What is Equitation Science?

Equitation Science uses valid scientific evidence and methods to promote best practice during all our interactions with our horses to safeguard their health and welfare. It is important that we understand what our horses' needs are and how they think and learn and in order to do that we have to appreciate their ethology, how they are designed to live in the wild, and their psychology including Learning Theory.

Learning Theory is a psychological term used to describe how animals (including horses and humans) learn new behaviours. As trainers of horses it's really important that we understand how our horses learn so we can be the most effective and ethical trainers possible.

Ethology
Horses are designed to live in social herds and spend much of their time moving around and grazing, sometimes up to 16 hours a day! An easy way to remember this is to think about our horses' natural needs as the **3 F's – Friendship, Food and Freedom.** Not meeting these ethological needs can have a massive impact on both their physical and mental welfare and can even be the cause of stress and anxiety during training.

Memory
Horses have an outstanding memory which is also virtually photographic. They remember exact placements of objects in their surroundings and have much better attention to detail than we do.
A downside to this is that horses are Context Specific Learners, meaning they aren't able to generalise like we do as humans. This means that they might not be able to apply something they have learnt in one place to another; this is why a horse will load perfectly fine at home but won't load in a new environment, such as on the way home from a show. This is also why a horse will shy at wheelbarrow left outside a gate, as although the horse has seen the wheelbarrow many times before it has not seen it in that position in that area. On the plus side, it also means that after months off, or even years, horses can still remember the aids they learnt in their foundation (backing) training.

Intelligence
We must be careful not to overestimate a horse's intelligence, e.g. ''He knows what he did wrong'' or ''He's so clever because he learns so quickly''. Equally we should not underestimate their intelligence by supposing that they don't have emotions or feelings. Be careful not to blame them for past experiences as they may not recall events like humans do.

Fear / Flight
Horses are prey animals and are naturally hard-wired for flight, they learn and recall fearful events faster than any others and although that fear can be reduced through careful training it cannot ever be totally eradicated. It is also important to know that due to the horse's excellent memory anything in the environment during a fearful event might also become associated with and trigger further fear, including any people involved.
A fear response can be learnt in just one episode, which is why it is important that we never create fear in our horses. To ensure this never happens it is vital to always pay attention to our horses' relaxation levels; even very subtle signs of tension or stress should be identified and eradicated immediately. Remember horses are all individuals, and while some may only outwardly show very subtle signs even though they may actually be quite fearful, others will show more obvious signs.

Relaxed	Tense / Anxious	Some of the more subtle signs of tension
Soft neck position, no straining muscles Ears flickering softly backward and forwards towards handler/rider Even breathing with a closed and soft jaw and mouth	Tensed neck muscles and raised head Swishing or clamped tail, sharp snorts Ears flat back or sharply pricked Teeth baring or grinding	Tight chin Raised respiration rate Facial tension Wrinkles above the eyes