

# Tuxemon Combat System

## Subroutines

### HP bar

1. If a monster's "current HP" is different to their "display HP",
  - a. increase or decrease "display HP" to approach "current hp", at a rate of 1 per frame
2. Update HP image for each monster to match its "display HP" score

### Monster changes condition

1. If either monster changes condition, change condition label and image and Stat calculations

### Monster below 1 HP

2. If either monster reaches 0 or lower HP, Run the "Monster Knocked Out" subroutine at the end of that step

### Gain Condition

1. If a monster would gain a condition, check their current condition
2. If the current condition allows for the replacement, replace it
  - a. Add to Dialogue: TARGET NAME affected by CONDITION!
  - b. Recalculate all the monster's Stats
3. Otherwise, Dialogue: TARGET NAME's current condition prevents NEW CONDITION from being acquired
4. Either way, return to battle flow upon SPACE/CLICK

### Monster Knocked Out

1. If a monster's "current HP" is 0 or lower,
  - a. Dialogue: MONSTER NAME is knocked out!
  - b. Monster sprite fades out over 0.5 seconds
2. If it was the Rival's monster that was eliminated,
  - a. Add  $(\text{active monster's level} + 8)/4$  to "XP\_available\_for\_player" scene variable
3. Check if there are other conscious monsters on their team. If so, run Monster Selection subroutine
4. Otherwise, move to No Monsters Remain subroutine

### Speed Test

If a Speed Test is required:

1. Generate a random number between 0 and the sum of the two active monster's Speed Stats
2. If the number is less than the Player's monster's Speed stat, the Player wins the Speed Test
3. Otherwise, the Rival wins the Speed Test

### No Monsters Remain

1. If Rival has no monsters remaining,
  - a. Display text: "Battle won"
  - b. Remove all conditions from both side's monsters (except Eliminated)
  - c. Display Unsummon animation for Player's monster, and remove its sprite
  - d. Player and Rival re-enter from their respective sides
  - e. XP Display pops up

- i. Assign XP
  - f. Display Player Winning Dialogue, if any
    - i. Wait for SPACE/CLICK
- 2. If Player has no monsters remaining,
  - a. Display text: "Battle lost"
  - b. Remove all conditions from both side's monsters (except Eliminated)
  - c. Display Unsummon animation for Rival's monster, and remove its sprite
  - d. Player and Rival re-enter from their respective sides
  - e. Display Player Losing Dialogue, if any
    - i. Wait for SPACE/CLICK

## Monster Selection

1. If Monster Selection subroutine has been called,
  - a. Record the active monster's current HP
  - b. Set the active monster's condition to 0 (none)
  - c. If called for Player,
    - i. Display remaining conscious monsters
    - ii. Player to click on selection
    - iii. That monster becomes the new active monster for Player
    - iv. Set "participated\_in\_this\_battle" to 1
  - d. If called for Rival,
    - i. AI selects between remaining conscious monsters
    - ii. That monster becomes the new active monster for Rival
2. Summon animation appears in Rival's/Player's space, over 0.5 seconds
  - a. The sprite for the monster appears at this time, beneath the animation
  - b. Load that monster's Stats, Elements, Techniques and current and max HP
3. Dialogue: TRAINER summons MONSTER NAME

## Chapter 1: Preliminary

### Stage 1: Preliminary

1. Begin playing "Battle Theme"
2. Display Battle Background
3. Player trainer back sprite travels right, on-screen, over 0.5 seconds
4. If facing a Rival trainer:
  - a. Rival trainer sprite travels left, on-screen, over 0.5 seconds
  - b. Display Rival's Battle Dialogue
5. If facing a wild tuxemon:
  - a. Dialogue: "You stumble on a wild NAME!"
6. Wait for SPACE/CLICK

### Stage 2: Battle begins

1. Dialogue disappears
2. The word "BATTLE!" is transposed in the middle of the screen. It fades out over 0.5 seconds.
  - a. The battle theme starts playing at this time
3. Rival trainer sprite travels right, off-screen, over 0.5 seconds
4. Summon animation appears in Rival's space
  - a. The sprite for the monster first in their team order appears at this time, beneath the animation

- b. This is the active monster for the Player, and has “participated\_in\_this\_battle” set to 1
  - c. When animation complete, move to Step 5
- 5. Dialogue: RIVAL summons MONSTER NAME
- 6. 0.5 seconds later, Player trainer sprite travels left, off-screen, over 0.5 seconds
- 7. Summon animation appears in Player’s space, over 0.5 seconds
  - a. The sprite for the monster first in your team order appears at this time, beneath the animation
  - b. This is the active monster for the Player, and has “participated\_in\_this\_battle” set to 1
  - c. When animation complete, move to Step 8
- 8. Dialogue: PLAYER summons MONSTER NAME
- 9. 0.5 seconds later, Monster Blocks slide in from respective sides for each monster

## Chapter 2: Beginning of Round

### Stage 1: Selection

1. Combat Options pop up – see “Combat Options” for more details
  - a. Dialogue: Select your action!
2. Player selects one Combat Option
  - a. The AI selects for the Rival at this time
  - b. If a Technique is selected, set its Recharge Timer to the technique’s Recharge Value
  - c. If a Fast Technique is selected, multiply that active monster’s Speed by 1.5
3. Combat options fade away, over 0.5 seconds

## Chapter 3: Other Actions

### Stage 1: Retreat

1. If Player did not select Retreat, move to Stage 2
2. Otherwise, test Speeds
  - a. See “Speed Test”
  - b. If Player wins Speed Test, move to Chapter 5
3. Otherwise, dialogue: Too slow – you can’t escape!
  - a. SPACE or CLICK to move to next step

### Stage 2: Capture

1. If Player did not select Capture, move to Stage 3
2. Otherwise, test against this formula
  - a. Random number between 0 and 100%, compared to  $((\text{HP Lost}/\text{Total HP}) * 100) + 15$  if affected by a negative condition + 10)
  - b. If random number is greater than or equal to ratio, monster is caught
3. Otherwise, dialogue: It failed!
  - a. SPACE or CLICK to move to next step

### Stage 3: Switch

1. If neither Player nor Rival selected Switch, move to Stage 4
2. If both selected Switch, Speed Test
  - a. The winner of the Speed Test Switches *second*
3. If Player selected Switch,

- a. run Unsummon animation and remove monster sprite
  - b. run Monster Selection subroutine for Player
  - c. Pause Stage 3 while subroutine takes place
4. If Rival selected Switch, run Monster Selection subroutine for Rival
  - a. run Unsummon animation and remove monster sprite
  - b. run Monster Selection subroutine for Rival
  - c. Pause Stage 3 while subroutine takes place
5. Then move to Stage 4.

#### Stage 4: Items

1. If Player selected, display Inventory.
  - a. Player may select any eligible item
  - b. Display the item in the middle of the screen for 0.5 seconds
  - c. Dialogue: PLAYER used ITEM NAME
  - d. Effects depend on the item
2. If Rival selected, AI selects an item
  - a. Display the item in the middle of the screen for 0.5 seconds
  - b. Dialogue: RIVAL used ITEM NAME
  - c. Effects depend on the item

## Chapter 4: Techniques

### Stage 1: Initial Setup

1. If both Player and Rival chose a non-technique action, move to Chapter 5.
2. If one chose a non-technique action, set them as "acted"

### Stage 2: Next Actor

1. If both Player and Rival have acted, move to Chapter 5.
2. If one has acted, assign next action to the other.
3. If neither have acted
  - a. Do a Speed Test and assign next action to the winner

### Stage 3: Action

1. For the monster with next action assigned (the "User")
2. Dialogue: MONSTER NAME uses TECHNIQUE NAME.
  - a. Wait till SPACE/CLICK
3. Check Accuracy
  - a. Random number between 0 and 100%, compared to (Technique Accuracy)
  - b. If random number is less than or equal to Accuracy,
    - i. Add to Dialogue: It succeeds!
    - ii. Sound effect: Technique sound effect
    - iii. Animations:
      1. User motion
      2. Technique animation
      3. Target motion
  - c. If random number greater than Accuracy,
    - i. Add to Dialogue: It fails!
    - ii. Animations: User movement
    - iii. Sound effect: Fail sound effect

- iv. Wait till SPACE/CLICK
    - v. Return to Stage 2
- 4. Calculate Damage.
  - a. If Technique's Power is 0, go to next step.
  - b. Otherwise,
    - i. If target is weak against technique's element, dialogue: ELEMENT is strong against TARGET NAME
    - ii. If target is strong against technique's element, dialogue: ELEMENT is weak against TARGET NAME
    - iii. On the rare occasions that a dual-element technique or creature is involved and it results in x4 or ¼ damage, dialogue: ELEMENT is very strong/very weak against TARGET NAME.
    - iv. Reduce or increase target's HP according to the Damage Formula
  - c. Wait for SPACE/CLICK
- 5. Remove User's Condition if it is lost on the use of a Technique
  - a. If Condition removed, recalculate all Stats
- 6. Check Technique's User Condition
  - a. If no User Condition, go to next step
  - b. Otherwise, random number between 0 and 100%, compared to (Technique Potency)
  - c. If random number is greater than or equal to ratio,
    - i. Run Get Condition subroutine
  - d. If random number less than ratio,
    - i. Add to Dialogue: USER NAME misses out on CONDITION!
    - ii. Wait till SPACE/CLICK
- 7. Check Technique's Target Condition
  - a. If no Target Condition, go to next step
  - b. Otherwise, random number between 0 and 100%, compared to (Technique Potency)
  - c. If random number is greater than or equal to ratio,
    - i. Run Get Condition subroutine
  - d. If random number less than ratio,
    - i. Add to Dialogue: TARGET NAME resists CONDITION!
    - ii. Wait till SPACE/CLICK
- 8. User set to "acted"
  - a. Return to Stage 2

#### Stage 4: End of Techniques

- 1. Dialogue: Round end!
  - a. Reset Round-specific variables
  - b. End all conditions that end on that player's End of Turn
  - c. Wait till SPACE/CLICK

## Chapter 5: End of Round

### Stage 1: End-of-Round conditions (Player)

- 1. Any End-of-Round conditions kick in for the Player
- 2. Display details
  - a. Wait for SPACE/CLICK, if has a condition

### Stage 2: End-of-Round conditions (Rival)

1. Any End-of-Round conditions kick in for the Rival
2. Display details
  - a. Wait for SPACE/CLICK, if has a condition

### Stage 3: Recharge Techniques

1. Each technique's Recharge Timer is reduced by 1, if it is greater than zero

### Stage 4: Repeat

1. Set Rival and Player back to "has not acted"
2. Recalculate all Stats
3. Move to Chapter 2