

Name: _____ Date: _____

Fishing Cat Foraging Ratios, Rates & Unit Rates

Part 1: Hunting Efficiency & Unit Rates

In the Zoo Minutes clip, we watched the fishing cat tap the water surface to mimic insects, luring fish before diving in.

1. **Diving Success Rate:** A field researcher observes a wild fishing cat making **12 diving attempts over a 40-minute period**. Out of those 12 attempts, the cat successfully caught **8 fish**.
 - a. Write the simplified ratio of successful catches to total diving attempts.
 - b. What is the cat's unit rate of diving attempts per hour? (*Hint: 40 minutes is $\frac{2}{3}$ of an hour*).
 - c. At this same rate, how many total fish would the cat catch in a 2-hour hunting session?
2. **Caloric Intake Rates:** An adult fishing cat needs to consume approximately **500 grams of food per day** to maintain its energy.
 - a. If a single small fish provides an average of **62.5 grams** of food, how many fish must the cat catch each day to meet its requirement?
 - b. Based on your answer from Question 1c, how many hours (or minutes) of hunting would it take the cat to catch enough fish for its daily meal?

Part 2: Analyzing Diet Ratios

While fish make up the majority of their diet, fishing cats are opportunists and also hunt frogs, crustaceans, rodents, and waterfowl.

3. **Diet Composition:** A study of fishing cat scat shows that for every **15 kg of fish** consumed, the cat eats **3 kg of rodents/birds** and **2 kg of freshwater crabs**.
- Write the ratio of **fish to total food consumed** as a fraction, a decimal, and a percentage.
 - If a sanctuary fishing cat eats **80 kg** of food over several months following this exact diet ratio, how many total kilograms of fish did it consume?
4. **Comparing Predators (Extension):** Domestic house cats catch prey on about **2 out of every 10 attempts** (2:10). A fishing cat catches prey on about **6 out of every 10 attempts** (6:10).
- How many times more efficient is the fishing cat per attempt than the domestic cat? Express your answer as a unit rate.