

## CALCIUM GAME

**PREPARATION:** (This is a 2 day event)

1. Prepare: - one set for each group.  
**CALCIUM GAME BOARD**  
**CALCIUM CARDS**  
**TAKE A CARD**  
**CALCIUM QUESTIONS** - one per student

The **CALCIUM GAME CARDS** sheet and **TAKE A CARD** page can be laminated for durability. Cut **TAKE A CARD** direction cards apart. Put them into an envelope.

2. On day one students should read the chapter on milk in any text book. Have students review questions used in the game (**CALCIUM GAME QUESTIONS**) by finding answers in a text book.
3. On day two supply each group with one dice, one sheet of questions, one answer sheet and one **TAKE A CARD** envelope. Each student receives a token (beans, buttons, etc.) for use in the game.
4. Students can use their cheat sheet (questions researched the day before).

### **DIRECTIONS FOR PLAY:**

1. Assign one student in the group to be question verifier to make sure the right answer is given. Give him/her the answer sheet.
2. Each student takes a turn shaking the dice. He/she moves the number of spaces indicated. The student answers the question of the number landed upon. If he/she can't answer the question, he/she goes back to start. If he/she lands on a "Take a Card" number, he/she draws a card and follows the instructions given in addition to answering the corresponding question.

**Variation:** Depending on the time of year, this game could also be played like a baseball or football game, with two competing teams. Draw appropriate playing field on chalk or white board. You will not need cards on page IV-4-17 for these variations or you can find creative ways to use them to add more fun to the game. They could represent a foul ball, a turnover, etc.

**For baseball,** pre-determine, based on difficulty of questions, which questions are singles, doubles, triples, or homeruns. If the team answers correctly, they “move” around the “bases” as earned by the difficulty level of the question.

**For football,** pre-determine, based on difficulty of questions, which questions worth 10 yards, 20 yards, a touchdown, etc. If the team answers correctly, they “gain yardage” on the playing field toward a touchdown.

## CALCIUM GAME CARDS

<b>5</b> WHAT IS <u>LACTASE</u> ?	<b>4</b> WHAT IS <u>LACTOSE</u> ?	<b>3</b> WHAT DOES IT MEAN TO <u>FORTIFY</u> MILK?	<b>2</b> WHAT DOES IT MEAN TO <u>PASTEURIZE</u> MILK?	<b>1</b> WHAT IS THE FILM THAT FORMS ON HEATED MILK?
<b>10</b> HOW CAN YOU PREVENT THE FILM THAT FORMS ON HEATED MILK?	<b>9</b> WHAT IS THE <u>FAT</u> IN MILK CALLED?	<b>8</b> WHAT IS <u>YOGURT</u> ?	<b>7</b> WHAT IS THE <u>RECOMMENDED DAILY ALLOWANCE</u> OF MILK FOR YOUR AGE?	<b>6</b> WHAT 2 VITAMINS ARE ADDED TO MILK?
<b>15</b> WHAT IS <u>CASEIN</u> ?	<b>14</b> WHAT <u>TWO</u> IMPORTANT MINERALS ARE FOUND IN MILK?	<b>13</b> WHAT IS <u>FRESH MILK</u> MADE UP OF?	<b>12</b> WHAT IS <u>OSTEOPOROSIS</u> ?	<b>11</b> WHAT HAPPENS TO THE BODY WITHOUT LACTASE?
<b>20</b> WHAT IS <u>LACTALBUMIN</u> ?	<b>19</b> WHAT IS <u>RICKETS</u> ?	<b>18</b> HOW IS <u>CANNED MILK</u> MADE?	<b>17</b> WHAT IS <u>CONDENSED</u> MILK?	<b>16</b> NAME THREE TYPES OF PEOPLE USUALLY LACKING LACTASE.
<b>25</b> LACTOSE IS CHANGED TO WHAT <u>TWO</u> SIMPLE SUGARS?	<b>24</b> WHAT HAPPENS WHEN MILK COMES INTO CONTACT WITH AN ACID?	<b>23</b> WHAT <u>VITAMINS</u> ARE FOUND IN MILK?	<b>22</b> WHAT DOES <u>CALCIUM</u> DO FOR YOUR BODY?	<b>21</b> HOW CAN YOU PREVENT THE LOSS OF <u>RIBOFLAVIN</u> IN MILK?
<b>30</b> HOW DOES <u>LACTOSE</u> HELP THE BODY?	<b>29</b> HOW SHOULD DAIRY PRODUCTS BE STORED?	<b>28</b> WHY IS <u>VITAMIN D</u> ADDED TO MILK?	<b>27</b> WHAT DOES <u>PHOSPHORUS</u> DO FOR YOUR BODY?	<b>26</b> NAME <u>TWO</u> WAYS TO PREVENT MILK FROM SCORCHING OR BURNING.

## CALCIUM GAME QUESTIONS

Name \_\_\_\_\_ Period \_\_\_\_\_ Assign # \_\_\_\_\_

**DIRECTIONS:** With your group research textbooks and answer the following questions.

1. What is the film that forms on heated milk?
2. What does it mean to pasteurize milk?
3. What does it mean to fortify milk?
4. What is Lactose?
5. What is Lactase?
6. What 2 vitamins are added to milk?
7. What is the recommended dairy allowance of milk for your age?
8. What is yogurt?
9. What is the fat in milk called?
10. How can you prevent the film that forms on heated milk?
11. What happens to the body without lactase?
12. What is osteoporosis?
13. What is fresh milk made up of?
14. What two important minerals are found in milk?

15. What is casein?
16. Name three types of people usually lacking lactase.
17. What is condensed milk?
18. How is canned milk made?
19. What is rickets?
20. What is lactalbumin?
21. How can you prevent the loss of riboflavin in milk?
22. What does calcium do for your body?
23. What vitamins are found in milk?
24. What happens when milk comes into contact with an acid?
25. Lactose is changed to what two simple sugars?
26. Name two ways to prevent milk from scorching or burning.
27. What does phosphorus do for your body?
28. Why is vitamin D added to milk?
29. How should dairy products be stored?
30. How does lactose help the body?

## CALCIUM GAME QUESTIONS KEY

Name \_\_\_\_\_ Period \_\_\_\_\_ Assign # \_\_\_\_\_

DIRECTIONS: With your group research textbooks and answer the following questions.

1. What is the film that forms on heated milk?

proteins, minerals and fats

2. What does it mean to pasteurize milk?

heat milk briefly to kill bacteria then chill

3. What does it mean to fortify milk?

nutrients are added

4. What is Lactose?

milk sugar

5. What is Lactase?

enzyme to digest milk

6. What 2 vitamins are added to milk?

vitamins A & D

7. What is the recommended dairy allowance of milk for your age?

2-3 servings

8. What is yogurt?

fermented milk using a special bacteria culture

9. What is the fat in milk called?

butter fat or milk fat

10. How can you prevent the film that forms on heated milk?

keep covered, continue to stir

11. What happens to the body without lactase?

cannot digest milk, lactose will not break down into simple sugars

12. What is osteoporosis?

lack of calcium in the bones

13. What is fresh milk made up of?

87% water, 13% solids

14. What two important minerals are found in milk?

| calcium and phosphorus

*Resource for Option #5-continued*

15. What is casein?

| milk protein

16. Name three types of people usually lacking lactase.

| Blacks, Asians both Near and Far East

17. What is condensed milk?

| water is removed and sugar added

18. How is canned milk made?

| remove 40-50% of water and add vitamin D

19. What is rickets?

| bone disease from lack of vitamin D

20. What is lactalbumin?

| milk protein

21. How can you prevent the loss of riboflavin in milk?

| keep out of direct light, especially sunlight

22. What does calcium do for your body?

| strengthens bones and teeth

23. What vitamins are found in milk?

| vitamins A & D

24. What happens when milk comes into contact with an acid?

| it curdles

25. Lactose is changed to what two simple sugars?

| glucose & galactose

26. Name two ways to prevent milk from scorching or burning.

| cook on low heat, keep stirring

27. What does phosphorus do for your body?

| helps in formation & strengthening bones and teeth

28. Why is vitamin D added to milk?

| prevents bone disease called rickets

29. How should dairy products be stored?

| in the refrigerator or cool place (40° or cooler)

30. How does lactose help the body?

\_\_\_\_\_ helps body absorb calcium & phosphorus and use vitamin D

Resource for Option #5

### TAKE A CARD

PREPARATION: Cut cards apart. They may be laminated for durability. Make one set for each group of students.

YOU SKIPPED BREAKFAST THIS MORNING - GO BACK 2 SPACES	YOU PASSED UP THE SNICKERS FOR A GLASS OF MILK - GO AHEAD 2 SPACES	YOU SLUFFED YOUR FOODS CLASS - GO BACK 3 SPACES
YOU LEFT THE MILK OUT FOR 4 HOURS AFTER DINNER - GO BACK 2 SPACES	YOU GAVE A CLASS REPORT ON OSTEOPOROSIS - GO AHEAD 3 SPACES	TODAY YOU ATE 4 SERVINGS FROM THE MILK GROUP - GO AHEAD 2 SPACES
YOUR MOM SENT YOU TO THE STORE TO BUY MILK, INSTEAD YOU BOUGHT DOUGHNUTS - GO BACK 3 SPACES	YOU SCORCHED THE CHOCOLATE PUDDING. GO BACK 3 SPACES	THE DINNER YOU FIXED LAST NIGHT INCLUDED AT LEAST ONE SERVING FROM THE MILK GROUP - GO AHEAD 2 SPACES

### CALCIUM GAME BOARD

