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Learn Create Master

# Python
# Animal Expedition – Lesson 9-10
# Food and whistling

## Student Objectives

- Add food pickup objects
- Add whistling (summon) functionality
- Finish all code and animal/background image designs
- Have all code/images loaded, uncommented and running

## Concepts Covered

1. If/elif/else structures
2. Functions
3. Global Variables
4. Turtle object creation
5. Click events and key-bound events

## Today' s Activity

Today, we will finish our code and any/all animal and background image designs. We will create a food object (which makes the animals go to a target position) and a whistling effect (which makes the animals go to and follow the player).

## Classroom Discussion

Create the final functionalities for additional player controls for commanding animals to follow or go to specific places. We will also finish all drawings and be able to run and uncomment all final code.

## Class Activity- Guided Work

```
# MAKE FOOD
food = turtle.Turtle()
food.hideturtle()
food.penup()
food.shape('square')
food.color('green')
food.shapesize(2,2)

food_is_used = False
is_whistling = False

def whistle():

    global is_whistling

    if is_whistling:
        is_whistling = False
        print('STOPPED Whistling')

    else:
        is_whistling = True
        print('STARTED Whistling')
```

```
def handleFood():

    global food_is_used

    if food.isvisible():

        for a in animal_house:

            if distForm(food,a) <= 50:
                food_is_used = False
                food.hideturtle()
                break

    s.ontimer(handleFood,100)

def placeFood(x,y):

    global food_is_used

    if not food_is_used:
        food_is_used = True
        food.setpos(x,y)
        food.showturtle()



s.onclick(placeFood)
s.onkeypress(whistle,'w')


set_biome()
handleFood()
```

## Lesson Overview / Summary

1. Create a food turtle object (as a green circle) as well as the global variables food_is_used and is_whistling (which may need to be created higher up on the script).
2. The whistle() function is used to set the is_whistling variable to True, which is used in animal movement to direct the naimals to move towards the player until it is changed (*toggled) to False. This function is mapped to the ‘ w’ keyboard key.
3. The handleFood() function is used to monitor the food object once it is placed. If it is visible, it has not been picked up yet and if the distance between an animal and the food breaches the required threshold distance, the food will disappear and the food_is_used variable is set to False.
4. The placeFood() function is used to set the food_is_used variable to True and places the food in a random place (and makes it visible). The placeFood() function should be mapped to on-screen mouse clicks.
5. Additonally, included here are the final 2 lines of code that need to be run to initiate the first biome setting as well as the continuously running handleFood() function.

## Independent Play/ Game Customization

Allow your students to enjoy their new game! Give them the last 10 minutes of class to play their game, or explore what they can do to customize their world. Celebrate creativity!

## Building Relationships

Share what your students can do! Take screenshots of your student' s work, or pictures of them (absolutely no faces please!) with their computer screens, and use the handle @CodeAdvantage and the handle #CodeAdvantage to let others see and be inspired by your students' success with coding!

*(Tweet or Instagram example: " My students completed @CodeAdvantege #Lets Float Around today! We designed and coded games! I' m so proud of them! My students rock!)*

Consider the plans for your next lesson and start preparing for how the kids are going to have a great time with @CodeAdvantage creating #(next lesson name)!

We value your opinion! Please send any lesson suggestions, edits, comments, or questions to feedback@codeadvantage.org.