PACIFIC VIEW CHARTER SCHOOL

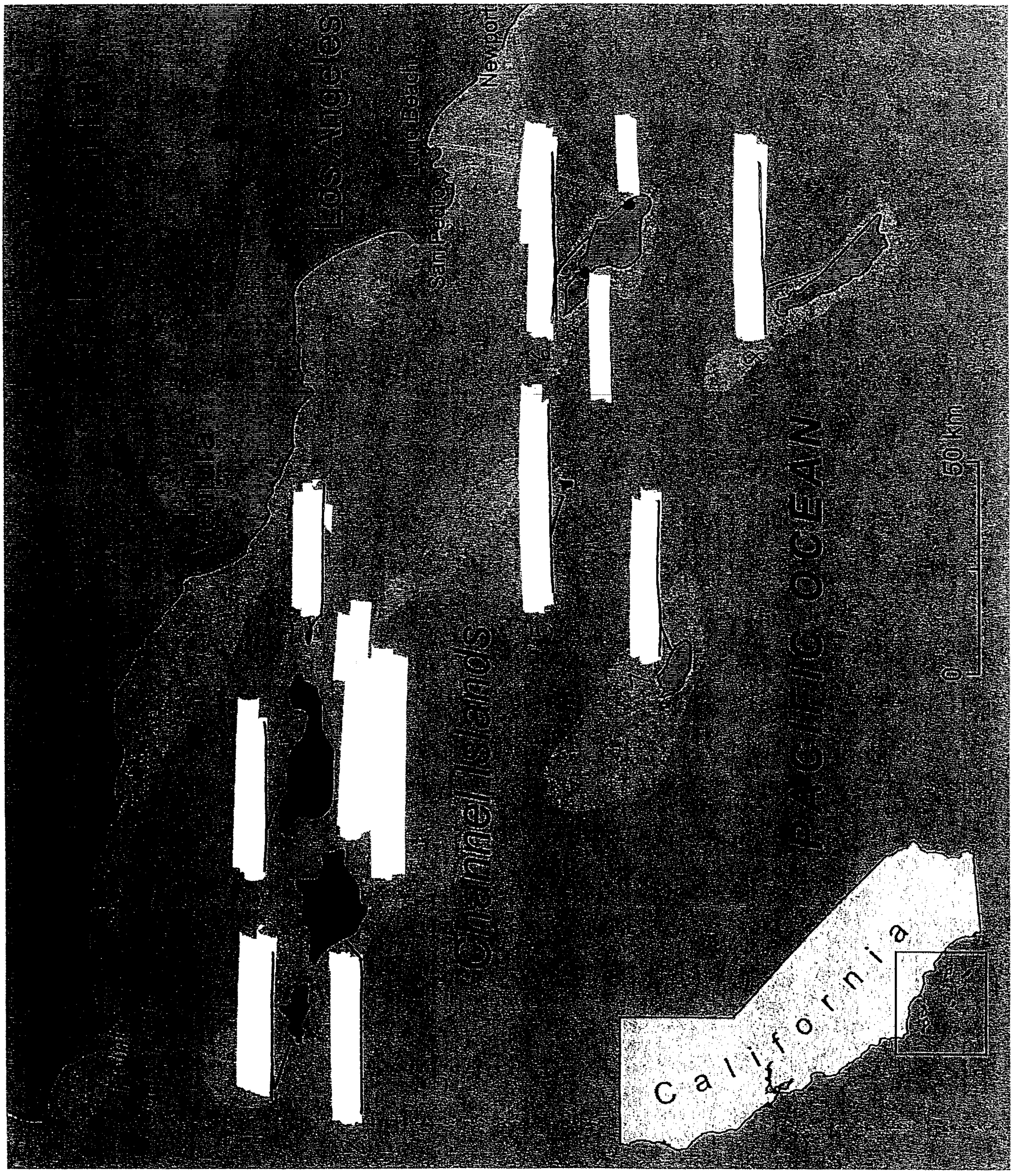
A California Public School

K-8 Student Worksheets

4th Grade

January 2011

Map worksheet Day 2
Lang. Arts



What is figurative language? DAY 5-Language Arts

Whenever you describe something by comparing it with something else, you are using figurative language.

Simile

A simile uses the words "like" or "as" to compare one object or idea with another to suggest they are alike. Example: busy as a bee

Metaphor

The metaphor states a fact or draws a verbal picture by the use of comparison. A simile would say you are like something; a metaphor is more positive - it says you are something. Example: You are what you eat.

Personification

Personification is a figure of speech in which human characteristics are given to an animal or an object. Example: My teddy bear gave me a hug.

Alliteration

Alliteration is the repetition of the same initial letter, sound, or group of sounds in a series of words. Alliteration includes tongue twisters. Example: She sells seashells by the seashore.

Onomatopoeia

Onomatopoeia is the use of a word to describe or imitate a natural sound or the sound made by an object or an action. Example: snap crackle pop

Hyperbole

An exaggeration that is so dramatic that no one would believe the statement is true. Tall tales are hyperboles. Example: He was so hungry, he ate that whole cornfield for lunch, stalks and all.

Idioms

According to Webster's Dictionary, an idiom is defined as: peculiar to itself either grammatically (as no, it wasn't me) or in having a meaning that cannot be derived from the conjoined meanings of its elements (as Monday week for "the Monday a week after next Monday")

Clichés

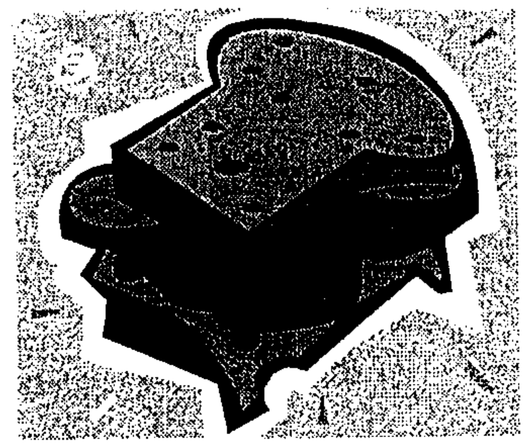
A cliché is an expression that has been used so often that it has become trite and sometimes boring. Example: Many hands make light work.

Sandwich Book Report

Note: You may use the provided sheets or create your own.

Here is the recipe for your sandwich book report!

1. Write the book title, author, and your name on the BREAD (brown) top.



2. Describe the setting on the LETTUCE (green).

3. Describe the main character on the TOMATO (red).

4. Write about the other characters of the book on the CHEESE (yellow).

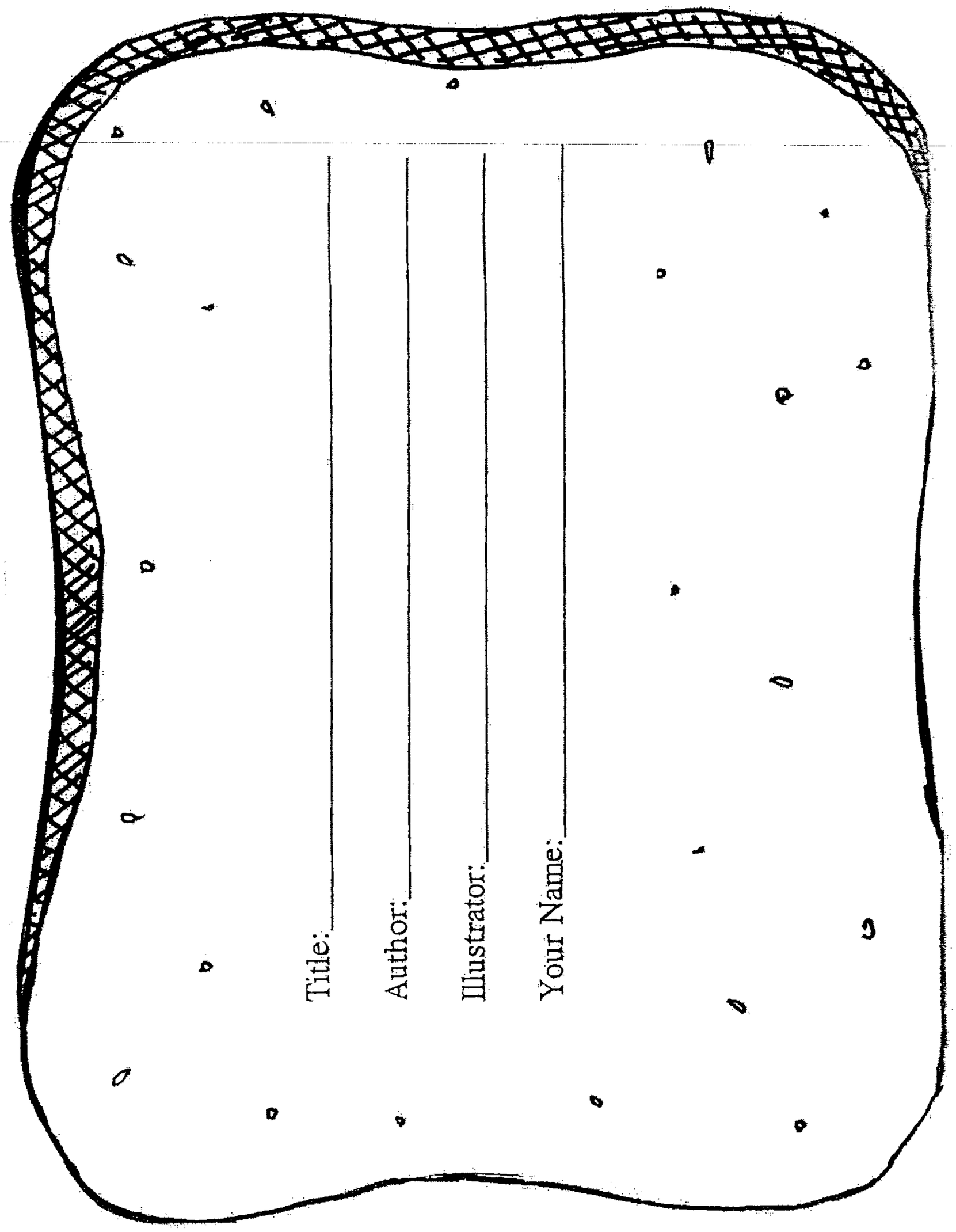
5. Write about a happy time in the story and a sad time in the story on the ONION (Purple).

6. Write a summary of the book on the MEAT (white or pink).

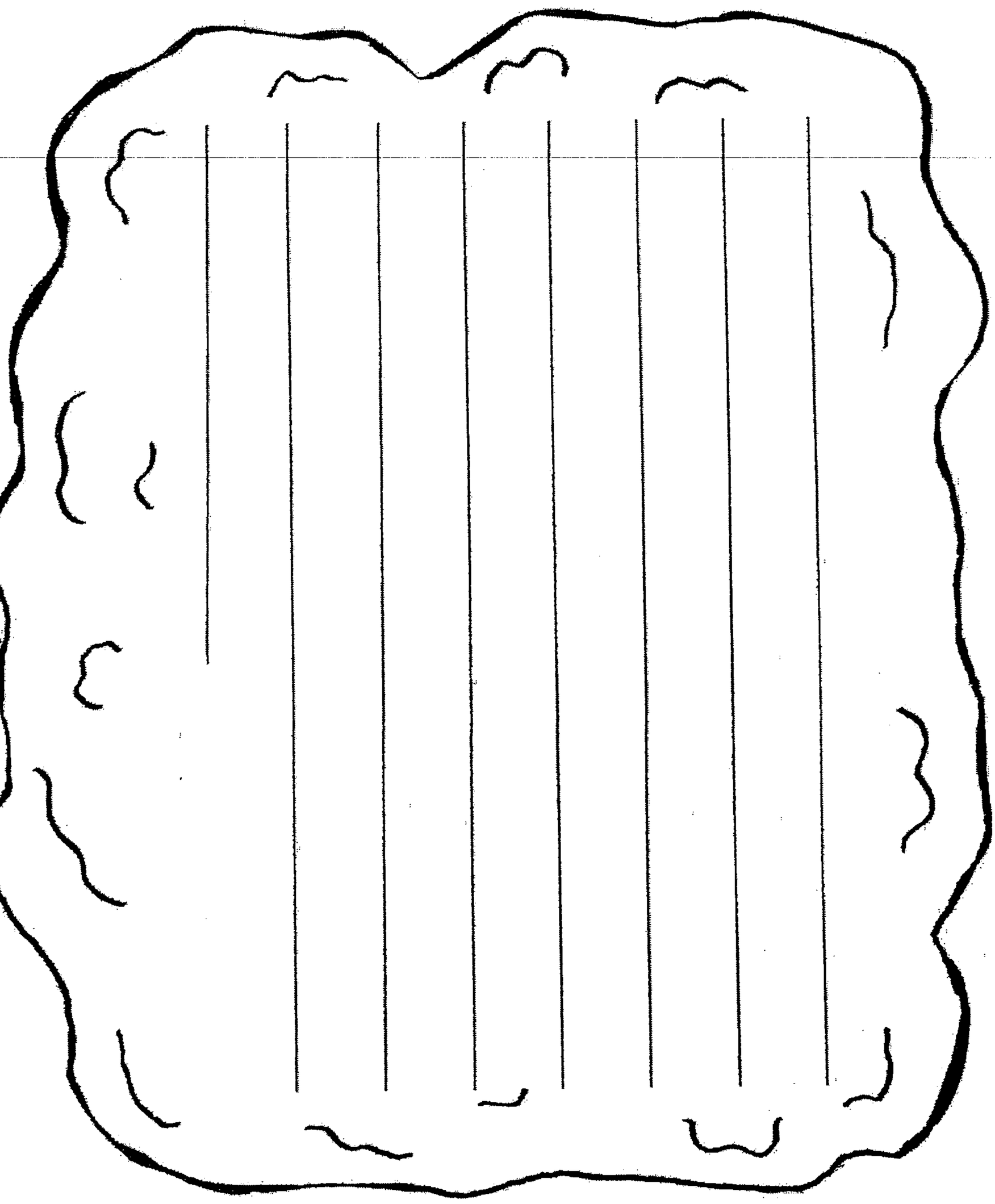
7. Write about the author's style on the BREAD (brown) bottom.

8. Assemble your sandwich by stapling it together.

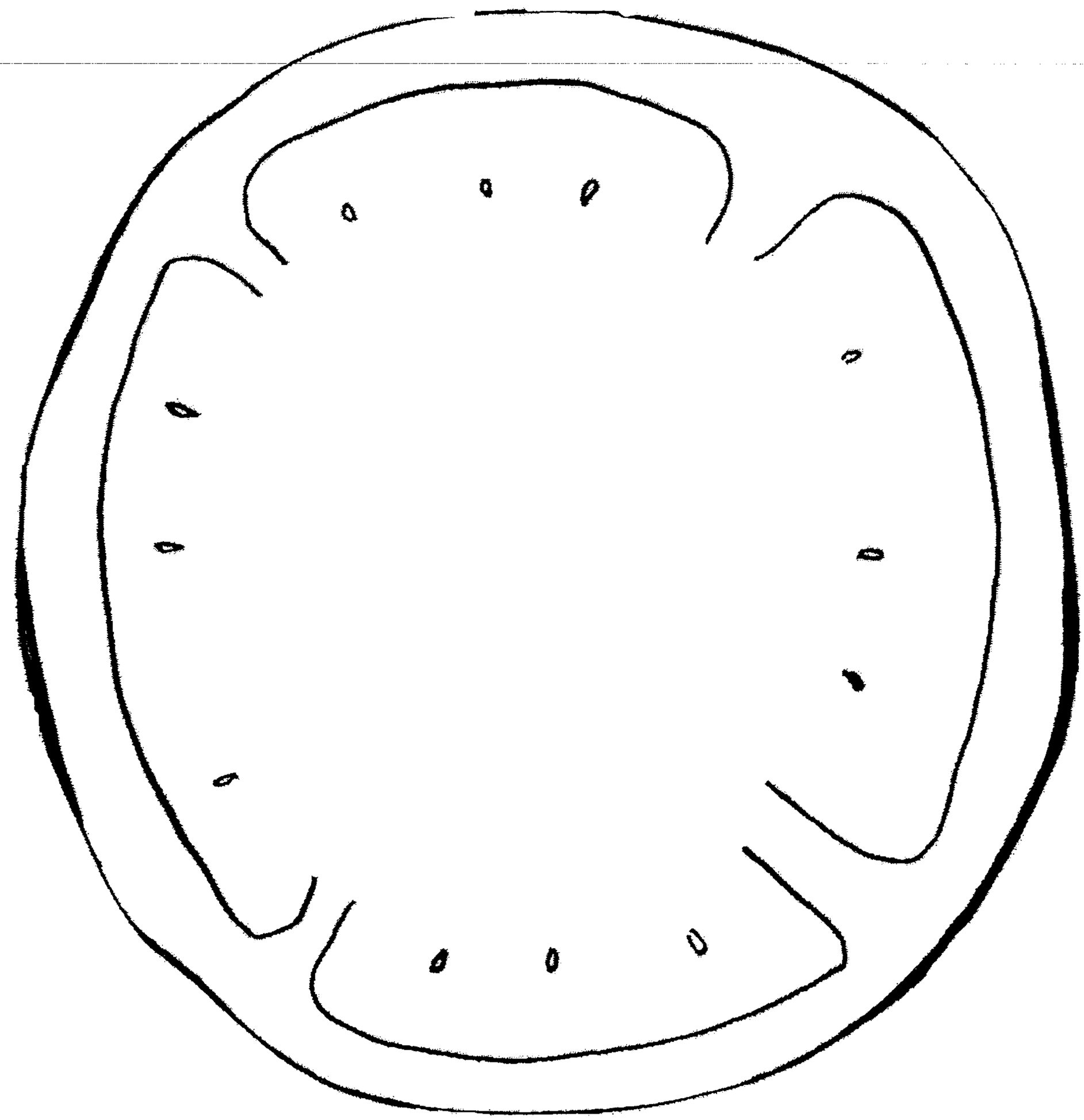
Language Arts Book Report
Days 5-10

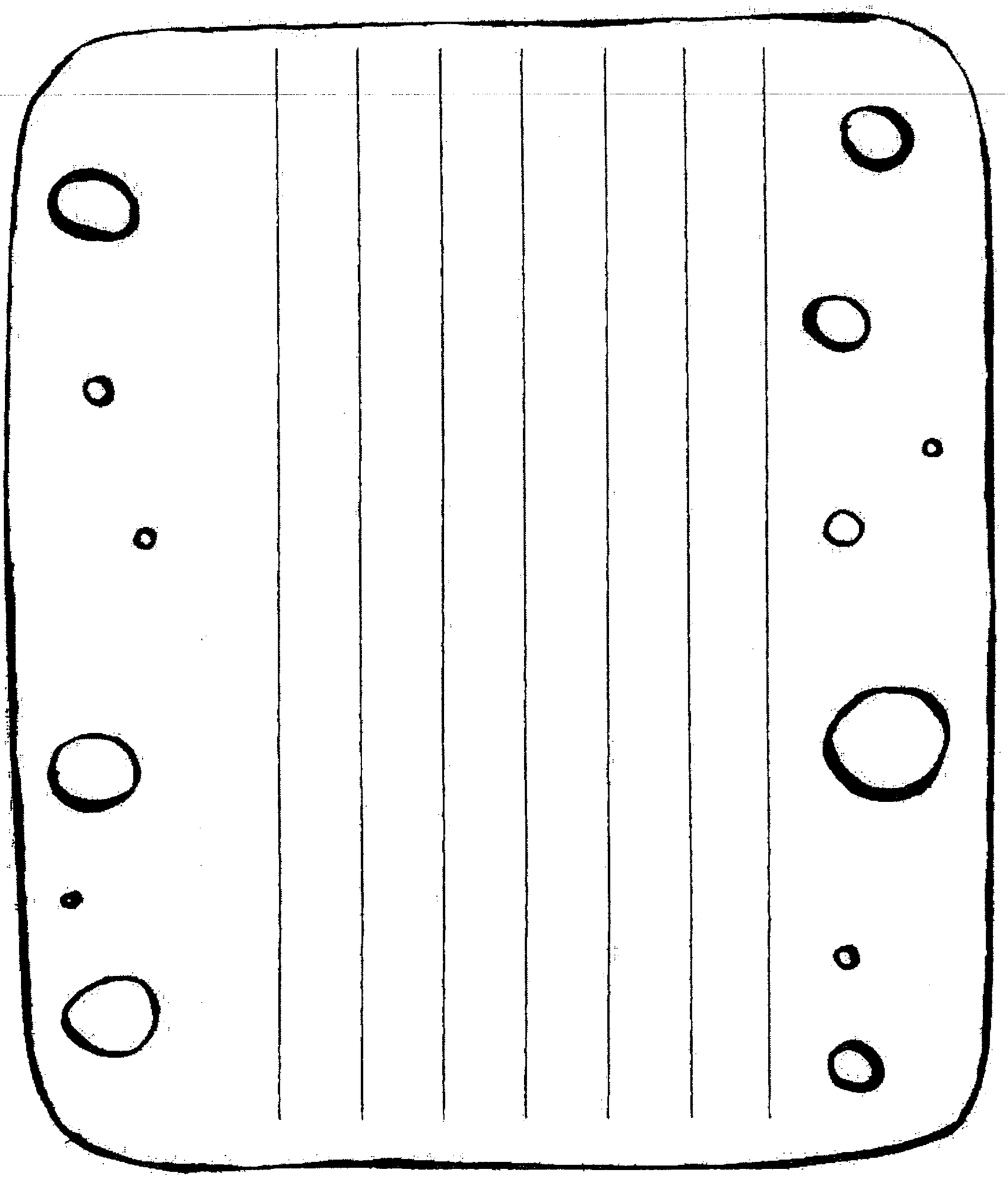


Language Arts Book Report
Days 5-10

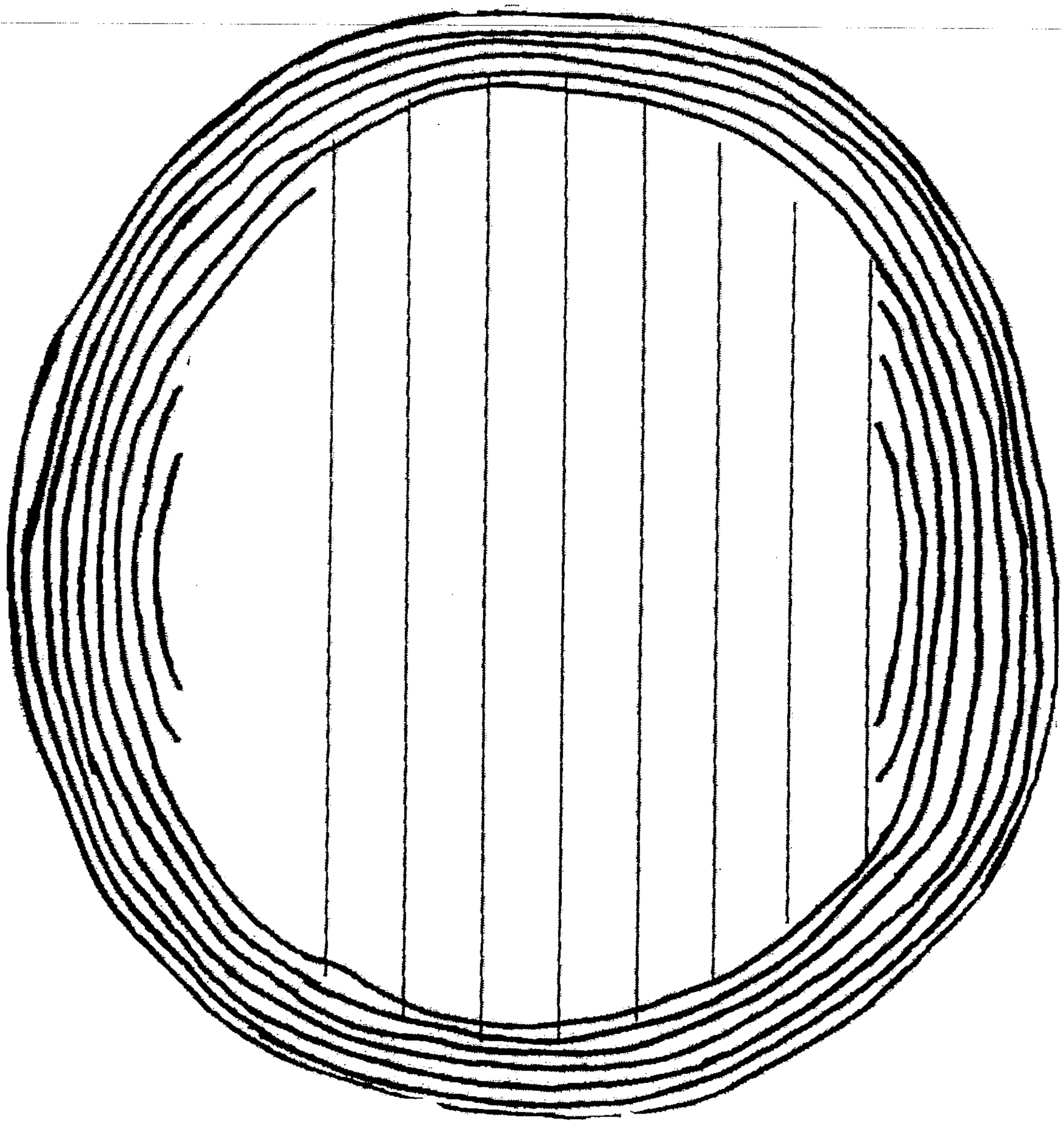


Language Arts Book Report
Days 5-10



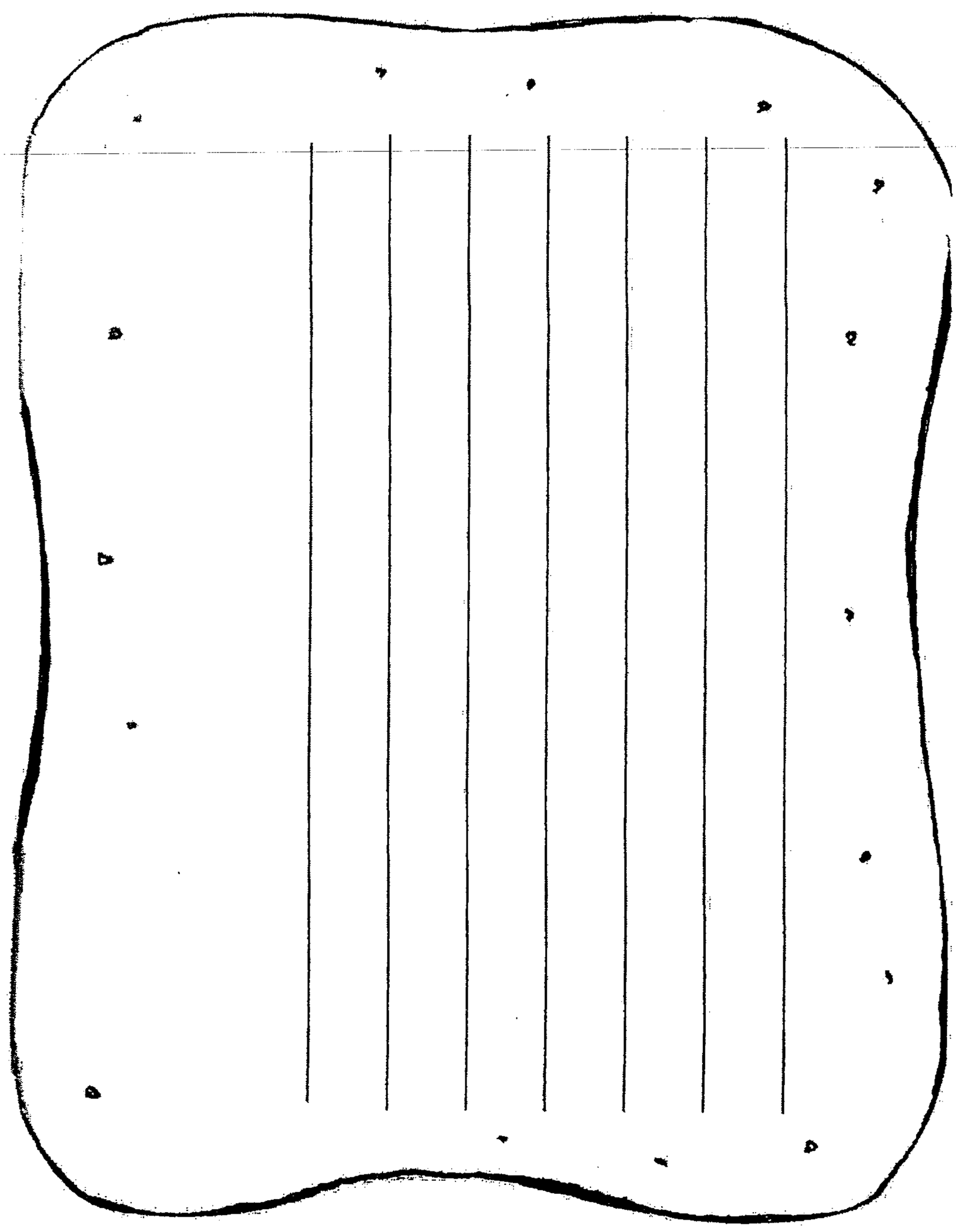


Language Arts Book Report
Days 5-10



Language Arts Book Report
Days 5-10

Language Arts Book Report
Days 5-10



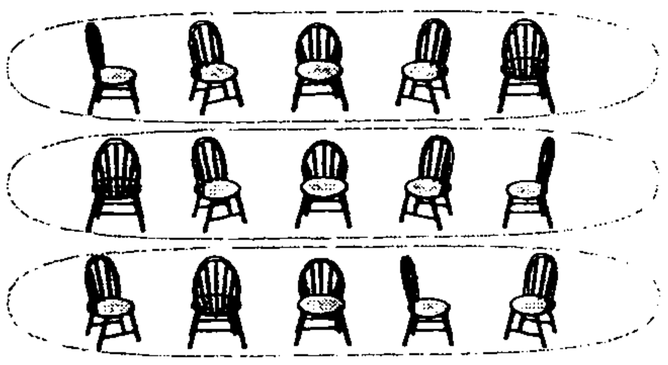
Name _____ Date _____

Discovery EDUCATION

WHOLE NUMBER MULTIPLICATION AND DIVISION

Multiplication and division are opposite operations.

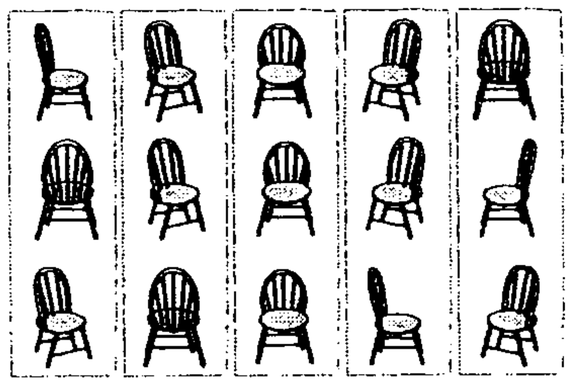
Circle each of 3 rows.
How many chairs are in each row?



$3 \times 5 = 15$ $15 \div 3 = 5$

There are 5 chairs in each row.

Draw a rectangle around each of 5 columns.
How many chairs in each column?



$5 \times 3 = 15$ $15 \div 5 = 3$

There are 3 chairs in each column.

Multiply.

1. $4 \times 8 =$ _____ **2.** $9 \times 3 =$ _____ **3.** $6 \times 5 =$ _____

4. $3 \times 7 =$ _____ **5.** $8 \times 6 =$ _____ **6.** $9 \times 4 =$ _____

7. $6 \times 3 =$ _____ **8.** $5 \times 7 =$ _____ **9.** $8 \times 8 =$ _____

Divide.

10. $18 \div 2 =$ _____ **11.** $24 \div 8 =$ _____ **12.** $28 \div 4 =$ _____

13. $40 \div 5 =$ _____ **14.** $12 \div 3 =$ _____ **15.** $45 \div 9 =$ _____

16. $20 \div 4 =$ _____ **17.** $21 \div 7 =$ _____ **18.** $36 \div 6 =$ _____

CHALLENGE

Explain how to use repeated addition to find the product: 5 x 26.

_____

DISCOVERING MATH

LEVEL 1

Name: _____ Multiplication 0 - 3

SPEED MULTIPLICATION

3 x 9	2 x 8	2 x 2	2 x 5	3 x 10
3 x 7	2 x 12	3 x 12	2 x 3	3 x 3
3 x 9	3 x 11	2 x 9	1 x 3	2 x 7
3 x 6	3 x 4	3 x 5	2 x 4	1 x 7
2 x 10	2 x 11	1 x 4	3 x 1	3 x 6
2 x 1	3 x 2	3 x 7	2 x 5	1 x 9
2 x 2	1 x 10	3 x 8	3 x 11	2 x 6
3 x 4	3 x 9	3 x 3	2 x 7	2 x 10
3 x 5	2 x 12	3 x 2	3 x 1	1 x 7
1 x 1	1 x 11	3 x 12	5 x 2	0 x 3

Time: _____ Score: _____

Name _____ Date _____

Discovery EDUCATION

WHOLE NUMBER MULTIPLICATION AND DIVISION

Multiplication and division are opposite operations.
Use multiplication facts to help you divide.

There are 344 seats at the stadium. The seats are arranged in 4 equal size sections.
How many seats are in each section?
Divide: $344 \div 4$.

Step 1 There are not enough hundreds to divide. Divide 34 tens.

$4\overline{)344}$

Step 2 Divide the tens. Multiply. Subtract. Compare.

$$\begin{array}{r} 8 \\ 4\overline{)344} \\ -\,32 \\ \hline 2 \end{array}$$

4×8 tens
Compare $2 < 4$.

Step 3 Divide the ones. Multiply. Subtract. Compare.

$$\begin{array}{r} 86 \\ 4\overline{)344} \\ -\,32 \\ \hline 24 \\ -\,24 \\ \hline 0 \end{array}$$

Bring down.
4×6 ones.
Compare. $0 < 4$.

Use multiplication to check.

$$\begin{array}{r} {}^{2} \\ 86 \\ \times\,4 \\ \hline 344 \end{array}$$

Think: $4 \times 6 = 24$ Regroup as 2 tens and 4 ones
4×8 tens $= 32$ tens
32 tens + 2 tens = 34 tens
34 tens + 4 ones = 344

Multiply.

1. $\begin{array}{r} 37 \\ \times\,6 \end{array}$

2. $\begin{array}{r} 94 \\ \times\,3 \end{array}$

3. $\begin{array}{r} 158 \\ \times\,5 \end{array}$

4. $\begin{array}{r} 206 \\ \times\,4 \end{array}$

Divide.

5. $6\overline{)168}$

6. $9\overline{)405}$

7. $3\overline{)186}$

8. $4\overline{)868}$

CHALLENGE

Find the missing number. _____ $\div\ 7 = 52$

DISCOVERING MATH LEVEL 2

Name: _____ Multiplication 0 - 4

SPEED MULTIPLICATION

4 x 5	3 x 2	1 x 8	4 x 8	2 x 4
5 x 9	4 x 1	4 x 6	3 x 3	3 x 8
4 x 7	4 x 11	4 x 9	4 x 4	2 x 2
4 x 10	3 x 3	3 x 9	2 x 8	4 x 3
3 x 10	4 x 11	1 x 1	3 x 12	2 x 9
4 x 2	3 x 5	1 x 4	2 x 10	4 x 9
1 x 10	2 x 12	3 x 11	2 x 4	4 x 6
4 x 12	3 x 1	2 x 11	5 x 9	2 x 12
3 x 9	2 x 5	4 x 5	3 x 6	2 x 6
2 x 9	5 x 1	5 x 11	3 x 0	5 x 10

Time: _____ **Score:** _____

Name _____ Date _____

Discovery EDUCATION

WHOLE NUMBER MULTIPLICATION AND DIVISION

Use multiplication facts to help you divide.
Then use multiplication to check division.

There are 928 seats available at the stadium in 16 different sections.
Each section has the same number of seats.
How many seats are in each section?

Divide: 928 ÷ 16.

Step 1 Divide the tens.

$$\begin{array}{r} 5 \\ 16\overline{)928} \\ -\ 80 \\ \hline 12 \end{array}$$

← Multiply: 16 × 5
← Subtract.
Compare.
12 < 16

Step 2 Divide the ones.

$$\begin{array}{r} 58 \\ 16\overline{)928} \\ -\ 80 \\ \hline 128 \\ -\ 128 \\ \hline 0 \end{array}$$

← Bring down.
← Divide: 128 ÷ 16
← Multiply: 16 × 8
← Subtract.
Compare.
0 < 16

Step 3 Check.

$$\begin{array}{r} 58 \\ \times\ 16 \\ \hline 348 \\ +\ 580 \\ \hline 928 \end{array}$$

← Multiply ones.
← Multiply tens.

Multiply.

1. $\begin{array}{r} 28 \\ \times\ 34 \\ \hline \end{array}$

2. $\begin{array}{r} 47 \\ \times\ 19 \\ \hline \end{array}$

3. $\begin{array}{r} 56 \\ \times\ 38 \\ \hline \end{array}$

Divide and check.

4. $27\overline{)972}$

5. $23\overline{)966}$

6. $35\overline{)805}$

CHALLENGE

Find the missing number. _____ ÷ 34 = 276 R10

Name: _____ Multiplication 0 - 5

SPEED MULTIPLICATION

5 x 2	2 x 3	1 x 9	5 x 12	3 x 7
4 x 8	5 x 6	2 x 7	4 x 9	2 x 8
5 x 7	2 x 9	5 x 11	5 x 5	4 x 4
5 x 10	2 x 2	5 x 1	3 x 6	2 x 6
4 x 8	3 x 11	2 x 1	6 x 12	4 x 8
3 x 3	2 x 3	5 x 2	1 x 10	4 x 6
1 x 1	5 x 9	5 x 4	3 x 5	4 x 10
2 x 12	2 x 0	4 x 11	5 x 1	3 x 12
2 x 9	5 x 8	1 x 12	3 x 9	1 x 1
3 x 8	1 x 1	4 x 12	2 x 4	5 x 0

Time: _____ **Score:** _____

Name _____ Date _____

PROPERTIES AND RELATIONSHIPS OF ARITHMETIC OPERATIONS

Inverse operations are opposite operations, one operation reverses the other.

Addition and Subtraction

Addition and subtraction are inverse operations.

Addition sentences:	$6 + 8 = 14$	$8 + 6 = 14$
Related subtraction sentences:	$14 - 8 = 6$	$14 - 6 = 8$

Multiplication and Division

Multiplication and division are inverse operations.

Multiplication sentences:	$3 \times 7 = 21$	$7 \times 3 = 21$
Related division sentences:	$21 \div 7 = 3$	$21 \div 3 = 7$

Complete each number sentence. Then write a pair of number sentences using the inverse operation.

1. $9 + 2 =$ ___

_____

_____

2. $7 + 5 =$ ___

_____

_____

3. $15 - 8 =$ ___

_____

_____

4. $13 - 4 =$ ___

_____

_____

5. $4 \times 7 =$ ___

_____

_____

6. $9 \times 8 =$ ___

_____

_____

7. $36 \div 4 =$ ___

_____

_____

8. $40 \div 5 =$ ___

_____

_____

CHALLENGE

Write $+$, $-$, $\times$, or $\div$ to make each number sentence true.

$(20 + 4) \bigcirc 8 = 3$ $(5 \times 6) \bigcirc 4 = 26$

Name: _____ Multiplication 0 - 6

SPEED MULTIPLICATION

6 x 3	3 x 4	5 x 4	6 x 9	6 x 7
3 x 9	1 x 4	5 x 7	6 x 10	4 x 7
1 x 8	5 x 8	6 x 11	5 x 3	4 x 2
6 x 12	6 x 6	5 x 12	4 x 9	3 x 7
4 x 8	3 x 11	2 x 1	6 x 12	4 x 8
6 x 1	4 x 4	3 x 3	2 x 4	2 x 10
2 x 2	6 x 9	5 x 5	2 x 5	5 x 10
4 x 11	2 x 9	6 x 1	4 x 0	3 x 11
3 x 0	7 x 6	1 x 1	2 x 8	3 x 7
3 x 6	4 x 10	3 x 12	6 x 12	5 x 9

Time: _____ **Score:** _____

Name _____ Date _____

PROPERTIES AND RELATIONSHIPS OF ARITHMETIC OPERATIONS

Inverse operations reverse each other.

Addition and subtraction are inverse operations.

$8 + 11 = 19$ Subtraction reverses addition. $19 - 11 = 8$

$16 - 3 = 13$ Addition reverses subtraction. $13 + 3 = 16$

Multiplication and division are inverse operations.

$5 \times 4 = 20$ Division reverses multiplication. $20 \div 4 = 5$

$24 \div 3 = 8$ Multiplication reverses division. $8 \times 3 = 24$

Complete each number sentence. Then write a number sentence that shows how to reverse each operation.

1. $9 \times 6 =$ ___

_____

2. $12 + 14 =$ ___

_____

3. $18 - 7 =$ ___

_____

4. $35 \div 7 =$ ___

_____

5. $20 + 9 =$ ___

_____

6. $24 - 11 =$ ___

_____

7. $48 \div 8 =$ ___

_____

8. $7 \times 9 =$ ___

_____

CHALLENGE

Show how to use an inverse operation to find the missing number in each number sentence. Then find the missing number.

$15 +$ ___ $= 32$ _____

$8 \times$ ___ $= 88$ _____

Name: _____ Multiplication 0 - 7

Speed Multiplication

7 x 9	4 x 5	6 x 3	3 x 7	7 x 7
3 x 2	2 x 5	4 x 1	4 x 6	2 x 7
1 x 6	7 x 4	4 x 3	7 x 9	2 x 4
3 x 5	5 x 5	7 x 6	7 x 12	6 x 4
5 x 2	7 x 11	7 x 1	6 x 6	3 x 4
3 x 0	7 x 7	2 x 4	5 x 7	5 x 4
7 x 2	7 x 10	5 x 2	3 x 3	2 x 2
2 x 6	4 x 6	7 x 0	1 x 1	3 x 5
6 x 7	7 x 9	1 x 2	4 x 4	7 x 8
2 x 0	2 x 10	6 x 5	2 x 8	6 x 9

Time: _____ **Score:** _____

Name _____ Date _____

PROPERTIES AND RELATIONSHIPS OF ARITHMETIC OPERATIONS

You can add or multiply numbers in any order.

Commutative Property:

Addition	Multiplication
$13 + 46 = 46 + 13$	$12 \times 3 = 3 \times 12$
$59 = 59$	$36 = 36$

Inverse Operations: Operations that reverse each other.

Addition and subtraction are inverse operations.

$15 + 43 = 58$	Subtraction reverses addition.	$58 - 43 = 15$
$90 - 17 = 73$	Addition reverses subtraction.	$73 + 17 = 90$

Multiplication and division are inverse operations.

$12 \times 4 = 48$	Division reverses multiplication.	$48 \div 4 = 12$
$45 \div 3 = 15$	Multiplication reverses division.	$15 \times 3 = 45$

Find each missing number. Then write the sum or product.

1. $38 + 11 = \_\_\_ \quad + 38$

_____

2. $9 \times 10 = 10 \times \_\_\_$

_____

Complete each number sentence. Then write a number sentence that shows how to reverse each operation.

3. $50 \div 2 = \_\_\_$

_____

4. $54 - 19 = \_\_\_$

_____

5. $12 \times 8 = \_\_\_$

_____

6. $43 + 67 = \_\_\_$

_____

CHALLENGE

Use the number sentence $768 \div 16 = 48$ to write two related multiplication sentences.

_____

Name: _____ Multiplication 0 - 8

SPEED MULTIPLICATION

2 x 2	8 x 5	4 x 6	7 x 6	5 x 2
6 x 5	8 x 8	3 x 4	7 x 2	8 x 3
3 x 0	7 x 3	2 x 8	7 x 8	2 x 3
1 x 8	5 x 3	5 x 6	8 x 12	5 x 4
3 x 2	8 x 9	5 x 2	8 x 0	8 x 4
8 x 1	6 x 6	7 x 5	6 x 2	2 x 4
4 x 5	8 x 10	2 x 7	5 x 8	8 x 3
1 x 2	7 x 7	8 x 11	3 x 0	3 x 3
4 x 6	6 x 8	4 x 4	5 x 1	8 x 7
7 x 4	5 x 5	8 x 0	3 x 7	4 x 3

Time: _____ Score: _____

PART 3

Write the two division facts for each number family.

a. $2\overline{)14}$ → 7

b. $5\overline{)15}$ → 3

c. $6\overline{)60}$ → 10

d. $6\overline{)54}$ → 9

PART 4

Write the missing small number to complete the number family.

a. $6\overline{)18}$ → 3

b. $7\overline{)42}$ → □

c. $2\overline{)12}$ → □

d. $3\overline{)24}$ → □

Answers are on page 22.

Name: _____ Multiplication 0 - 9

SPEED MULTIPLICATION

5 x 7	4 x 3	9 x 5	9 x 11	8 x 0
5 x 8	9 x 9	4 x 5	9 x 10	7 x 6
3 x 7	4 x 1	9 x 8	6 x 3	4 x 8
7 x 9	3 x 3	8 x 2	9 x 12	7 x 4
2 x 5	6 x 9	3 x 8	9 x 4	2 x 1
0 x 5	5 x 5	1 x 1	8 x 12	5 x 9
1 x 9	2 x 2	6 x 2	9 x 9	2 x 7
7 x 3	0 x 6	9 x 5	7 x 8	4 x 4
9 x 0	9 x 6	6 x 4	3 x 5	8 x 6
1 x 7	3 x 2	1 x 1	7 x 7	9 x 2

Time: _____ **Score:** _____

LESSON 2

Short Division

PART 1

Work each division problem.

a. $5\overline{)34}$ $\quad 6 + R4$

$-\overline{)30}$

4

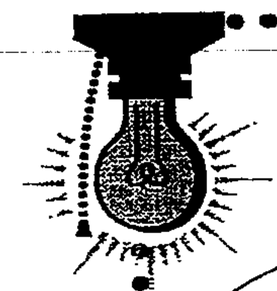
b. $10\overline{)28}$ $\quad \_\_ + R$

c. $2\overline{)17}$ $\quad \_\_ + R$

d. $3\overline{)16}$ $\quad \_\_ + R$

e. $4\overline{)17}$

f. $4\overline{)10}$



Here's how you work it!

19 is not part of a division family for 2's. Find the closest number before 19 that is in a 2's family.

$2\overline{)19}$

It's 18. Write 18 below 19. What number times 2 is 18?

$2\overline{)19}$

$\overline{)18}$

It's 9. Write 9 in the answer.

$\quad 9$

$2\overline{)19}$

$\overline{)18}$

Subtract 18 from 19 to get the remainder. It's 1. Write +R1 next to the 9 in the answer.

$\quad 9 \quad +R1$

$2\overline{)19}$

$-\overline{)18}$

1

Answers are on page 23.

Name: _____ Multiplication 0 - 10

SPEED MULTIPLICATION

5 x 3	2 x 6	8 x 2	10 x 11	4 x 5
6 x 7	6 x 9	2 x 9	2 x 4	1 x 8
9 x 1	2 x 7	4 x 3	3 x 9	4 x 10
10 x 0	6 x 5	2 x 2	5 x 1	9 x 5
4 x 7	5 x 2	1 x 10	3 x 2	9 x 9
9 x 7	8 x 7	1 x 6	10 x 12	5 x 5
5 x 7	10 x 5	8 x 6	6 x 6	10 x 3
9 x 8	1 x 6	5 x 0	7 x 7	3 x 3
4 x 9	10 x 1	6 x 2	1 x 1	9 x 10
7 x 8	10 x 7	3 x 6	8 x 1	2 x 3

Time: _____ Score: _____

PART 2

Work each division problem.

a. $2\overline{)684}$ = 342

b. $4\overline{)848}$

c. $2\overline{)628}$

PART 3

Work each division problem. Watch out for the zero.

a. $4\overline{)840}$ = 210

b. $2\overline{)802}$

c. $3\overline{)603}$

PART 4

Work each division problem.

a. $2\overline{)120}$ = 60

b. $2\overline{)160}$

c. $2\overline{)628}$

d. $2\overline{)106}$

e. $2\overline{)206}$

f. $4\overline{)128}$

Review

Write the two division facts for each number family.

a. $9\overline{)54}$ = 6

b. $4\overline{)20}$ = 5

Answers are on page 24.

Name: _____ Multiplication 0 - 11

SPEED MULTIPLICATION

7 x 7	9 x 8	3 x 5	2 x 1	4 x 6
9 x 2	6 x 4	7 x 4	2 x 8	2 x 6
0 x 5	10 x 3	1 x 4	5 x 7	2 x 0
3 x 4	2 x 7	9 x 10	4 x 2	6 x 3
5 x 10	5 x 6	3 x 10	2 x 8	10 x 0
4 x 8	7 x 9	6 x 11	5 x 9	4 x 1
6 x 7	5 x 7	0 x 5	3 x 7	8 x 2
4 x 3	6 x 8	11 x 2	4 x 9	5 x 6
7 x 3	5 x 5	4 x 5	7 x 9	4 x 1
4 x 7	5 x 11	2 x 5	9 x 3	5 x 1

Time: _____ **Score:** _____

LESSON 4

More Short Division

PART 1 Work each division problem. Do the underlining and then write the answer.

a. $3\overline{)1599}$ = 533

b. $4\overline{)8164}$

c. $9\overline{)9927}$

d. $3\overline{)669}$

e. $2\overline{)4816}$

f. $5\overline{)3515}$

PART 2 Work each division problem.

a. $3\overline{)2409}$ = 803

b. $5\overline{)5015}$

c. $4\overline{)3212}$

d. $3\overline{)3015}$

e. $2\overline{)2016}$

f. $6\overline{)1206}$

PART 3 Use this number line to solve these problems.

4 8 12 16 20 24 28 32 36

a. 22 = 4 x ___ + R ___

b. 33 = 4 x ___ + R ___

Answers are on page 27.

c. $27 = 4 \times \_\_\_ + R \_\_\_$

d. $18 = 4 \times \_\_\_ + R \_\_\_$

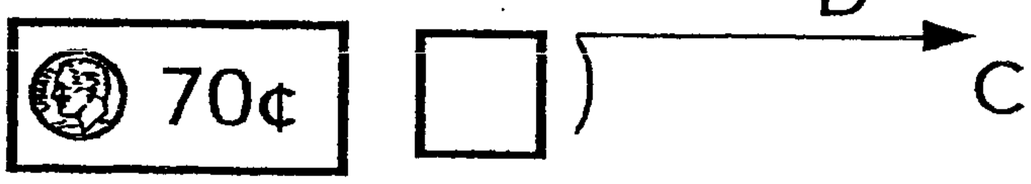
e. $13 = 4 \times \_\_\_ + R \_\_\_$

f. $34 = 4 \times \_\_\_ + R \_\_\_$

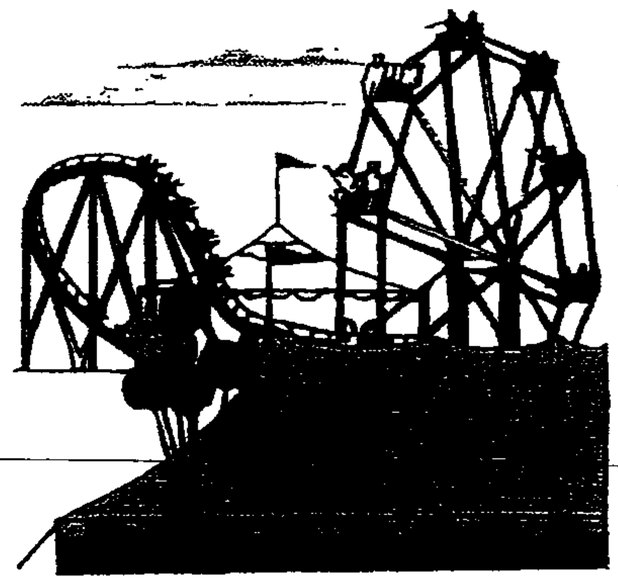
Review

Figure out the answer for each problem.

a.



b. You have 40 cents in nickels. How many nickels do you have?



Mad Math went to a carnival. Answer the following questions.

a. Mad Math counted 27 people riding on the Ferris Wheel. The Ferris wheel was full. Three people were in each car. How many cars did the Ferris Wheel have?

b. Mad Math spent 70 cents in dimes at the carnival. How many dimes did he spend?

c. Mad Math counted 14 people in front of him in the Ferris Wheel line. If the Ferris Wheel picks up 2 people each time it stops, how many times must it stop before Mad Math gets his turn?

Answers are on page 28.

Name: _____ Multiplication 0 - 12

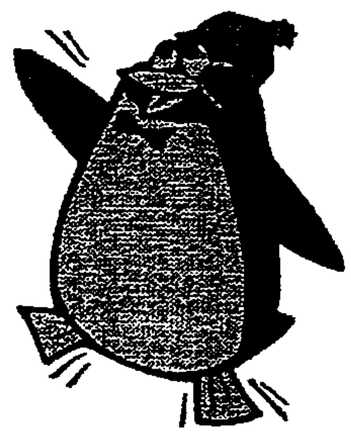
SPEED MULTIPLICATION

7 x 6	12 x 11	5 x 7	9 x 3	12 x 9
8 x 7	8 x 9	5 x 7	6 x 6	1 x 0
3 x 6	12 x 4	4 x 3	7 x 12	11 x 10
9 x 6	9 x 3	10 x 5	7 x 3	8 x 4
7 x 9	1 x 4	5 x 11	4 x 4	12 x 11
7 x 6	12 x 11	5 x 7	9 x 3	12 x 9
4 x 7	7 x 7	8 x 0	8 x 12	9 x 4
4 x 9	1 x 6	5 x 8	6 x 8	8 x 7
5 x 5	11 x 6	8 x 2	8 x 8	3 x 8
5 x 8	6 x 12	9 x 9	11 x 1	12 x 10

Time: _____ Score: _____

LESSON 6

Checking Your Answers



PART 1 Do the multiplication and subtract to figure out the remainder.

a. $5\overline{)174}$ = 34 +R4

$-\overline{)170}$

4

b. $4\overline{)74}$ = 18 +R

c. $\overline{)592}$ = 65 +R

d. $5\overline{)414}$ = 82 +R

e. $7\overline{)257}$ = 36 +R

f. $\overline{)382}$ = 63 +R

PART 2 Do the multiplication and subtract to find the remainder.

a. $54\overline{)380}$ = 7 +R2

$-\overline{)\blacksquare\blacksquare\blacksquare}$

2

b. $35\overline{)152}$ = 4

$\overline{)\blacksquare\blacksquare\blacksquare}$

c. $29\overline{)180}$ = 6

$\overline{)\blacksquare\blacksquare\blacksquare}$

Answers are on page 31.

PART 3

Figure out the remainder for each problem.

a. $42\overline{)359}$ $-\overline{)336}$ — $8 + \text{R } 23$

b. $35\overline{)253}$ $\overline{}$ — 7

c. $82\overline{)499}$ $\overline{}$ — 6

PART 4

For each problem, figure out if the answer is too big or too small. Then work the second problem to get the correct answer.

a. $54\overline{)185}$ 216 — 4

$54\overline{)185}$ $-\overline{)162}$ — $3 + \text{R } 23$

b. $73\overline{)300}$ — 5

$73\overline{)300}$

c. $29\overline{)213}$ — 6

$29\overline{)213}$

d. $34\overline{)210}$ — 5

$34\overline{)210}$

e. $78\overline{)230}$ — 3

$78\overline{)230}$

f. $56\overline{)400}$ — 8

$56\overline{)400}$

Answers are on page 32.

1

Name _____

GEOLOGIST'S NOTEBOOK
WHAT EXACTLY ARE MINERALS?

Pre-Test/Anticipation Guide

Directions: Circle the best answer to the following questions before viewing the program. Don't worry; you may not know all of the answers. The answers will be reviewed following the program.

1. Minerals are living.
   True False

2. Valuable minerals are distributed evenly around the world.
   True False

3. Minerals are often aggregated, or collected together, with other minerals in a rock.
   True False

4. Once minerals are together in a rock, they form new minerals.
   True False

5. Color and luster are two physical properties used to identify a mineral.
   True False

6. Minerals can break apart, or cleave, in a specific way.
   True False

7. Elements are not Earth's basic building blocks.
   True False

8. Minerals are made of elements.
   True False

9. Most minerals grow in water or magma.
   True False

10. Minerals grow in unpredictable patterns.
    True False

Vocabulary Word:

Definition:

Sentence:

Vocabulary Word:

Definition:

Sentence:

Vocabulary Word:

Definition:

Sentence:

Vocabulary Word:

Definition:

Sentence:

Science Vocabulary
Day 1

Vocabulary Word:

Definition:

Sentence:

Vocabulary Word:

Definition:

Sentence:

Vocabulary Word:

Definition:

Sentence:

Vocabulary Word:

Definition:

Sentence:

Science Vocabulary
Day 1

Vocabulary Word:

Definition:

Sentence:

Vocabulary Word:

Definition:

Sentence:

Vocabulary Word:

Definition:

Sentence:

Vocabulary Word:

Definition:

Sentence:

Science Vocabulary
Day 1

2

Name _____

GEOLOGIST'S NOTEBOOK
WHAT EXACTLY ARE MINERALS?

Discussion Questions

Directions: Research and report back to the class. Creatively present the information you have learned. For example, you could create a game, do a dramatization, a news show, PowerPoint® presentation with visuals, design a timeline, or write a story and read it to class.

1. What are minerals?

2. Why are minerals important to people?

3. Where can geologists find minerals?

4. Why is there not an even distribution of minerals found around the world? For example, why is gold in California but not Illinois?

5. How can minerals be separated from the rock of which they are part?

6. How are minerals identified? Be specific.

7. You are a geologist trying to identify two minerals. What should you do if two rocks contain yellow minerals but you know they are different minerals? Be specific.

8. Why did geologists come up with so many ways to identify minerals?

9. What are elements?

10. How do elements make minerals?

11. How many kinds of minerals are there? Provide a few examples.

12. Describe a crystal.

13. How do crystals grow?

14. Give examples of minerals used in everyday life.

5

Name _____

GEOLOGIST'S NOTEBOOK
WHAT EXACTLY ARE MINERALS?

Identifying Minerals Graphic Organizer

Directions: List the physical properties, define what it means, and include an example of a mineral that demonstrates those properties.

Physical Property	Definition of Physical Property	Example of a mineral with this physical property

6

Name _____

GEOLOGIST'S NOTEBOOK
WHAT EXACTLY ARE MINERALS?

Cause and Effect

Directions: Match the cause with the correct effect. Write the letter on the line in column two that correctly matches.

Column I	Column II
A) Certain minerals are expensive, such as gold.	_____ Helps geologists identify minerals.
B) Minerals need to be separated out by processing.	_____ We use table salt, copper, and diamonds.
C) Identifying minerals is challenging.	_____ Few have room to grow into large crystals.
D) Testing the physical properties of minerals.	_____ Minerals are aggregated with others in rock.
E) Earth has about a hundred elements.	_____ They are deposits of minerals in different places around the world.
F) Our world is so rich with minerals.	_____ There are so many kinds of minerals.
G) Minerals are important to everyday living for humans.	_____ There are thousands of chemical combinations of elements that make different minerals.

3

Name _____

GEOLOGIST'S NOTEBOOK
WHAT EXACTLY ARE MINERALS?

Video Quiz

Directions: Now that you have learned so much from viewing *What Exactly are Minerals?*, it is now time to test what you have learned. Answer each question by circling the correct response by circling either true or false. Do your best!

1. Minerals are evenly distributed around the world.
   True False

2. Rocks may be made of two or more minerals.
   True False

3. Physical properties of minerals include color, hardness, and cleavage.
   True False

4. Most minerals are made of two or more elements.
   True False

5. Minerals grow in an orderly, repeating fashion.
   True False