

## Instincts: A summary of how they work

Instincts allow creatures to be taught that doing a particular action given a certain situation is either bad or good, without the creature having to go through the experience itself. This allows important concepts to be “pre-taught” to Norns, Ettins and Grendels to affect their initial behaviour.

Instincts are used for many purposes. These include teaching Norns to retreat when overcrowded, or to do something when bored and eat when seeing food. A typical instinct gene may look like this:

(# 345) 018 avoid overcrowding - Instinct (Creature: Instinct)

Gene Header

Youth ☒ Dup ☒ Mut. Degree: 128 ☒ Cut

☒ B ☐ M ☐ F ☐ Do not express (carry)

When this is true: (lobe/cell)

Drive i/ps OVERCROWDEDNESS Lobes and neurones to stimulate

General Sensory i/ps IT is a creature

<NOT USED> <NOT USED>

WARNING: Only those lobes that are flagged as perceptible should be used

... and you do this:

Retreat frm it

... reward/punish like this:

Reward

Chemical - usually [Reward] or [Punish]

Amount

Notes Cancel Close

Instincts are processed when creatures sleep. **If a creature does not sleep, its instincts will not be learnt.**

During sleep, Creatures detaches the brain from any outside stimulation. The sensory inputs specified in the Instinct gene (“When this is true” frame, in the picture above) are then fed directly into the creature’s brain. The action specified in the instinct gene is then fired, and the action connected dendritically through the concept lobe to the sensory inputs. The dendrites involved are then strengthened, and the weights increased according to the reward or punishment specified in the instinct gene.

The creature will then form neural connections that are likely to respond should the scenario specified in the instinct actually arise when the creature is awake. This allows many scenarios to be presented to the creature’s brain, in advance of them occurring in real life.

Many instincts switch on at different life stages. Instincts are used to influence and encourage mating behaviour, for example.

An instinct will not guarantee certain behaviour in a given situation, it can only influence and encourage, as it will integrate itself with the existing neural structure the creature has.