# Code Evaluation Report

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| Code Location | Comments | Reporter | Issue Created |
| Within OrganismBrain.cs V1 | Within OnCollisionStay(Collision collision) method hunger is incremented as “hunger++” whereas elsewhere it is incremented using the increment function “hunger = increment(hunger, -1);” – this is inconsistent | Andy |  |
|  | Hunger variable is decremented in one place, incremented in another however there is only a bounding check made on the upper value. Ie hunger is tested for a value > 100 but no such check is made for the lower bound. | Andy |  |
|  | Food is modified within OrganismBrain.cs (OnCollisionStay(Collision collision)) whereas this should call a food.method() to reduce food and not direct access a variable publicly. OOPs Principles. collision.gameObject.GetComponentInParent<food>().foodAmount--; should call a food accessor to modify variables | Andy |  |
| Food.cs V1 | public float foodAmount; should be private. An accessor method should be used to alter this variable | Andy |  |
| CameraFollows.csV1 | Public vector3 offset; and Public Transform player; both should be private and accessed via methods as per OOPs principles | Andy |  |
| Hunger / hungry V1 | This appears to only be dependent upon time. As creatures move, they should use energy at a rate set by their movement. Ie, standing still uses little energy, moving slow uses more, moving fast uses even more. Needs to mimic real-life energy flow. How hungry they are depends on how much energy they have used. | Andy |  |
| Creature Movement V1 | <https://scratch.mit.edu/projects/369453344/fullscreen/> as can be seen in the prototype creatures don’t just stop when they have something in front of them, they try other directions. They are simple so if their path is blocked, they can try moving in a random direction. For example, if they are heading toward food and something is in their path they don’t just stop, they will move back, or up or down for a short period before then heading toward food gain. Remember this maybe a game but it is educational and a study of simple rules / simple creatures and as such is also a simulation played over time to see behaviour. | Andy |  |
| Directory Structure | Some .cs files are within the scripts folder, others are outside of it one level up. Why aren’t all scripts inside the script folder? | Andy |  |
| Code Style consistency | Some single line code blocks eg if (x) { do something; } are also written as if (x) do something; style consistency is needed when reading code | Andy |  |
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