



BASIC TESTING -- For Bird subclasses

| @Test | Example | Expected |
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| TestConstructor | BirdOfPrey("Hawks", ["Sharp Hooked beaks"], False, 2, ["Other birds"]) | Expect values to be passed to the constructor, verify by checking. |
| | | |
| TestgetType() | birdObject.getType() | "Hawks" |
| TestgetCharac() | birdObject.getCharac() | ["Sharp Hooked beaks"] |
| TestgetisExtinct() | birdObject.getisExtinct() | False |
| TestgetNumOfWings() | birdObject.getNumOfWings() | 2 |
| TestgetFoodPref() | birdObject.getFoodPref() | ["Other birds"] |
| | | |
| TetstaddCharac() | birdObject.addCharac("Visible Nostrils") | ["Sharp Hooked beaks", "Visible Nostrils"] |
| TestsetCharac() | birdObject.setCharac("Visible Nostrils") | ["Visible Nostrils"] |
| TestremoveCharac() | birdObject.removeCharac("Visible Nostrils") | ["Sharp Hooked beaks"] |
| | | |
| TestsetType() | birdObject.setType("Eagles") | "Eagles" |
| TestsetIsExtinct() | birdObject.setIsExtinct(True) | True |
| TestsetNumOfWings() | birdObject.setNumOfWingst(1) | 1 |
| | | |
| TestsetFoodPref() | birdObject.setFoodPref(["Fruit"]) | ["Fruit"] |
| TestaddFoodPref() | birdObject.addFoodPref("Insects") | ["Other birds", "Insects"] |
| TestremoveFromFoodPref() | birdObject.removeFromFoodPref("Insects") | ["Other birds"] |
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| TesttoString() | birdObject.toString() | "Type of Bird: Hawk; Characteristics: Sharp hooked beaks; |

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| | | Extinct: No; Number of Wings: 2; Favorite food: Other birds" |
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SPECIFIC BIRD SUBCLASS TESTING -- Parrots, Waterfowls, Shorebirds

| @Test | Example | Expected |
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| TestsetBodyOfWater | birdObject.setBodyOfWater(["Freshwater", "Saltwater"]) | ["Freshwater", "Saltwater"] |
| TestaddBodyOfWater | birdObject.addBodyOfWater("Wetlands") | ["Freshwater", "Saltwater", "Wetlands"] |
| TestremoveBodyOfWater | birdObject.removeBodyOfWater("Freshwater") | ["Saltwater"] |
| TestInvalidNumOfWaterBodies | birdObject.removeBodyOfWater("Saltwater") | IllegalStateException |
| TestgetBodyOfWater | birdObject.getBodyOfWater() | ["Freshwater", "Saltwater"] |
| | | |
| TestsetNumOfVocabWords | birdObject.setNumOfVocabWords(100) | 100 |
| TestgetNumOfVocabWords | birdObject.getNumOfVocabWords() | 100 |
| TestMinNumOfVocabWords | birdObject.setNumOfVocabWords(-1) | IllegalArgumentException |
| TestsetFavWord | birdObject.setFavWord("Apples") | Apples |
| TestgetFavWord | birdObject.getFavWord("Apples") | Apples |

ASSERTION TESTING

| @Test(expected = IllegalArgumentException.class) | Example | Expected |
|---|--|--------------------------|
| TestInvalidType | BirdOfPrey("Owl", ["Sharp Hooked beaks"], False, 2, ["Other birds"]) | IllegalArgumentException |
| TestInvalidCharacteristic | BirdOfPrey("Owl", ["Facial disks"], False, 2, ["Other birds"]) | IllegalArgumentException |
| TestInvalidCharacterAdd | birdObject.addCharac("Furry") | IllegalArgumentException |
| TestInvalidCharacterSet | birdObject.setCharac("Furry") | IllegalArgumentException |
| TestInvalidFoodSet | birdObject.setFoodPref("Potatoes") | IllegalArgumentException |
| TestInvalidFoodAdd | birdObject.addFoodPref("Potatoes") | IllegalArgumentException |

EDGE CASE TESTING

| @Test | Example | Expected |
|-------------------------|---|---|
| TestLowerNumOfWings | BirdOfPrey("Owl", ["Sharp Hooked beaks"], False, -2, ["Other birds"]) | IllegalArgumentException |
| TestMaxNumOfWings | BirdOfPrey("Owl", ["Sharp Hooked beaks"], False, 3, ["Other birds"]) | IllegalArgumentException |
| TestIllegalWingNumSet | birdObject.setNumOfWings(-2) | IllegalArgumentException |
| TestIllegalWingNumSet | birdObject.setNumOfWings(3) | IllegalArgumentException |
| TestInvalidNumOfCharacs | birdObject.removeCharac("Sharp Hooked beaks") | IllegalStateException |
| TestInvalidMinNumOfFood | birdObject.removeFoodPref("Other animals") | Assert cannot have less than 2 food preference |
| TestInvalidMaxNumOfFood | birdObject.addFoodPref("Other animals") | Assert bird object cannot have more than 4 food preferences |

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|--|---|--|
| | birdObject.setFoodPref("Other animals") | Assert bird object cannot have more than 4 food preferences or less than 2 |
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