**The Whale**

This document outlines the proposed technical specifications and mechanics for the Whale mob to ensure a seamless and intuitive player experience.

**1. Size Variants & Natural Generation**

* **Three Size Variants:**
  + **Small (Baby):** Hitbox: 1.5 x 1 x 2 (X x Y x Z, representing width x height x length).
  + **Medium (Young):** Hitbox: 7 x 4 x 8. Features a **solid collision box** on its top surface (similar to the Happy Ghast).
  + **Large (Adult):** Hitbox: 15 x 8 x 18. Features a **solid collision box** on its top surface.
* **Wild Spawning:**
  + Whale pods generate naturally in deep oceans.
  + Pods consist primarily of adult whales, accompanied by baby whales and young whales.
  + Wild whales are **neutral mobs**, but adult whales will become **hostile** if the player gets too close to their calves.

**2. Taming, Growth & Bonding**

* **The Stranding Event:** A baby whale will rarely spawn, stranded on a beach.
* **Rescue Mission:**
  + The player must use **water buckets** on it to revive it.
  + The player must then push it back into the water within **2 minutes**.
  + **Failure:** If not pushed into the water in time, it will re-strand and **die after 10 minutes**.
* **Bonding & Growth:**
  + Successfully saving the whale establishes a bond. It will return to the shore where it was saved at **dusk every Minecraft day**.
  + The player can feed it up to **8 fish (or buckets of fish) per day**.
  + Upon consuming a total of **32 fish**, OR after **8 in-game days** have passed, it grows into a **Medium** whale.
  + A **Medium** whale can be fed another **32 fish** to mature into a **Large** whale.
  + **Note:** Tamed Medium whales are **passive**, remain stationary at the water's surface, and will not grow further without player intervention.

**3. Building on the Whale**

* **The Build Grid:** The top of **Medium** and **Large** whales presents a **selectable build grid** (Just like block outline selection)

**Structural Integrity:** Any block not directly or indirectly connected to the main structure will **break and drop as an item**. This prevents floating structures that could strangely get the whale stuck.

**Performance:** Structures on the whale could be rendered and calculated as part of the whale entity itself.

* **Build Limits & Rules:**
  + The build area is the same width & length as the whale's own hitbox, 16 blocks in height.
  + Water placed on the whale becomes a **non-flowing, shallow "still water"** layer for aesthetic purposes without complex fluid dynamics. If completely surrounded by blocks on all four horizontal sides, it will become a full water source block.
  + Placing a block directly on the whale's **blowhole** will cause it to slowly suffocate.
* **On Death:** If the whale dies, **all blocks on its back are dropped as items**. Non-droppable blocks (like the still water layer) simply vanish.

**4. Piloting & Movement Controls**

* **Mounting:** Right-click any block on the whale's back to sit here and mount it.
* **Movement Controls:**
  + W / S: Move forward / backward.
  + A / D: Turn left / right.
  + SPACE while looking up: **Ascend** by 1 block. (Movement is grid-based). The whale's back can be a maximum of **2 blocks** above the water surface.
  + SPACE while looking down: **Dive** by 1 block.
* **Grid Snapping:** When dismounting, if the whale's rotation is within **15 degrees** of a cardinal direction (North, East, South, West), the entire built structure will **snap to the world's grid** for easy fine-tuning.

**5. Submarine Functionality**

* When the whale is fully submerged, it functions as a submarine.
* The player's oxygen bar is replaced by the whale's larger, dedicated oxygen supply.
* The whale's oxygen depletes at a rate of **1 unit per minute**, providing extended underwater exploration time.

#### ****Technical Feasibility & Design Philosophy****

The community mod **"Valkyrien Skies"** demonstrates the technical feasibility of large, player-built mobile structures. However, its complex physics, like buoyancy simulation, deviate from Minecraft's core simplicity. This proposal aims to capture that fantasy in a **uniquely "Minecrafty"** way by leveraging familiar mechanics and integrating it organically through a tamable mob, rather than adding a separate engineering system.