Guide dog puppy development and advice leaflet –
No. 4 Dog Understanding

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In order to effectively communicate with, socialize and train your puppy it is essential that you have a basic understanding of why your puppy behaves as it does.

By focusing on particular areas of dog behaviour it is possible to further understand and explain the actions of puppies and dogs. These areas include:

- The ancestry of the domestic dog.
- The dog’s basic senses.
- The pack structure or hierarchy understood by all dogs.
- The traits and characteristics of dogs and the specific breeds that Guide Dogs uses.
- How dogs communicate with one another.
- How humans should communicate with dogs.
- The effects of physical maturity on dog behaviour.

The following information has been provided to give a basic understanding of dog behaviours that you may see from your puppy. Further detail is available from a number of sources including the reading list at the end of this booklet or from your Puppy Walking Supervisor.

If this information raises any questions or concerns please contact your supervisor who will be very happy to discuss them with you.

The ancestry of the domestic dog

The domestic dog still displays many of the behaviours of its ancestor, the wolf. All breeds of dog have a genetic link with the wolves currently living throughout the world. Like wolves, dogs remain social animals who enjoy and thrive when living in groups. Man first domesticated wolves to capitalise on their abilities to hunt for food and to protect the people and families within their settlements. By breeding from the tamest wolves, more social and biddable dogs were developed. As you would expect, the first domesticated dogs looked very similar to wolves but with selective breeding for size, colour, temperament and behaviour, man has created the multitude of dog breeds that exist today.

The extent to which an individual’s behaviour relates to that of its ancestry will vary from individual to individual and from breed to breed.

Despite hundreds of thousands of years of domestication, domestic dogs still exhibit a number of innate behaviours. You may see some of these behaviours exhibited by your guide dog puppy, for example:

Scent marking

The behaviour carried out by a dog to emphasise its presence to other dogs within the environment, by urinating and/or ground scratching. In the wild, dogs use this method to mark out their territory and that of their pack; this is most commonly seen in the domestic dog when adolescent males ‘cock’ their legs or when pre-season/in season bitches ‘mark’ by spot urination. You may even see this in your young puppy when it shows a preference to spend in areas that have already been marked by itself.
Rolling
Some dogs will roll in the foulest smelling substances, including fox faeces and decaying animals, and others will roll in sand or long grass. The reason is likely to be as a result of instinctive behaviour originally carried out to disguise the dog’s natural scent and improve success when hunting.

Carrying
Wild dogs carry their food back to the family group or pack for sharing or storing. These carrying and retrieving behaviours have been selectively maintained by man and are evident in breeds such as golden retrievers and Labradors. In the home, puppies show this by carrying their toys/bones/bedding, and/or when bringing articles during greeting.

Digging
Digging is a behaviour derived from the storage of food and/or the maternal need to create a den. This instinct is still present in domesticated dogs even though they are well fed and housed. You may witness this behaviour if your puppy hides biscuits, toys or chews in its bed, or more obviously when digging holes in the garden.

Vocalisation
Dogs naturally live within groups or packs and as a result they need to communicate with one another over a variety of distances. A common vocalisation is howling, and this can be heard in domestic dogs, usually when left alone, as an attempt to communicate with the distant pack. Your puppy may well try to communicate in this way when initially settling into your home, or when learning to be left.

Herding, stalking and chasing
These are basic behaviours required during hunting and are necessary for the survival of predatory animals. As a result, degrees of this behaviour will be exhibited by your puppy. Herding breeds, such as collies and German shepherds, show stronger instinct to carry out these chase behaviours. However all dogs run or chase to a degree and even shake toys during play, the basis for this behaviour is hunting.

Licking
Licking is used instinctively by young puppies to encourage an adult dog to regurgitate food. Wild dogs are weaned onto solid food with the partly digested contents of an adult’s stomach; this is why dogs will eat their own vomit if allowed to. Licking is also seen during social grooming, the more submissive dogs will groom the dominant ones when allowed. This is often displayed by guide dog puppies when they lick their handlers or other people.

Gorging
In the wild, dogs hunt and eat in groups and as a result, the faster they eat the more they eat. Therefore some puppies may bolt their food if there is a perceived threat of it being removed or stolen by another individual; this can explain why your pup may eat faster in the presence of other dogs or members of the family. Tug of war games are also derived from eating and gorging stemming from conflict over food.

Mounting
This is obviously a sexual activity but it is also used to assert dominance over other pack members. NB: This behaviour can be displayed by both dogs and bitches.

Bedding
This refers to the circling action carried out by some dogs before lying down and is instinctive behaviour intended to flatten the surface before settling down. You may also see your puppy rearrange its bedding before it settles. Similar behaviour can be seen by dogs before they relieve themselves; again to flatten the ground’s surface.
2 Dog senses

Although dogs have the same basic senses as man, they have developed to different degrees in order to assist with the instinctive behaviours necessary for the survival of the species. In the wolf and dog population evolution of senses has primarily been to support the predatory behaviour of hunting. In addition the selective breeding of dogs has also ensured that each separate breed uses its senses differently, either because of its working purpose or the shape of its body, e.g. ear and eye shape and size.

For example, gun dog breeds rely more heavily on the senses of sight and smell, whereas herding breeds more effectively use sight and hearing.

To help explain dog senses in a little more detail the following information regarding the five basic senses may be of interest:

Sight
Dogs’ visual perception differs greatly from ours. Born with their eyes closed, a dog’s eyes usually open at ten to 14 days and their eyesight is fully developed by the age of four weeks. Due to the design of a dog’s eyes, the ability to focus on detailed images and to see colour is fairly limited, however the ability to see movement and distance especially in low lighting conditions is far greater. Depending on breed, a dog’s visual field is also wider than ours; on average dogs can see nearly 270 degrees of field as opposed to our 100 degrees. Therefore it would be wrong to assume that a dog sees the world as we do.

Hearing
Dogs hear very differently from the way we do. To explain this in more detail, the aspects of hearing can be broken into three parts: the acuity of hearing; the range of hearing; and the location of sound direction. Unlike us dogs are born with their ears closed, these normally open ten days after birth.

A dog’s range of hearing (i.e. what it can physically hear) is vast. Although low level frequency sounds are similar to our range, a dog can perceive much higher frequencies than we can. As a result dogs can differentiate between sounds more efficiently than us.

Hearing acuity is also good; they can hear fainter sounds coming from four times the distance that we can.

Finally, dogs can also detect where sounds are coming from with great accuracy. This is due not only to the points above but also because they have the ability to move their ears to assist with location detection. Watch a German shepherd locate a sound source and you will see ear movement in action!

Smell
Man’s ability to use smell has declined during evolution. However, in dogs the opposite is true. Because dogs communicate and hunt using scents their ability to smell has been greatly developed, as a result it is suspected that a dog’s sense of smell is 100 times more effective than ours. This is as a result of the dog having 14 times as many sense organs in its nose as man, and 40 times the brain power dedicated to processing scents.

Taste
Although closely linked to smell a dog’s ability to taste is similar to humans, although they seem not to savour food as we do and find many different things palatable!

Touch
Dogs experience their environment through tactile information in a variety of ways, especially with their feet and often with their mouth. In addition, dogs gain tactile feedback from the environment via their coat and whiskers, as each hair follicle contains sensory nerve fibres. This is important to consider during grooming and checking. Physical contact plays an important part in guide dog work, as our dogs must be happy to wear a harness and cope with the physical demands experienced when working.
3 Pack hierarchy and structure

A pack hierarchy refers to the social structure inherent within any group of animals. It can loosely be described as the pecking order of a group of individuals. As a rule, an individual's social position is dependent on character, physical ability, status and age. Dogs instinctively live in packs or groups to ensure the survival of the species. Pack life provides security by ensuring safety from predators and improved hunting success. It also ensures stability via an ordered social society, as well as the successful natural genetic selection of the species because only the superior dogs mate.

A pack is loosely assembled with the cleverest, strongest and bravest mating pair of dogs in charge of the group and the weakest, timid types at the opposite end of the structure. In between, dogs of various ranks will continually jostle for status. The aim of all dogs is to become pack leader so as to enjoy the benefits associated with this position. These include eating first, having the nicest sleeping area and the right to mate. Whilst living with you, your puppy will instinctively see you and your family as its pack, with home life providing its basic needs, warmth, food, companionship, security and the leadership necessary to survive.

In order for a puppy to fit in with a human pack harmoniously, it must maintain an appropriate position in the social structure. Your puppy will understand its pack position by using his or her own instincts and by the way you and your family influence behaviour from puppyhood.

You and your family members must consistently maintain a higher status than your puppy from the day of its arrival. The pack leader should be in control of all things that are important to the puppy i.e. food, territory and toys. Beware – problems can occur when leadership status becomes confused, this can occur during adolescence and as a result of inconsistent handling.

Tips to help you maintain leader status include:

- Restricting your pup's access to specific areas in the home e.g. don't allow them to go upstairs or into the kitchen, as you see fit.
- Setting and adhering to ground rules in the home e.g. non use of furniture.
- Following Guide Dogs’ feeding procedure and routines.
- Establishing a spending routine.
- Controlling attention seeking.
- Effectively controlling undesirable behaviours.
- Maintenance of basic obedience responses.
- Ensuring basic good manners in all situations.
- Control of play and use of toys etc.

If you feel you are having any difficulty with maintaining your puppy's status within your family please ask your supervisor for advice.

4 The traits and characteristics of dogs including the breeds used as guide dogs

When analysing the temperament and work performance of a guide dog or guide dog puppy, staff and volunteers frequently refer to the dogs’ basic traits or temperamental components, which form the dog’s general character. It is important that everyone involved with the development and training of our dogs uses the same descriptions to avoid confusion or misrepresentation when discussing a particular dog or training issue.

The following list outlines the main temperamental terminology used with a brief description of their meanings. If you require more information regarding these explanations please contact your Puppy Walking Supervisor.

• • • • • • • • •
• **Willingness**
  The dog’s natural desire to please the handler.

• **Distraction**
  Anything within the environment which diverts the dog’s attention from a task or the handler.

• **Sensitivity**
  The dog’s instinctive reaction to sound and touch which affects its response to the handler and the environment. This can be divided into:
  - **Hearing sensitivity** – The dog’s reaction to sound.
  - **Body sensitivity** – The dog’s reaction to physical touch and proximity of objects or the handler.

• **Suspicion**
  The dog’s reaction to sights, sounds, or smells within the environment. Ranging from cautious to fearful. This is normally shown to new or unusual objects.

• **Excitability**
  The dog’s readiness to be excited by a variety of stimuli including objects, people or situations.

• **Aggression**
  A natural behaviour which the dog shows in order to deal with a perceived or actual situation in which it uses conflict or threat.

• **Responsiveness**
  The dog’s ability to react as desired when prompted by the handler or environment.

• **Attentiveness**
  The puppy’s ability to focus and concentrate on a given task or the handler.

• **Dominance and submissiveness**
  The degrees by which a dog is ready to challenge or yield.

• **Adaptability**
  The dog’s ability to cope with changes in environment and routine.

• **Confidence**
  The dog’s level of self assurance.

• **Self interest**
  The puppy’s desire to please itself.

• **Initiative**
  The dog’s ability to think ahead and make decisions.

• **Stress resilience**
  The ability to cope with stressful situations.

**Breed characteristics**

The dogs used as guide dogs are primarily gun dog and herding breeds. The most commonly used gun dog breeds are Labradors, golden retrievers, flat coated retrievers and curly coat retrievers. Herding breeds include German shepherds and border collies.

Although each breed and each individual dog has a number of different traits, dogs from these groups are used because of a number of inherent characteristics which have been selectively bred into these breeds for hundreds of years.

As a generalisation we use these breeds as they are sociable, adaptable, willing to please, quick to learn and an appropriate size to take on the role of guiding a person.

### 5 How dogs communicate

Dogs convey their intentions and feelings using a wide range of complex yet subtle body signals, facial expressions, scents and vocal expressions. A combination of all these signals is used during communication, so when assessing your puppy’s state of mind try to look at the dog as a whole not at one specific aspect e.g. tail positions or posture. Signals vary from dog to dog, dependent on breed, age and experience, however similarities exist. It is important to understand that unlike humans, dogs do not have the ability to disguise their feelings.

To help illustrate the communication displays used by dogs, the following diagrams highlight specific aspects of body language. However please remember that your puppy may communicate slightly differently. Experience with ‘reading’ your puppy will be required to fully understand what it is trying to communicate.
Body language signals

Relaxed posture
Relaxed tail posture, and facial expression, with a loose stance.

Dominance/aggression

Submissive
Tail down (may wag quickly), lowered body posture. Ears flattened and back. Eye contact sought but not maintained. Smooth forehead. Lips taut (may appear to smile).

Stressed/anxiety
Tail down, body lowered, ears back. Erratic movement. May pant and lick lips.

Fear/total submission
Rolls on back to expose stomach and throat. Ears flat and back. Head turned to avoid eye contact. Tight lips. Usually remains still at times of threat.

Alert and attentive
Horizontal tail carriage, may move slightly. Ears upright, may move to detect sound source, upright body position. Mouth generally closed with head forward facing.
Fear/aggression

Playful
Tail upright, yet not bristled, ears up. Front legs lowered with high back end. Face relaxed.

Dogs use ‘play bows’ to incite play with one another.

Dogs will use play sessions to assert themselves over one another, in a less formal way than confrontation. If you watch dogs playing, you may see dogs alternate dominance signals frequently.

Facial expressions
A dog will also display a wide range of subtle facial expressions to enhance body posture communication. Again these signals should not be used in isolation to identify a dog’s intentions but should be ‘read’ in conjunction with all the communication clues available at the time.

Fearful or submissive
Tight lips, ears flattened and back, head position lowered.

Fearful and aggressive
Teeth bared, ears flat and back.

Dominant and aggressive
Teeth bared, ears upright and forward, direct eye contact.

Attentive
Upright ears, fixed gaze, forward facing yet expression relaxed.
Eye contact
This is an extremely important communication method between dogs. Direct eye contact is usually displayed by a confident dog who is threatening or challenging, whereas an averted gaze is usually displayed by submissive types.

Ear positioning
A dog’s ears have a wide range of movement. Although this is primarily to assist with sound source detection, dogs also use them to convey intentions and feelings. As a general guide, flattened, pinned back ears can indicate fear, submission or intense concentration whereas erect ears suggest dominance or distraction.

Lip/muzzle position
The obvious signals given via the mouth are snarling, biting and snapping. This is usually an indication of aggression, either apprehensive or dominant. These behaviours should not be confused with mouthing which is usually displayed to seek attention. However there are a number of other signals given by the mouth including yawning or lip licking which can both indicate anxiety or stress, and ‘smiling’ which is usually intended to display a submissive greeting.

Head position
Closely linked with body posture, the way in which a dog holds its head can give a clear communication to others regarding its intentions. An upright position usually indicates interest, confidence or dominance, whereas a lowered head can indicate distraction (by scent), apprehension, submission or fear.

Other communication methods
Sounds
As explained earlier, dogs have a high hearing ability. As a result dogs make a variety of sounds when communicating, including barking (a wide variety of barks exist and can convey protectiveness, surprise, excitement and much more), yelping, whining, howling, growling, whimpering etc. All individuals and breeds have a different array of sounds and as a result each dog must be assessed as an individual.

Scent
With such a highly developed sense of smell it is of little surprise that dogs use scent to communicate in a number of ways. Dogs produce scent naturally, and this scent carries information to other dogs regarding sexual and status standing. Likewise dogs can detect pheromones given off by other living organisms including us, which give information regarding general mood including fear and anger.

Physical contact
Dogs are tactile creatures and communicate with one another physically during greeting, play, attention seeking, grooming and fighting. This is evident when dogs give paws, mouth, nibble and bite each other. Naturally this behaviour can be extended to humans, although within guide dog puppies these behaviours are discouraged.

6 How humans communicate with dogs
The relationship between a guide dog and its owner is a close one, assisted by the partnership’s ability to communicate effectively. The same should be true of all dog and handler relationships, as without effective communication between one another confusion can result, and undesired behaviours can be exhibited by the dog.

Humans communicate primarily using language. Our language in written or spoken form contains a vast amount of information which dogs cannot comprehend. However, we do also communicate in other ways, using the tone of our voice, eye contact, gestures and body posture. It is these communication techniques which can be used most effectively when training or handling a dog because, despite what some people believe, dogs do not understand every word you say!

To expand on this a little, the following communication methods have been explained in more detail:
Vocal communication
Dogs clearly understand some words or, more accurately, can learn an association between some words and actions, for example basic obedience responses such as “sit” or “down”. The most important consideration for a handler to make when using their voice, is the tone in which it is used. Firmer and sharper tones will convey displeasure or a command, whereas a lighter and softer intonation expresses pleasure, praise and comfort.

The volume of the handler’s voice is also important. Remember – dogs have great hearing, so volume should be adapted to suit the dog’s needs, raised only to cover distance or to compete with other sound sources. It is essential that your voice is used consistently and clearly to ensure your puppy understands your intentions.

Eye contact
As explained earlier, direct eye contact can be seen as confident or threatening, whereas an averted gaze can be seen as non threatening or submissive. With this in mind consider how you use your eye contact when handling your dog, but remember that many guide dog clients do not have the ability to use this important communication method.

Physical contact
Physical contact is usually used to apply praise by stroking or grooming, however lead control and rough play can be perceived as negative by a dog and may communicate a different handler intention.

Body language
This is a key area of communication for dogs and as a result our use of body language should mirror that of dogs. An upright position is generally perceived by dogs to be dominant whereas a lowered position i.e. bent over, is less dominant. Dog understanding of body posture can clearly be seen during play sessions; if the handler adopts the play bow position, the dog will usually respond playfully.

In addition we also use a variety of gestures and signals when communicating. When handling your puppy a variety of signals can be of use to assist your puppy in its understanding of what you want it to do, for example, patting your thighs during recall to encourage contact, using the policeman’s hand during wait or stay exercises or just pointing your arm in the direction you want to go.

Remember, when communicating with your puppy try to use a combination of methods to ensure you are understood as clearly as possible.

7 The effects of physical maturity on dog behaviour
As your puppy grows and matures a number of physical and temperamental changes will occur that may have an effect on behaviour. The following information has been provided to help you identify the causes and behaviours which may occur:

Teething
Puppies usually lose their first set of teeth between 14 and 20 weeks of age. This can cause them some discomfort and you may find lost teeth and some bleeding from the mouth as a result. Behaviour changes usually include increases in incidents of chewing and a reluctance to eat. Medical symptoms can also result including rashes on the skin, ear infections, eye discharge, smelly breath and diarrhoea.
Puberty in males
As with us, dogs go through puberty as they become sexually mature. This stage can be expected from around six months of age. Few clinical signs are usually evident, although behaviour may start to change and, unfortunately, changes are not usually for the better.

Although all dogs are different you may experience a number of behaviours from the following list:
- Increases in scenting or sniffing on walks.
- Increased urination frequency as a result of marking.
- More challenging behaviour towards handlers.
- A breakdown in recall and obedience responses.
- Mounting behaviour.
- Leg cocking during urination.
- Increase in awareness or distraction by other dogs.
- Protection of territory or toys.
- An increase in chewing incidents.

Puberty in bitches
As with males, sexual maturity brings on the onset of puberty. Bitches can show behavioural changes from six months of age as they start to hormonally develop. From this time onwards they can come into ‘season’, which will be accompanied by clinical signs.

The following are the common signs of a bitch coming into season:
- She may curl her tail and arch her back, particularly when physically praised or during grooming.
- There is usually a blood discharge (but not always).
- After being in season the blood discharge may become cream/clear in colour.
- Her mammary glands may become swollen.
- A season usually lasts around 21 days.

Security for bitches in season
When in season please ensure that your puppy cannot escape from the house or garden, as straying or inappropriate mating is a possibility. Some bitches will go to great lengths to find a mate! She may even dig under or jump walls/fences. In addition the local dog population may try to gain access to the garden.

Mating behaviour
It is normal for dogs to tie or lock together when mating for as little as a few minutes to over half an hour. If your puppy is ‘miss mated’ do not try to pull the dogs apart but wait until they naturally separate in order to prevent injury to the dogs and yourself. It is important to tell your supervisor as soon as possible; ideally within 24 hours so unwanted puppies can be prevented.

Exercise for bitches in season
Exercise routines during a season should be established with the advice of your Puppy Walking Supervisor and will depend on the area you live in and the temperament of your puppy. If exercising away from the garden, transportation to the exercise area must be made by car, as walking from home will leave a strong scent which will alert local dogs. Never free run in an open environment, as mating may occur. Your puppy must be kept on a lead until her season has finished. Remember even if your dog is on a leash, this will not keep unwanted males away and therefore you need to be vigilant. Select an area where you know there will be few dogs around.
General care for bitches in season
Although during their seasons bitches can behave uncharacteristically as a result of this physical development, they usually revert back to ‘normal behaviour’ once the season has ended (approx. 21 days). Handling at this time should be empathetic to meet your dog’s needs; as a result patience and understanding will be required.

However prior to a season you may witness a number of behaviour changes, such as:
- Increases in urination frequency due to marking.
- Increase in general sensitivity levels.
- Increase in scenting or sniffing.
- Break down in recall and obedience responses.
- Increase in awareness or distraction by other dogs.
- Increases in attention-seeking behaviour.
- Excitability.
- Frequent self-grooming.
- Increases in challenging behaviour.
- Mounting behaviours.
- Protection of territory and toys.
- Increased chewing activities.

Please contact your Puppy Walking Supervisor if you have any concerns about the behaviour of your puppy at any stage in its development.

Reading list
- Know your dog – Dr Bruce Fogle
- Talk to your dog – Susie Green
- What’s my dog thinking – Gwen Bailey
- The perfect puppy – Gwen Bailey
- Do dogs need shrinks? – Peter Neville
- Puppy training the Guide Dogs way – Julia Barnes
- Think dog – John Fisher
- Ain’t misbehaving – David Appleby

These action points must be followed at all times to support the agreed training process within the puppy walking department of Guide Dogs. To suggest amendments to this document contact the author: David Grice. Contact address: david.grice@guidedogs.org.uk