character, promotes self-esteem, enhances class climate, and fosters leadership and teamwork skills.' The studies also demonstrate that cooperative learning has an effect size of .78.
- Practical work - this enables students to develop their natural curiosity about how things work. Students are encouraged to develop their practical skills through KS3 and KS4. It is important that these experiments do not have a known outcome prior to carrying them out. For example, students are given a method to follow and are then asked to record their data, draw graphs, analyse the data and evaluate the procedures.
- Modelling - creativity is one area that science teachers sometimes omit. However, this is a learning activity that I like to include wherever possible as it allows students to demonstrate their understanding of a

key concept. Activities I have used include: sugar lace and jelly baby DNA models; plastercine models of specialised cells and enzymes (please see some of the photos below); using cardboard, card, etc. to make working models of a synapse or develop a board game; and using keywords to write a poem or compose a song.



4. Inspirational

My personal love of science drives me to inspire students both in and outside of the classroom and encourage students to have the desire to achieve highly. Wherever possible, I try to provide opportunities for students to further their learning through extra-curricular activities. This has included taking students to participate in the Royal Society of Chemistry competitions to raise aspirations and accompanying students to a STEM competition at Teesside University in which four pairs of students won event prizes and two students were overall winners and have since taken part in the Northern final at the University of Sheffield in January. I also try to be an inspiration to other staff by sharing my ideas with them at faculty meetings and in professional development sessions to foster their learning.

5. Growth Mindset

One key area that I try to incorporate into my teaching is Carol Dweck's philosophy on a growth mindset. Students often demonstrate a fixed mindset whereby they prefer to appear 'smart' in the classroom and therefore avoid challenges and give up easily so that they don't get things wrong. Students with this mindset also feel threatened by other students that are achieving success. However, students with a growth mindset embrace challenges and persist with challenges. They learn from criticism and are inspired by other students' success. This mindset therefore leads to a desire to learn and results in greater progress.