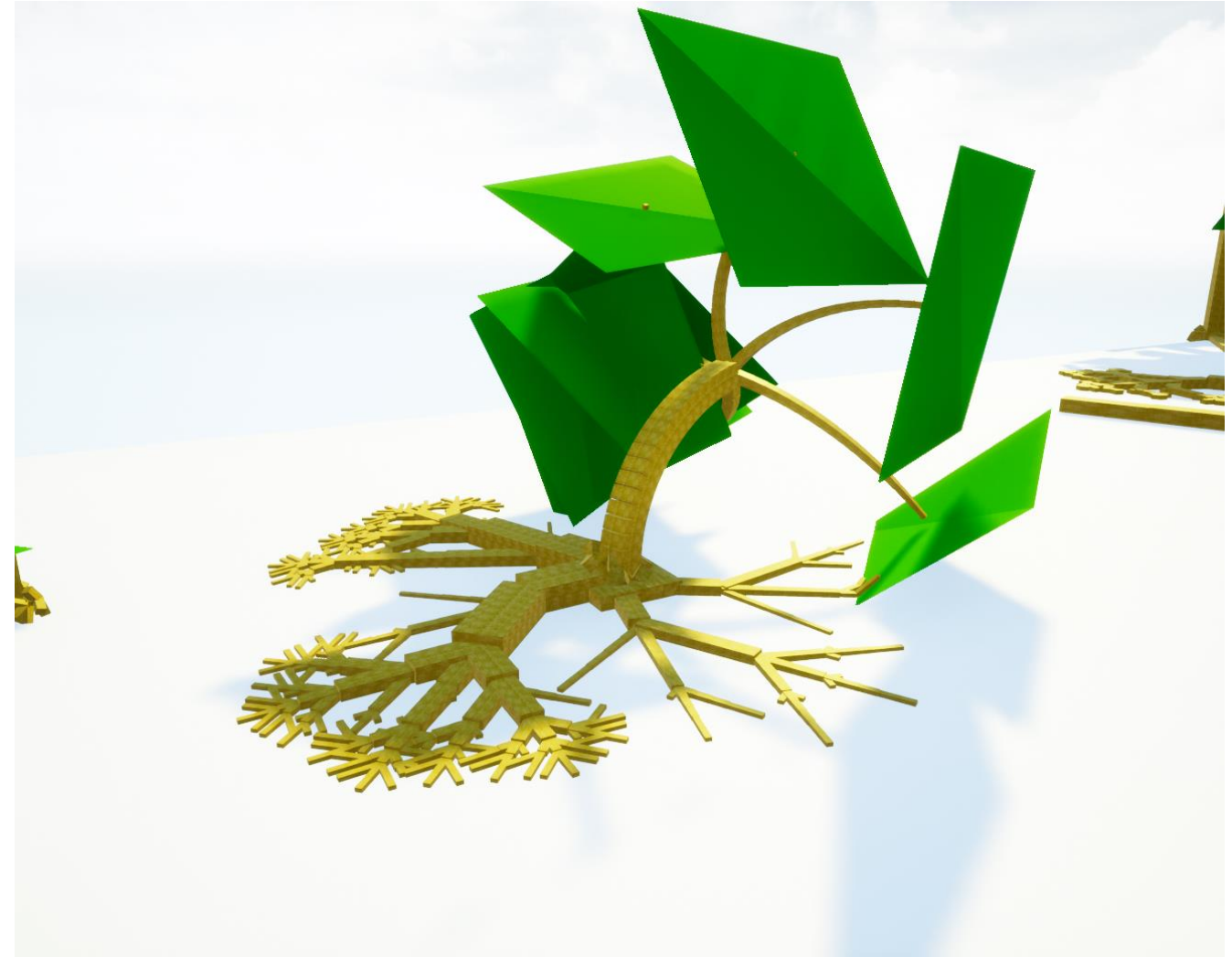


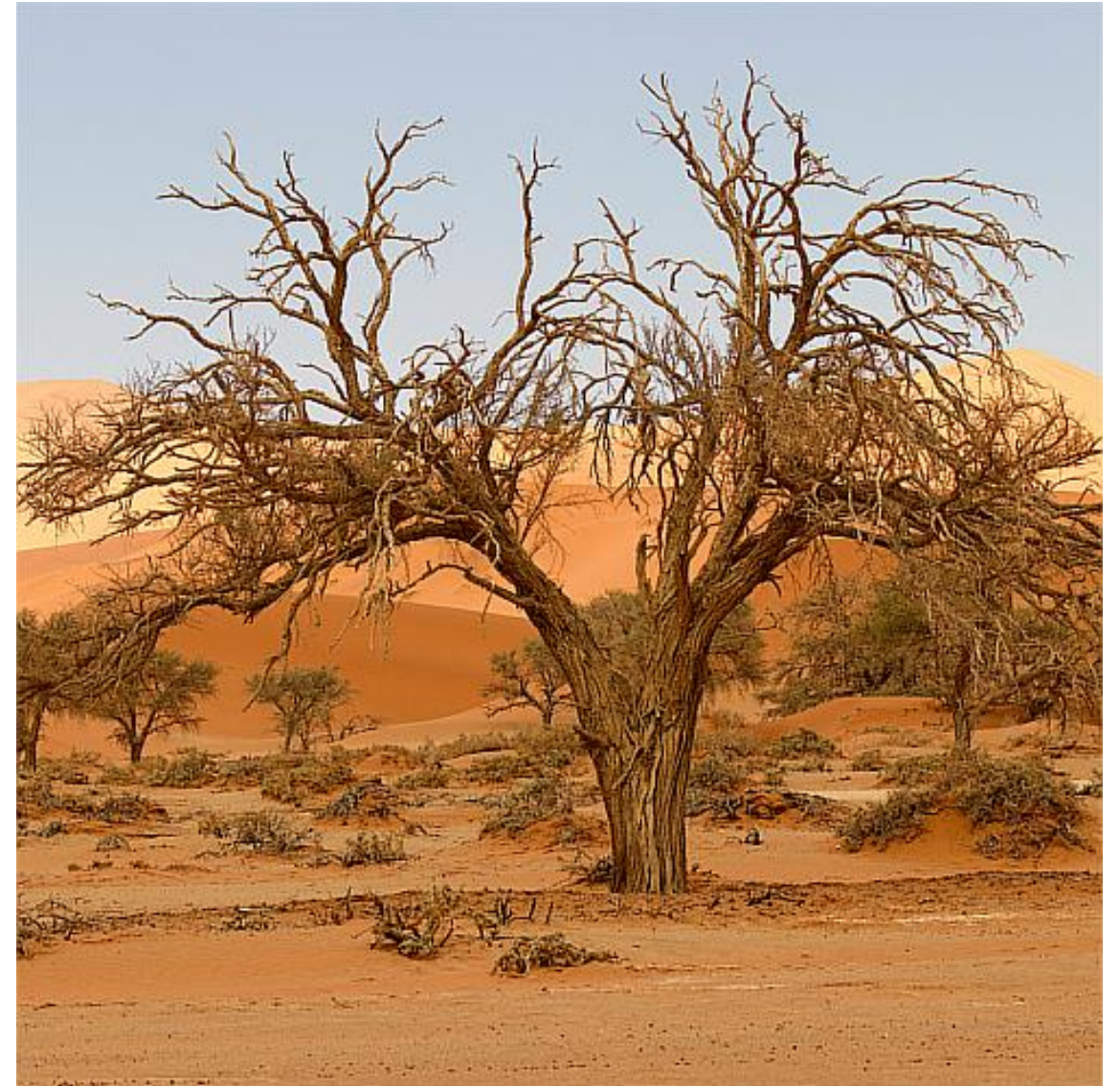


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Fundamental Ideas







Division Rules

- Vertical division means a “straight” growth into a branch
- Horizontal division means the creation of a branch fork
- For branches growing upwards, H are the leaf cells
- In general is $k > k'$ such that plants grow towards
- There are multiple F states, such that plants divide faster at the “tip” of the organism

$$K \xrightarrow{\text{time}}, F, H \quad (\text{vertical})$$

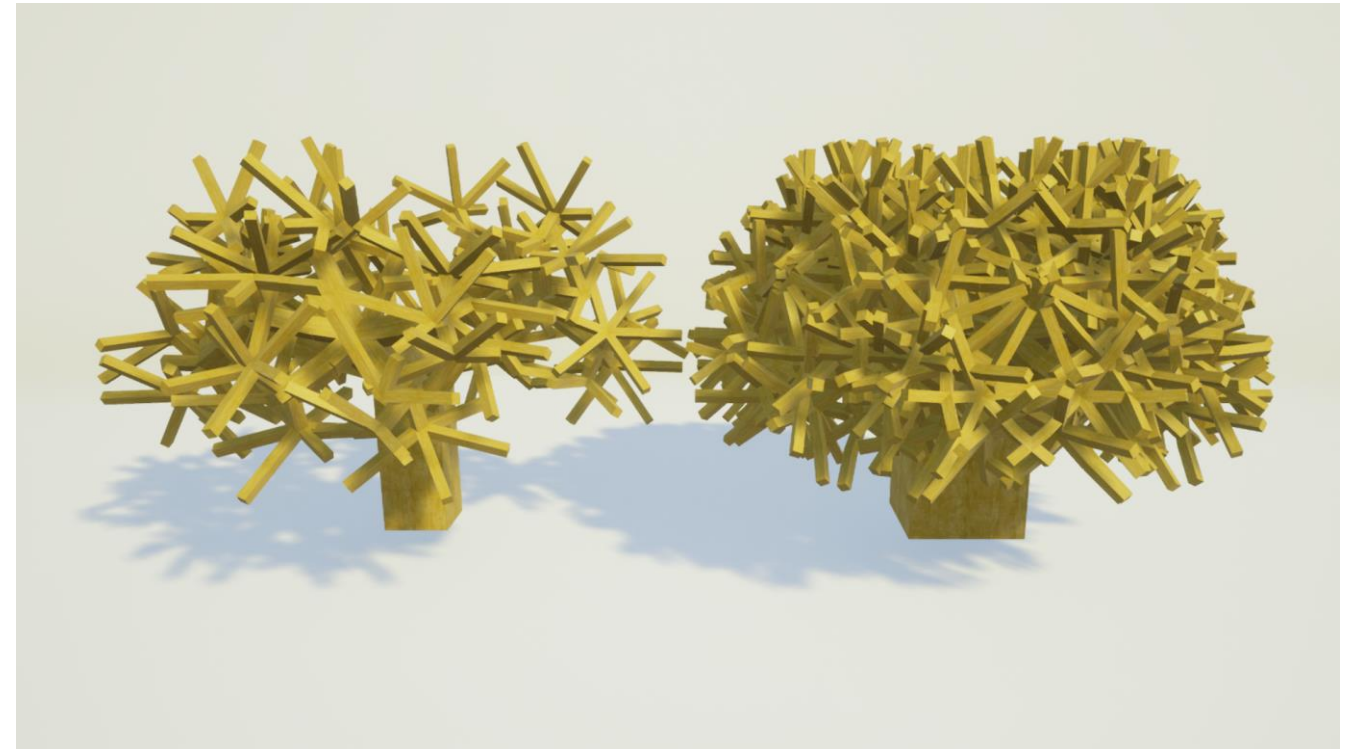
$$F \xrightarrow{\text{time}}, F, F \quad (\text{vertical})$$

$$H \xrightarrow{\text{light}}, \overbrace{K, \dots K}^k \quad (\text{horizontal})$$

$$H \xrightarrow{\text{time}}, \overbrace{K, \dots K}^{k'} \quad (\text{horizontal})$$

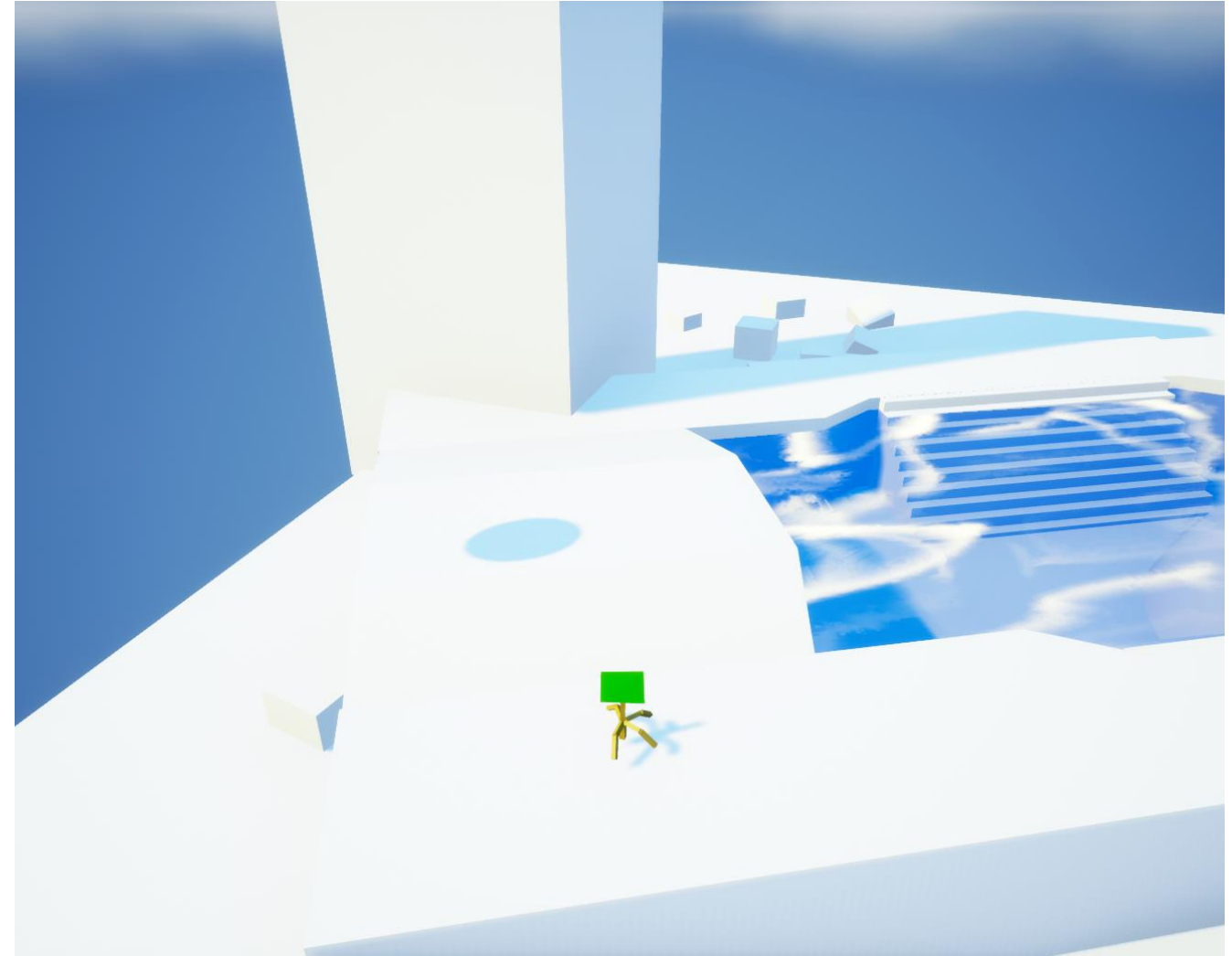
Self-Collision

- Left: self-collision disabled; Right: Self-collision disabled



Plant Grow

- 5 Iterations



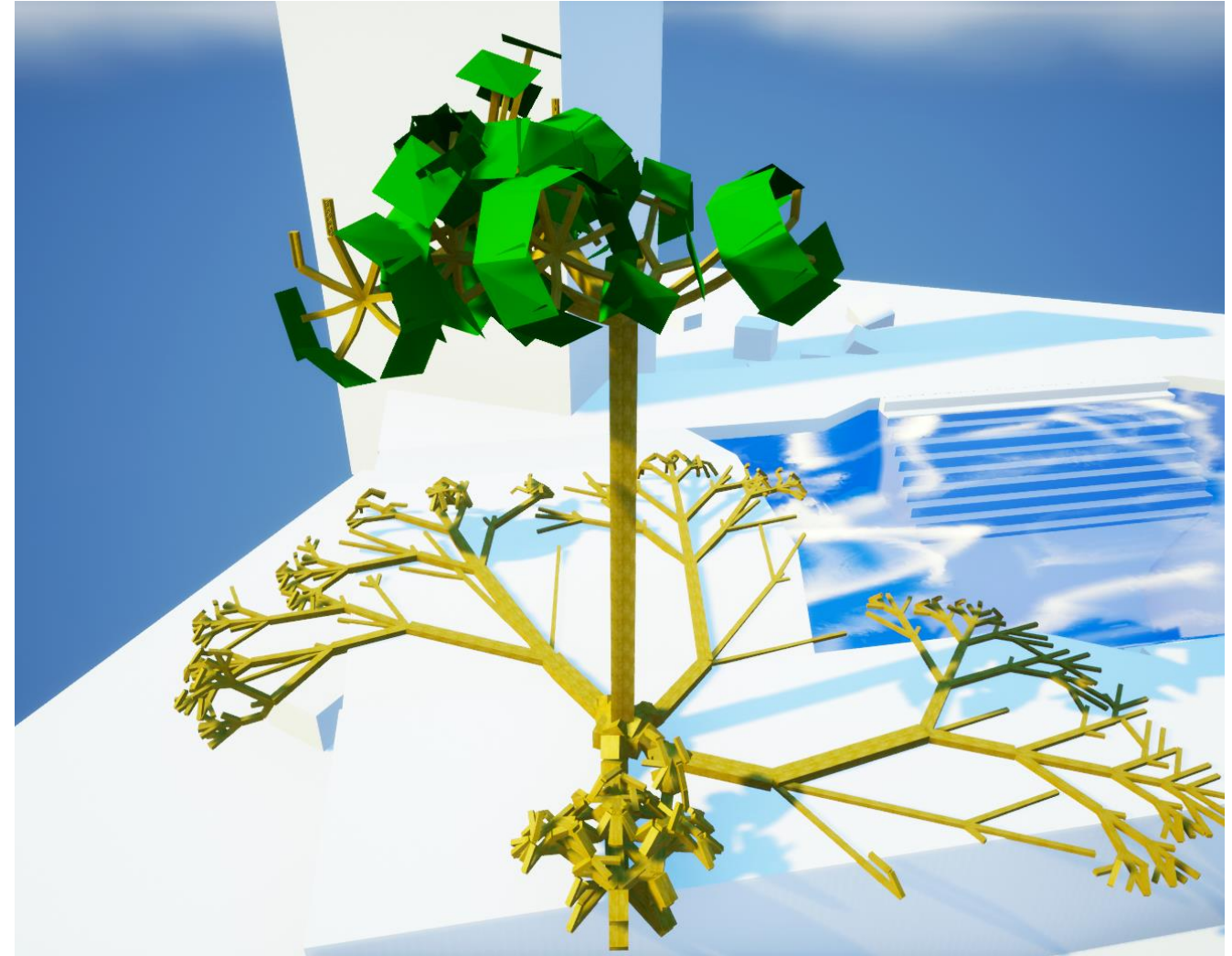
Plant Grow

- 20 Iterations

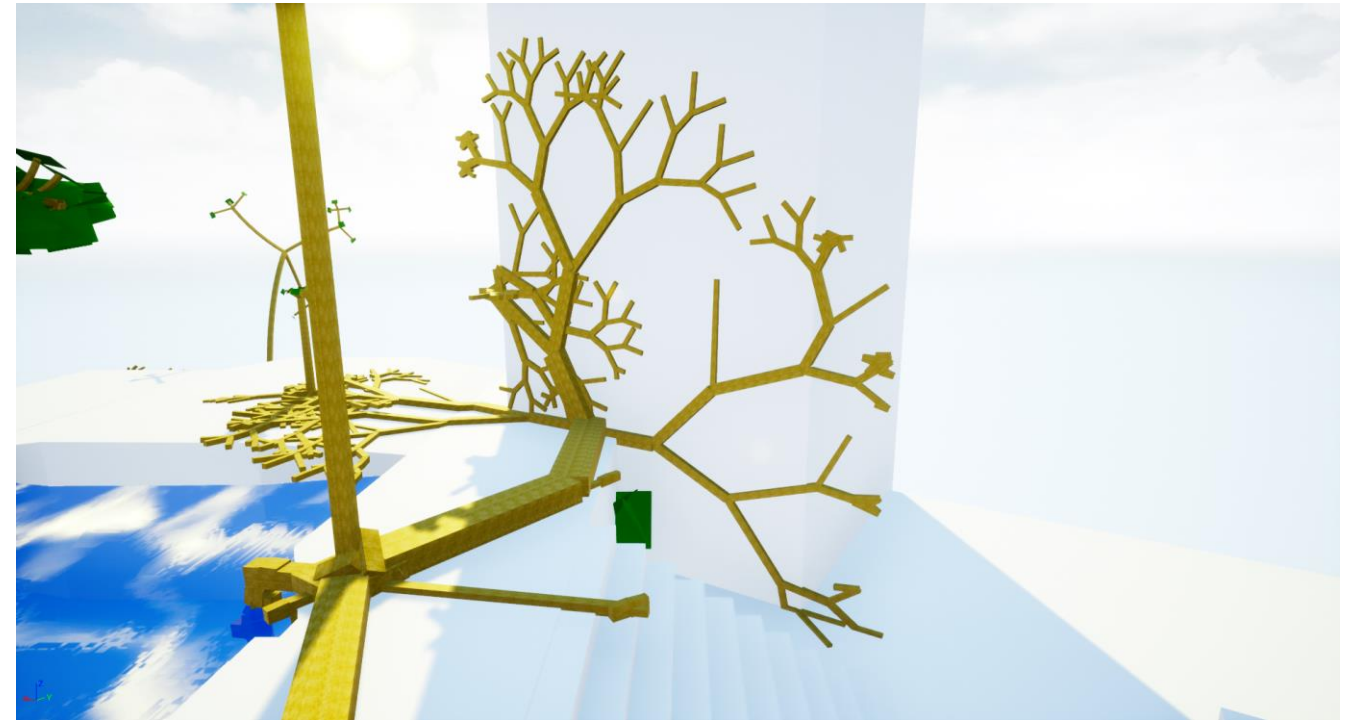


Plant Grow

- 35 Iterations



Growth In The Plane



Growth to Light



