

St Boniface's College Science Department Parent Guidance.

The Levelled Assessed Tasks LATs are written to support the evidence-based strategies of Assessment for Learning (AfL) for both teachers and pupils. **The focus should always be on improvement.** Teachers AND parents that focus on improvement of the science or scientific skills are more successful at ensuring their children make improvements.

Features of teaching that encourages AfL through LATs: *The Plan for Learning*

Teachers and parents ensures that learning takes place during the task e.g. a pupil deciding they are not sure what to do to meet a certain criteria will feel encouraged to ask a peer or consulting a secondary source (their exercise book, a text book or the Internet). When pupils take responsibility for their learning, they are more likely to remember it.

Lesson Structure

Teachers and parents structure the activity so the pupils have a chance to reflect on their progress against the Level Ladder criteria (either by peer or self assessment) and then are given time to improve. Strategies for this include:

(i) first half on the lesson attempting task, short plenary of assessment, followed by a period of improvement, followed by a final plenary of reflection and assessment,

(ii) **setting the task as a homework activity in draft**, then the lesson starts with self or peer assessment followed by a substantial time to do a final draft of the task using the improvement targets, followed by a plenary to reflect on the improvements being made.

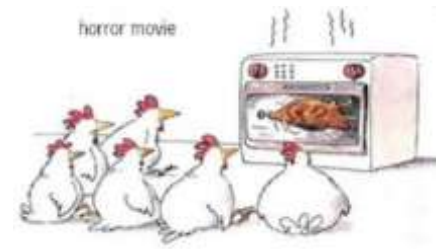
(iii) encourage groups of students to work collaboratively on a task during the first half of the lesson, followed by discussion focused on the requirements of each level, followed by individual work using the information or skills they have gained during the lesson. ***Pupil awareness of improvement***
Pupils need to recognise that an improvement is needed, what to do to make that improvement and recognise when they have made that improvement. It is important that a specific points in the lesson or period of learning that the pupils have the opportunity to reflect on their work in relation to the Level Ladder criteria.

The gains can be small but cumulative over time. For example, I have interviewed pupils that when doing a LAT, for the first time understand the value of drawing force arrows, realise that planets have different gravities, related the word conduction to a particle diagram. These are quite significant realisations, but other smaller but important steps include the correct spelling or meaning of a particular key word, the correct way for an arrow, the correct symbol for a particular element.

Ref: <http://www.appinscience.com/ourapproach.html>

St Boniface's College Science Department

Fight or Flight?



Humanity has survived and thrived on this earth for hundreds of thousands of years, through some of the most difficult and stressful of times. One of the factors that has enabled us to survive is a system called the fight/flight response. Whenever we perceive we are physically or psychologically threatened an inbuilt, reflex, alarm-system in our brain triggers the release of electrical impulses and a variety of hormones. There is a complex hormonal cascade of over 30 stress hormones, such as adrenaline, noradrenaline and cortisol, which have a powerful and widespread effect on our body's biochemistry, physiology and psychology, giving us the extra strength and speed we need to deal with the threatening situation. If a wild animal attacks us, we can either run away (flight) or if trapped, stand our ground and fight.

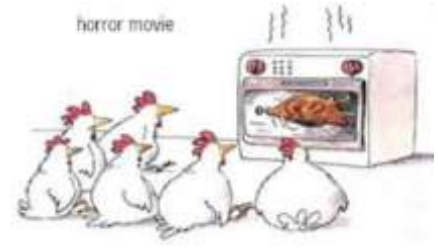
<p>E-D</p>	<p>Showed some knowledge and understanding of reflex reactions. Identified the stimulus, reflex and reaction. Identified the hormone and the gland it is produced from. Used simple labelled diagrams to describe the reflex and hormonal reaction. Described simply the organs and job of the nervous system. Described simply the organs and job of the hormonal system. Suggested some reasons for some of the changes in the body when a person jumps. Used simple key words correctly.</p>
<p>C</p>	<p>Showed good knowledge and understanding of reflex actions and hormonal reactions. Described in stages the reflex reaction correctly. Described the hormone response, identifying the hormone, gland, target organs and how the hormone is transported around the body. Used labelled diagrams to describe and explain how the body changes when it is made to 'jump'. Explained simply why the changes in the body happened when it 'jumped'. Used most key words correctly.</p>
<p>A-A*</p>	<p>Showed detailed knowledge and understanding of the nervous and hormonal changes in the body when it is made to 'jump'. Explained the reflex action in detail, describing all the stages correctly. Explained the hormonal response in detail, describing the production, transport and response to the hormones. Described in detail the reasons for the changes in people's bodies when they jump. Compared nervous and hormonal reactions, particularly the time to take effect and the time to complete. Used all key words correctly and fluently. Used additional sources of information to support your explanations.</p>

So why do we jump when we are watching a horror movie?

St Boniface's Coll ment

Fight or Flight?

The task is usually set with a scenario to make it more fun.



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<p>E-D</p>	<p>Showed some knowledge and understanding of reflex reactions. Identified the stimulus, reflex and reaction. Identified the hormone and the gland it is produced from. Used simple labelled diagrams to describe the reflex action. Described simply the organs and job of the nervous system. Described simply the organs and job of the hormonal system. Suggested some reasons for some of the changes in the body when a person jumps. Used simple key words correctly.</p>
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There is clear guidance on how to achieve each level.

The higher levels require significantly more scientific theory. In Physics this might mean the inclusion of equations; in Chemistry it may mean the use of balanced symbol equations. It is essential at this level that students apply some background reading and reference their sources of information.

So why do we jump when we are watching a horror movie

For the actual KS4 homework's please go to our Moodle website
(<http://moodle.stbonifaces.com/bonifacemoodle>)

Your son will have the appropriate username and password to access our Moodle website.