# Specification: Enemy Behavior

## 1. Wooltooth

### 1.1 General behavior

The Wooltooth is the first enemy type in Shadeshifter. The player encounters these foes in the underground laboratory where the game starts.

Woolteeth can only move horizontally. They cannot jump. By default, they slowly patrol back and forth between two defined points on the same platform. Once they see the player or are attacked by him, their speed increases and they start chasing the player. If they are nearby, they try to bite Slate. The area throughout which the Wooltooth will chase the player is defined separately from the patrol points. If the player remains outside the chase area for some time, the Wooltooth will regenerate its health and resume its patrolling routine, using the more distant point as its first goal.

If the player transforms into a Wooltooth, he can no longer jump. However, he can use the bite attack and—because of the size difference between Slate and the Wooltooth—get through narrow spaces that had not been accessible before.

### 1.2 Exposed parameters

#### 1.2.1 Float – PatrolSpeed

The maximum velocity the Wooltooth reaches while patrolling.

#### 1.2.2 transform – LeftPatrolPoint

A reference to an empty game object on the Wooltooth prefab. Its x-position will be used as one of the two points between which the Wooltooth patrols.

#### 1.2.3 transform – RightPatrolPoint

A reference to an empty game object on the Wooltooth prefab. Its x-position will be used as one of the two points between which the Wooltooth patrols.

#### 1.2.4 Float – WaitDuration

The number of seconds for which the Wooltooth waits on reaching a patrol point. After this delay, it turns around and moves towards the other point.

#### 1.2.5 Float – SightDistance

The number of units the Wooltooth can see in its current direction. If the player is within sight, the Wooltooth starts chasing and attacking him.

### 1.2.6 Float – ChaseSpeed

The maximum velocity the Wooltooth reaches while chasing the player.

### 1.2.7 BoxCollider2D – ChaseArea

A reference to a trigger volume. The Wooltooth keeps chasing the player as long as he is within the ChaseArea.

### 1.2.8 Float – ResetDuration

The number of seconds for which the player has to remain outside the ChaseArea for the Wooltooth to reset. When resetting, the Wooltooth regenerates all of its health points and resume its patrolling routine, starting with the more distant of the two points.

### 1.2.9 Float – HealthPoints

The number of health points of this enemy type. Once the player brings these down to zero, the enemy dies.

### 1.2.10 BoxCollider2D – HitBox

A reference to a box collider on the Wooltooth prefab that is responsible for hit detection. If a player's attack overlaps the HitBox, it is registered as a hit. The HitBox can vary significantly from the collision of the sprite.

### 1.2.11 Float – AttackRange

The maximum distance between the Wooltooth and the player at which it will try to launch an attack.

### 1.2.12 Float – BiteDamage

The number of health points the player loses if he does not manage to evade the Wooltooth's bite attack.

### 1.2.13 Float – TimeBetweenAttacks

The number of seconds after an attack during which the Wooltooth is not able to attack again.

# 2. Volture

## 2.1 General behavior

The Volture is the second enemy type in Shadeshifter. The player encounters these foes in the underground laboratory where the game starts.

Voltures fly and thus move in any direction. While not in combat, they fly to random points in a defined area. If the player is near a Volture or attacks them, they become aggressive and start attacking as well. Voltures always keep their distance to the nearest platform, so that Slate has to attack while jumping to hit them. In a fight, they fly to a position with an uninterrupted line of sight to the player (which can be from any direction) and spit lightning balls at him. If the player leaves a separately defined area and does not re-enter it for some time, the Voltures reset. They regenerate their health points and fly back to a random location in their initial area.

If the player transforms into a Volture, he is no longer affected by gravity and can move in every direction. He can also shoot a lightning ball, however, while the player is controlling the Volture, this ball always moves in a straight direction (to simplify the controls).

## 2.2 Exposed parameters

### 2.2.1 Float – FlySpeed

The velocity at which Voltures fly through the air.

### 2.2.2 BoxCollider2D – PatrolArea

A reference to a trigger volume in the level. While not in combat, the Volture picks a random location in the PatrolArea to fly to.

### 2.2.3 Float – WaitDuration

The number of seconds for which the Volture waits upon reaching a patrol point. After this delay, it chooses the next point and starts flying towards it.

### 2.2.4 Float – SightRadius

The maximum distance at which the Volture notices the nearby players and starts attacking him.

### 2.2.5 Float – DesiredFlightAltitude

The vertical distance to the nearest platform that the Volture tries to keep. This is to ensure that the player has to jump and attack at the same time to hit a Volture.

### 2.2.6 BoxCollider2D – ChaseArea

A reference to a trigger volume. The Volture keeps chasing and attacking the player as long as he is within the ChaseArea.

### 2.2.7 Float – ResetDuration

The number of seconds for which the player has to remain outside the ChaseArea for the Volture to reset. When resetting, the Volture regenerates all of its health points and returns to a random point within the PatrolArea.

### 2.2.8 Float – HealthPoints

The number of health points of this enemy type. Once the player brings these down to zero, the enemy dies.

### 2.2.9 BoxCollider2D – HitBox

A reference to a box collider on the Volture prefab that is responsible for hit detection. If a player's attack overlaps the HitBox, it is registered as a hit. The HitBox can vary significantly from the collision of the sprite.

### 2.2.10 Float – LightningBallDamage

The number of health points the player loses if he does not manage to evade the Volture's lightning ball projectile.

### 2.2.11 Float – LightningBallVelocity

The speed of the lightning ball projectile the Volture launches at the player.

### 2.2.12 Float – MinTimeBetweenAttacks

The minimum number of seconds after an attack during which the Volture is not able to attack again. After an attack, a random delay between MinTimeBetweenAttacks and MaxTimeBetweenAttacks is chosen. Only after this delay has elapsed does the Volture launch another attack.

### 2.2.13 Float – MaxTimeBetweenAttacks

The maximum number of seconds after an attack during which the Volture is not able to attack again. After an attack, a random delay between MinTimeBetweenAttacks and

MaxTimeBetweenAttacks is chosen. Only after this delay has elapsed does the Volture launch another attack.