

Velocity Tracking

Three values track character velocity: Horizontal Velocity, Vertical Velocity, and Bump Velocity.

Velocity Type	Horizontal Velocity	Vertical Velocity	Bump Velocity
Respects input direction?	Yes	-	No
Max speed	11 m/s	200 m/s	90 m/s

All max speed values should be adjustable.

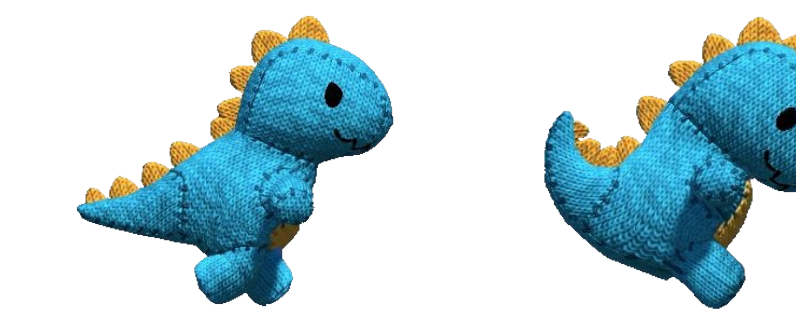
Available actions in all states

Physics States	Walking	Falling	Diving (air)	Diving (prone)	Taunt
Available Actions	<ul style="list-style-type: none"> - Move - Jump - Slap - Taunt 	<ul style="list-style-type: none"> - Move - Slap - Dive 	<ul style="list-style-type: none"> - Stand up 	<ul style="list-style-type: none"> - Stand up 	

Note that a character can be moving either up or down while in "falling" state

Slap

Slap can be performed any time the character is standing upright and not taunting or otherwise locked (at the finish line of a race)



The stumblebump will swing its arm or head forward, launching any other stumblebumps standing in front of it.

Slap does not affect physics or handling in any way, so it is not counted as a distinct state. All previous velocity is maintained and the player has all their usual control options available in the current state.

The player cannot perform another slap until the animation for their current slap, plus a short cooldown (2 seconds) is finished. The cooldown time should be adjustable.

Taunt

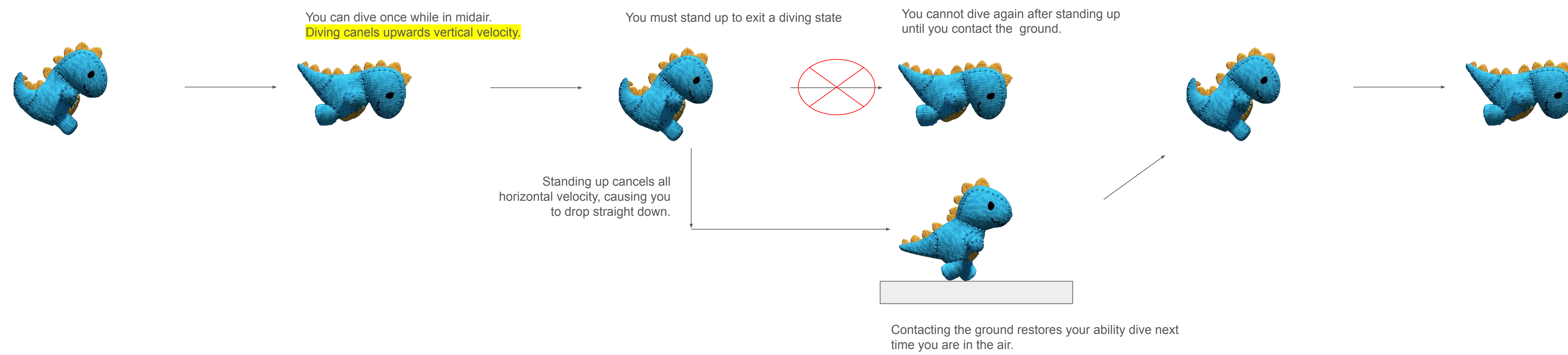
Taunt can be performed any time the character is standing upright on the ground.

Taunt locks all your movement options until the taunt animation finishes.

Diving (air)

Pressing Jump while in midair results in a Dive. A dive gives a burst of momentum in the direction the character is facing.

Hitting another stumblebump while in dive will launch that stumblebump. You cannot control your direction while diving.



Diving (prone)

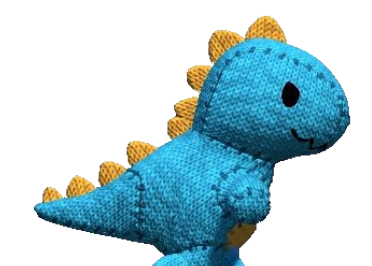


When the character lands while diving they will enter the Diving (prone) state.

In this state the character slides until ground friction brings all their bump velocity to zero.

The player has no control options but to stand up during this state. They can stand up at any time to re-enter Walking state.

Walking

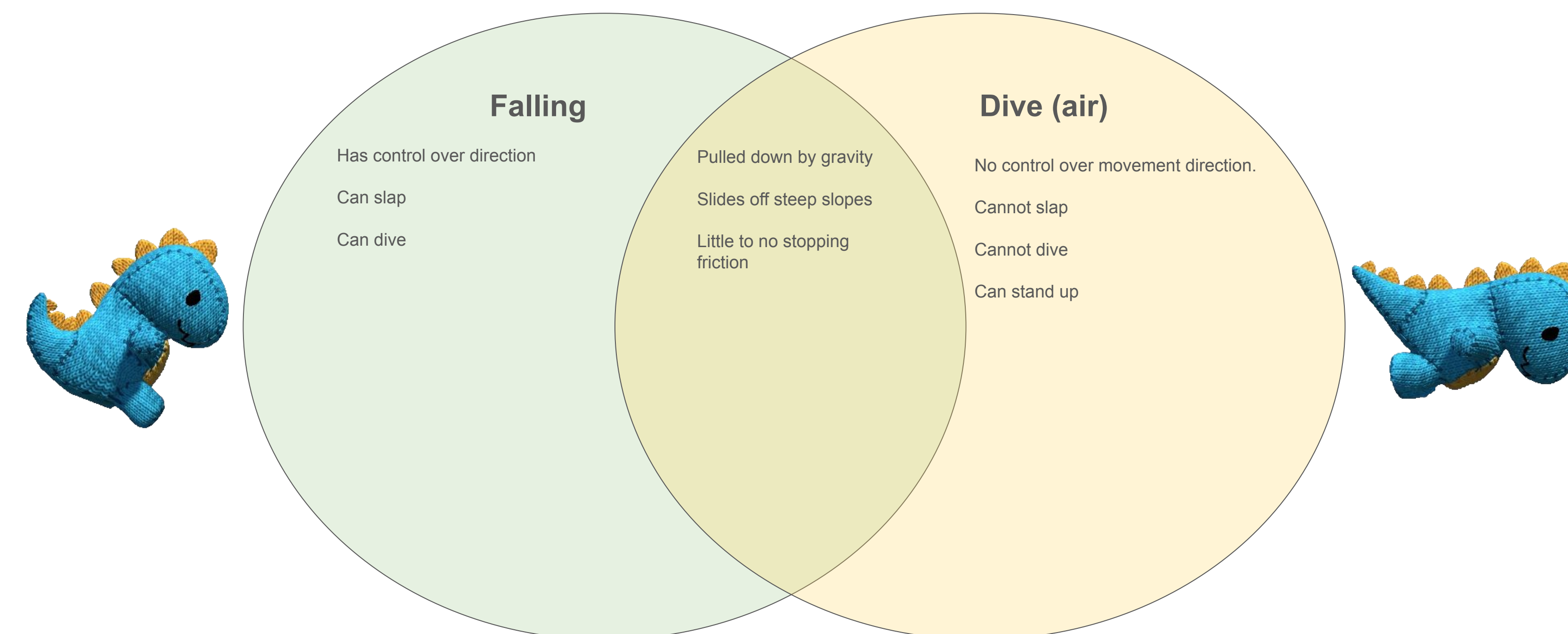
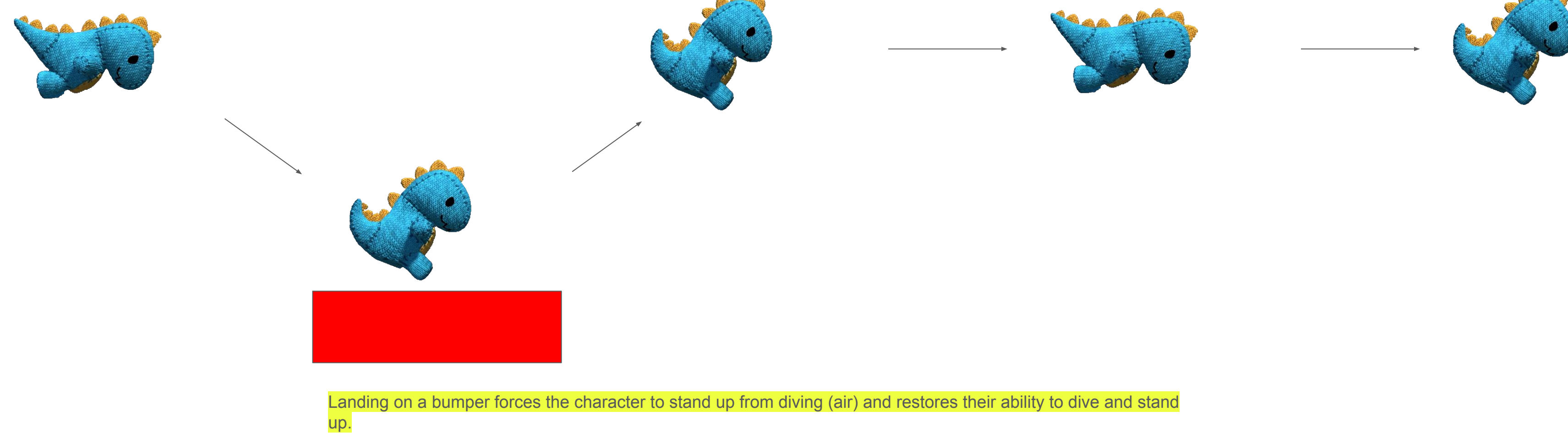


Base state all other states will enter from and eventually return to.

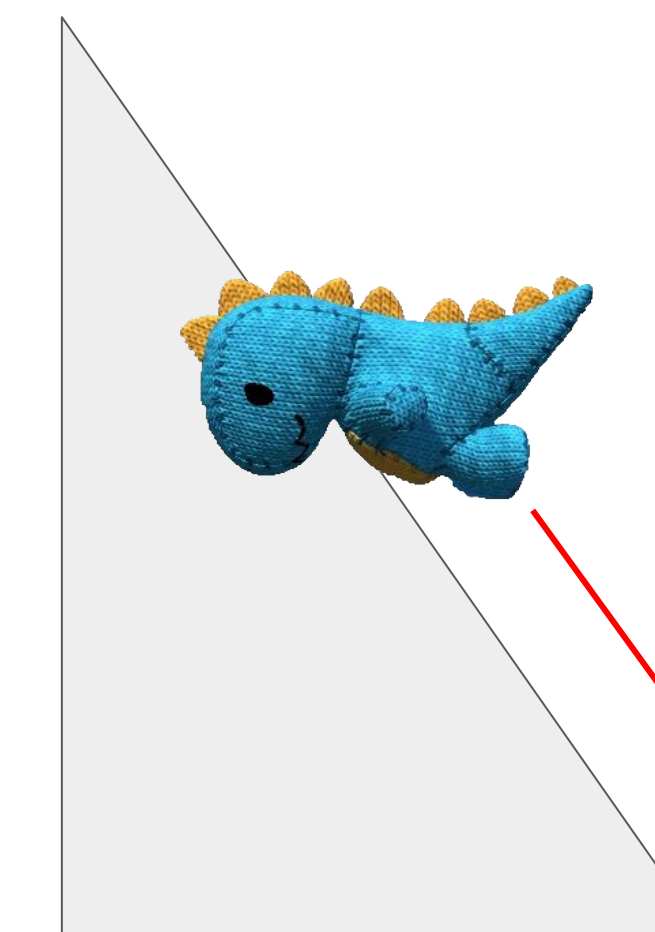
Includes idling.

Bumpers

Bumpers add velocity irrespective of the velocity you contact them with. This means you will maintain your previous velocity + the bumper velocity.



Steep Slopes



Some slopes are too steep to walk. Landing on a slope that is too steep will cause you to be pulled down the slope by gravity. This state still counts as Falling or Diving (air)

If the ground slope becomes too steep while the character is in walking state, the character will immediately enter falling state and slide down the slope.