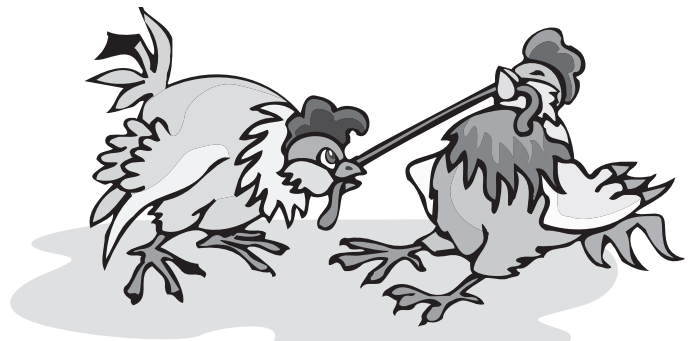


Hungry Hens



Did you know chickens need to eat a balanced diet too?

Like us, chickens need protein. Protein is found in muscles. It plays many roles in the body. Chickens can find protein in many different places. If they are raised by a farmer they probably get their protein from **feed**. Farmers use feed to provide their chickens with a balanced diet of protein, carbohydrates and calcium. Calcium is very important for **laying hens** or chickens that lay eggs. Egg shells are high in calcium. If the laying hen doesn't have enough calcium, she will lay fewer eggs.

To make sure hens have the best diet, **free-range** chicken farmers give their chickens feed and allow them to graze for food. Chickens really like bugs and worms. To a chicken, earthworms are yummy! Luckily for chickens, earthworms provide them with lots of protein. Some farmers even grow their own earthworms so they can give their chickens extra protein.

Chickens need about $\frac{1}{2}$ cup of feed per day. One of the best ways to feed chickens is to set the food out in the morning. This will allow the chicken to eat whenever they are ready. However, the farmer has to be sure not to leave out too much or too little feed.

DOODLE BUGS

In the reading, underline what chickens need for a balanced diet.

How much feed does a chicken need each day?

What do farmers need to know if they want to raise a healthy chicken?

MATHEMATICS INVESTIGATIONS:

Balanced Diet

You will need:

1 ruler
1 calculator
1 pencil

Things to know:

1 cup = 8 ounces
 $\frac{1}{2}$ cup = 4 ounces
 $\frac{1}{4}$ pound of feed = $\frac{1}{2}$ cup of feed

Predict what percentage of protein your chicken needs in **feed** if they also eat earthworms. First, use the chicken's weight to find out how much feed it needs. Second, track your chicken's growth from a chick to an adult chicken. Remember, if a chicken doesn't eat a balanced diet, they won't be healthy.

Protein from feed

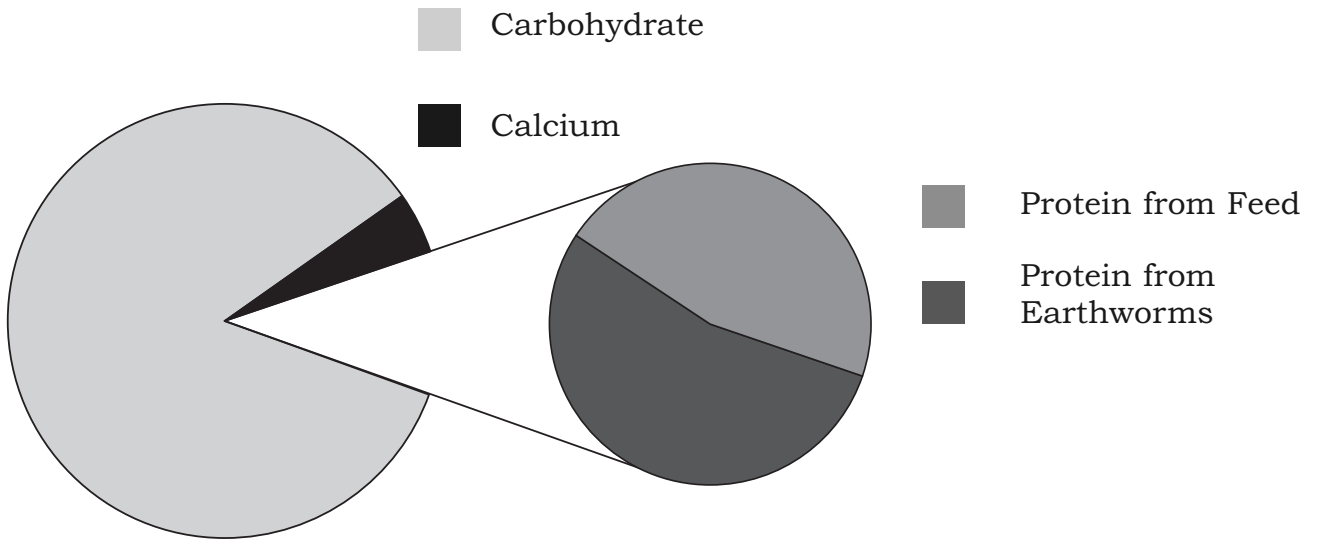
A chicken's diet is about 15% protein. Earthworms provide $\frac{4}{10}$ of the protein for a free-range chicken.

Prediction: _____ % of Protein in Feed

1. What is the ratio of protein to the chicken's total diet?
2. What percentage of protein will come from earthworms?
3. What percentage of protein will come from feed?

MATHEMATICS INVESTIGATIONS:
Balanced Diet (continued)

Chicken Diet



4. Was your prediction correct?

5. Why or why not?

MATHEMATICS INVESTIGATIONS:

Balanced Diet (continued)



Raising your chicken

Use the chart below to find out how much your chicken will weigh and eat each month. An adult chicken is 6 months old. Find out how much feed per pound your chicken needs. Remember, an adult chicken needs about $\frac{1}{2}$ cup of feed each day.

1. Find out how much feed your chicken will need when it is 6 months old by filling in how many ounces are in $\frac{1}{2}$ cups.
2. Find the ratio of weight to feed. Simply divide chicken weight by amount of feed. Use that number to fill in the rest of the chart.

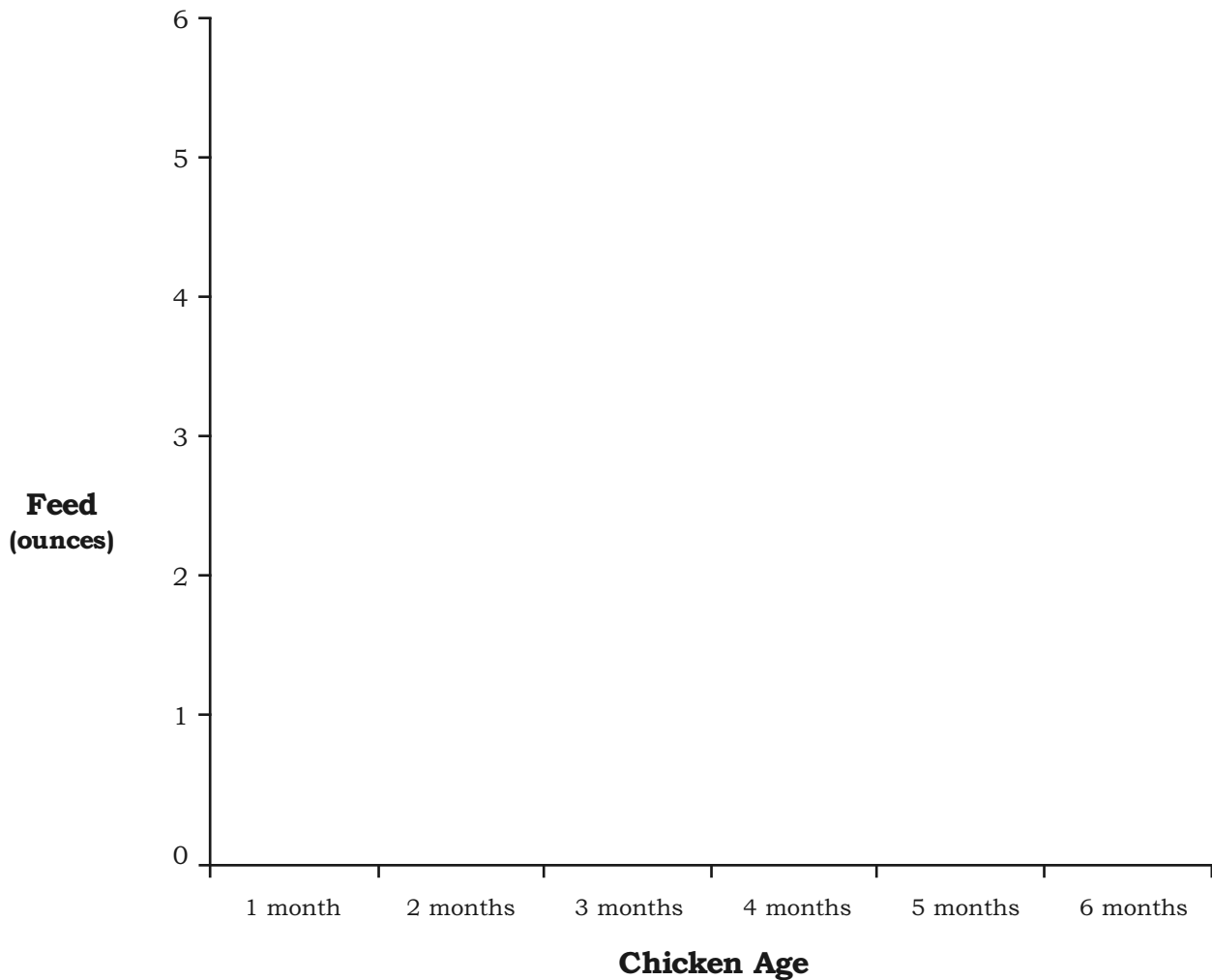
Chicken Age	Weight	Amount of Feed
1 month	___ pounds	1 ounce
2 months	2 pounds	___ ounces
3 months	___ pounds	2.5 ounces
4 months	3 pounds	___ ounces
5 months	___ pounds	3.5 ounces
6 months	4 pounds	___ ounces

MATHEMATICS INVESTIGATIONS:

Balanced Diet (continued)

Tracking your Chicken's Growth

Use the chart on the previous page to track your chicken's growth by how much you fed it. Place a dot on the graph where your chicken's age and amount of feed match. Once you have placed a dot for each, connect your dots from start to finish.



Did your chicken grow steadily each month?

FUN WITH FOOD: **Buying a Better Nugget**



You will need:

1 small package frozen chicken nuggets
1 small package frozen chicken tenders
Microwave or oven

PREP TIME: 20 minutes

1 plate
1 knife
Help from an Adult

Observe, taste and record the differences between chicken nuggets and chicken tenders. Predict which chicken product you think will taste better.

Chicken nuggets are made from different parts of the chicken that have been blended together and poured into a mold. Chicken tenders are made from one section of the chicken. Can you tell the difference?

Prediction: _____

Comparison

1. Follow the microwave instructions on each of the packages.
2. Cut the nugget in half. Record the color, texture, moistness and taste.
3. Cut the tender in half. Record the color, texture, moistness and taste.
4. Record any differences you observed or tasted.

Fun Fact

Chicken is a good source of the B vitamins (thiamin, riboflavin, and niacin). Choose white meat over dark, and remove the skin before eating to reduce the total fat and saturated fat content of chicken.

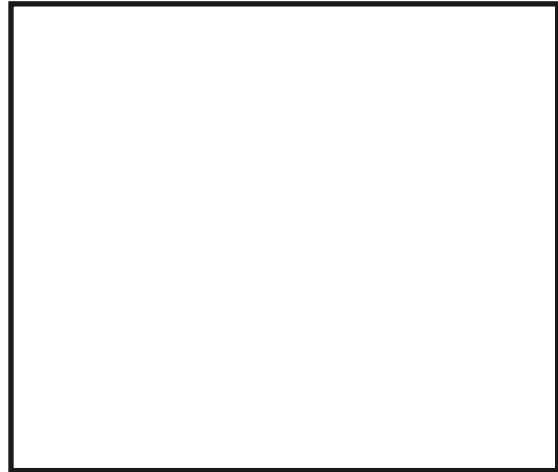
FUN WITH FOOD:
Chicken Evaluation

Record and draw your observations

Chicken Tender

Appearance: _____

Taste and Texture: _____



Chicken Nugget

Appearance: _____

Taste and Texture: _____



What were the differences?

Which did you like better? Why?

Proficiency Questions

Circle the best answer:

1. What is most important for laying hens?

- a. calcium
- b. fat
- c. grass
- d. none of the above

2. What is another source of protein for chickens other than feed?

- a. dirt
- b. grass
- c. earthworms
- d. none of the above

3. Use the Chicken Feed pie chart to find out what percentage of a chicken's feed should be calcium.

- a. 5%
- b. 10%
- c. 15%
- d. 20%

