4th Grade Distance Learning

Week 6

(May 4th-8th)

Name:

Teacher:

4th Grade Distance Learning

Week 7

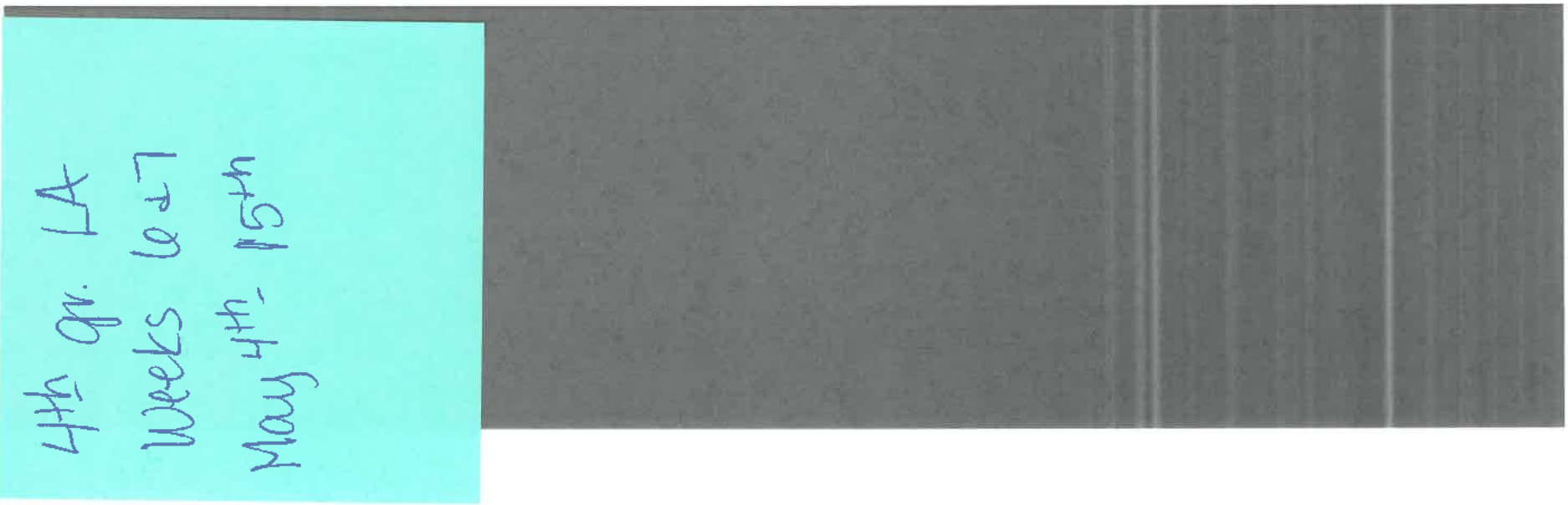
(May 11th-15th)

Name:

Teacher:

Oral History Project

Name:



Project Instructions

- For this project, students will need to choose an adult over the age of 50 to interview.
- Interviews should be conducted over the phone or via Skype, Facetime, etc. to protect the health of others.
- Students will have 2 weeks to complete this project (May 4th-15th). This will be their Language Arts requirements for distance learning during this time, along with 30 minutes of silent reading each day. It is our recommendation that students use the following timeline to complete the project:
    - Day 1: Choose a minimum of 10 interview questions in addition to the 6 required questions and choose the person being interviewed.
    - Day 2-3: Conduct Interview.
    - Days 4-10: Complete Google slides by answering the 6 required questions and at least 10 questions that you have selected. Answer the questions in complete sentences.
- When asking questions, the person being interviewed may tell you a lengthy story that greatly expands on the question. Let them!! Feel free to include these stories in your answer.
- Remember to thank the person you are interviewing!

Required Questions

Please ask the person being interviewed the following questions:

1. Name and his or her relationship to you?

2. Is there a story behind how you got your name or do you have any nicknames?

3. Who did you live with growing up?

4. Where did you grow up (town/state)?

Required Questions (continued)

5. Age and Birthdate(Month/day/year).

6. What is one piece of advice you have for me? (ask this question at the end of your interview)

Possible Interview Questions

1. What kinds of foods did you eat growing up?
2. Did you go to restaurants? Which ones?
3. How did you learn to cook and when?
4. What kinds of things did you do in your free time as a child?
5. Did you have any special toys that you remember?
6. What toy did you really want?
7. What was your favorite radio or television show as a child? What was your favorite TV or radio show in your 20's or 30's?
8. When did you get your first TV?
9. What was your school like?
10. What subjects did you take?
11. What was your favorite subject?
12. What was your least favorite subject?
13. How did you get to school? How far away was it?
14. What year did you graduate from high school?
15. What kinds of clothes did you wear as a child? Did you make them or buy them at the store?
16. What kinds of chores did you have growing up?
17. What was your first job? Where?

Possible Interview Questions

18. When did you start working? Where?

19. Did you serve in the military? When?

20. What effect did the depression have on your life?

21. Were you aware of or involved in the civil rights movement?

22. What event in history most impacted your life? Where were you when you heard about it? (ex. JFK assassination, Pearl Harbor, 9/11, MLK assassination)

23. What was the most interesting job you have ever had?

24. What is the greatest challenge you have faced in your life and how did you overcome it?

On the following slides, please type the ten(or more) questions you chose to ask the person you interviewed and respond to them. Responses should be in paragraph form. Don't forget to include capitalization and punctuation!

Question 1:

Response:

Question 2:

Response:

Question 3:

Response:

Question 4:

Response:

Question 5:

Response:

Question 6:

Response:

Question 7:

Response:

Question 8:

Response:

Question 9:

Response:

Question 10:

Response:

Name _____ Date _____

SuperKids® Math Worksheet

Multiplication using numbers between 2 and 12

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

Name _____ Date _____

SuperKids® Math Worksheet

Multiplication using numbers between 2 and 12

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

Multiplying by 18 (A)

Name: _____ Date: _____

Calculate each product.

17 × 18	5 × 18	6 × 18	16 × 18	8 × 18
15 × 18	7 × 18	13 × 18	12 × 18	15 × 18
1 × 18	8 × 18	3 × 18	18 × 18	11 × 18
7 × 18	14 × 18	2 × 18	10 × 18	18 × 18
9 × 18	5 × 18	14 × 18	2 × 18	4 × 18

Multiplying by 14 (A)

$11 \times 14 =$	$14 \times 12 =$	$14 \times 10 =$	$7 \times 14 =$
$14 \times 3 =$	$5 \times 14 =$	$14 \times 10 =$	$12 \times 14 =$
$14 \times 14 =$	$9 \times 14 =$	$6 \times 14 =$	$8 \times 14 =$
$1 \times 14 =$	$14 \times 14 =$	$4 \times 14 =$	$14 \times 13 =$
$2 \times 14 =$	$6 \times 14 =$	$13 \times 14 =$	$4 \times 14 =$
$9 \times 14 =$	$14 \times 9 =$	$14 \times 10 =$	$14 \times 8 =$
$1 \times 14 =$	$14 \times 3 =$	$2 \times 14 =$	$13 \times 14 =$
$14 \times 11 =$	$8 \times 14 =$	$14 \times 12 =$	$14 \times 5 =$
$11 \times 14 =$	$14 \times 14 =$	$7 \times 14 =$	$7 \times 14 =$

Name _____ Date _____

SuperKids Math Worksheet

Division with Integer Answers using divisors between 1 and 10

8) 72	8) 72	5) 95	1) 33	3) 33
9) 45	3) 9	1) 10	6) 42	9) 45
1) 14	3) 93	5) 25	6) 60	4) 32
4) 92	10) 30	6) 12	9) 45	7) 14
6) 60	6) 78	1) 93	8) 8	2) 90
5) 55	10) 60	10) 30	3) 39	4) 72

Name _____ Date _____

SuperKids Math Worksheet

Division with Integer Answers using divisors between 1 and 10

5) 100	8) 24	2) 64	4) 64	6) 42
4) 20	7) 21	9) 36	1) 48	4) 28
7) 35	5) 30	1) 22	1) 53	9) 18
3) 45	10) 10	10) 20	3) 12	5) 60
8) 56	2) 92	10) 30	10) 60	4) 44
7) 77	10) 90	3) 54	7) 77	5) 45

Math, Week 6, Day 1 and 2, May 4 and 5

Hi, I'm Rob. Welcome to Math Antics.
In this video, we're going to learn about decimal place value.
As that name suggests, it's related to regular place value,
so be sure to watch our video about that if you haven't already.
In that previous video, we learned how to count using just 10 different digits
and number places that represent different sized groups.
For example, if we needed to count 235 apples, we used different number places for counting by ones,
by groups of ten,
and by groups of a hundred.
The digit '2' in the hundreds-place represents two hundreds,
the '3' in the tens-place represents three tens (or thirty),
and the '5' in the ones-place represents five ones (or just 5).
It's a pretty amazing system if you think about it!
It only has 10 digits, but those digits can be re-used in different combinations to count any number from zero,
all the way to trillions of apples and beyond!
But!... as amazing as it is, there's just one little problem with our number system so far...
[Crunch]
What if you don't have a whole apple?
In the Place Value video, we only learned how to count whole amounts, or what we call "whole numbers",
which is the set of numbers you get if you start with 0 and then count by ones: 1,2,3,4... and so on.
But, there are things besides whole amounts. It's possible to have just part of something ...like just part of an apple.
And that means there are 'in-between' amount. You might have one apple or two apples,

but you could also have something in-between that, like one and a half apples.
How can the base 10 number system handle situations like that?
The answer is decimal places!
Decimal places are a way of extending the Base 10 number system so that it can represent amounts that are in-between whole amounts.
Decimal places are just like regular number places, except that instead of using them to count GROUPS, we use them to count PARTS (or FRACTIONS) of things.
To see how the Base 10 system is extended with decimal places, let's look at the pattern of number places that we saw in the last video.
We started out with a number place for counting things one at a time.
And when we hit the limit of counting with it, we used another number place (on the left side of it) for counting groups of 10.
By combining those two number places, we could count from zero all the way up to 99, but when we needed to count beyond that, we used another number place (on the left side of it) for counting groups of 100.
And when those places were maxed out, we added a place for counting by groups of 1,000,
and then by groups of 10,000 and so on.
See the pattern?
Each time we added a new number place, it was located to the left of the previous one,
and each time it represented groups that were TEN times larger than the previous group.
Since the amounts that our number places represent get bigger and bigger as we go to the left,
it makes sense that number places for counting smaller amounts (like parts of something that are LESS than 1) will need to go on the right side of the ones place.
That's where the decimal places are found.

And just like the whole number places can go on forever to the left, counting bigger and bigger groups,
the decimal number places can go on forever to the right, counting smaller and smaller parts (or fractions).
But... if number places go on forever in either direction, then how do we know which place is which?
I mean... if they all look the same... or worse... if they're invisible,
then how do we know which digit goes in which place?
Ah - that's an excellent question!
We do have a problem now that the number places can extend in both directions.
Before, when we had only whole number places that extended in just one direction (to the left),
we knew that the place that was farthest to the right was always the ones place.
But now we know that number places can extend in BOTH directions, so we need a new way to tell which place is which.
What we need is a point of reference... a place that we always start from.
And for that, we use a special symbol called "the decimal point", which in the United States, looks just like a period.
Basically, the decimal point acts as a separator.
It separates the number places that are used for counting whole values, (which are on the left side of the decimal point)
from the number places that are used to count fractional values (which are on the right side of the decimal point).
And that's why you don't see a decimal point in every number.
If there's no decimal digits in a number (like in the whole number 25), then you don't need to show the decimal point.
It's safe to assume that the digit farthest to the right is in the ones place.
Of course, you COULD still show the decimal point if you wanted to since it's always immediately to the right of the ones place,
but if there's no decimal digits, then we don't need to separate them from the whole number digits.

If a number does have decimal digits, then we call it a "decimal number" and the decimal point helps us quickly recognize which digit is in the ones place.
For example, if you see a sequence of digits like this: 1, 2, 6, point, 5, 3
You can tell right away that the digit '6' is in the ones place, because it's immediately to the left of the decimal point.
And that means this '2' is the tens place and this '1' is in the hundreds place.
Okay... but what about the digits that are to the right of the decimal point?
We know that they must be in decimal number places, but what are the names of those decimal number places and what values do they count?
Well, looking back at our number place pattern, we see that each time we move to the LEFT,
the new number place counts amounts that are ten times BIGGER than the previous place,
so each time we move to the RIGHT, that place should count amount that are ten times SMALLER than the previous place.
Since the ones place counts by 'ones', the number place to the right of it should count by amounts that are ten times smaller than one.
The amount that's ten times smaller than one is called "a tenth".
It's the amount you get if you take one whole (like one whole apple) and divide it into ten equal parts, keeping just one of them.
One-tenth is what we call a fraction, and fractions are written using a special notation that has two numbers with a line between them.
The number on the bottom tells how may equal parts a whole amount is divided into,
and the top number tells you how many of those parts you have.
So the fraction 'one-tenth' is written like this: one over ten.
Getting back to our apple counting example... previously, we could only count whole apples,
but now that we have a number place for counting tenths, we can count tenths of apples too.

We can use the ones place and the tenths place together to count amounts that are in-between a whole number of apples.
To see how it works, let's start our counting with one whole apple and NO tenths.
That means that there will be a '1' in ones place and a '0' in the tenths place.
But now let's start adding tenths to that. For each tenth that we count, we increase the digit in the tenths place by '1'
... one tenth, two tenths, three tenths, 4, 5...
Let's pause for a second to notice something important.
Do you see that having 5 tenths of an apple is the same as having one-half of an apple.
That's because 5 is exactly half of 10, and the fraction 5 over 10 can be simplified to 1 over 2.
That's why having 1.5 apples is the same as having one and a half apples.
Pretty cool, huh?
Anyway, back to counting... 6 tenths, 7, 8, and 9 tenths.
Now we have one whole apple and also nine-tenths of an apple. But our tenths place is maxed out with the digit '9'.
That's as high as it can count, so what do you think will happen if we add one more tenth?
Yep! Those ten tenths combine to form one whole apple, and that will cause our ones place digit to increase to a '2'.
We now have 2 whole apples (even though one is made up from slices, the amount is still equal to one whole.)
See how decimal digits help us count in-between whole amount?
But wait... there's more!
...more decimal number places that is.
The tenths place allows us to count in between the 'ones', but what if we want to count amounts that are in between the 'tenths'? [Crunch]
The decimal number places keep on going to the right,
and each time they count amounts that are ten times smaller than the previous amount.

So if the tenths place counts fractions that are a tenth of ONE,
then the next place over will count amounts that are one tenth of A TENTH!
One tenth of a tenth is called 'one hundredth'.
It's the fraction you get if you take a tenth and then divide IT into ten equal parts.
It's a very small fraction, and it's called a hundredth
because it's the same fraction you'd get if you take a whole and divide it up into 100 parts.
So its fraction form looks like this: 1 over 100.
Just like tenths could be used to represent amounts that are IN-BETWEEN the ones,
hundredths can be used to represent amounts that are IN-BETWEEN tenths!
And just like if you combined 10 tenths, they equal one, if you combine 10 hundredths, they equal a tenth.
And the decimal number places keep on going like that.
The next number place over represents fractions that are one-tenth of one-hundredth.
That very small fraction is called 'one-thousandth' because it would take 1,000 of them to make one whole.
And the next place over is 10 times smaller than that; it's called the 'ten-thousandths' place.
And then there's the 'hundred-thousandths' place...
there's the 'millionths' place, and so on...
So do you see how truly amazing our number system is?
It can represent any whole number amount, no matter how big, by adding bigger and bigger number places to the left.
But it can also represent amount in between those whole amounts, with more and more precision...
down to the tiniest fraction imaginable, by adding more and more decimal number places to the right.
"That is truly amazing!

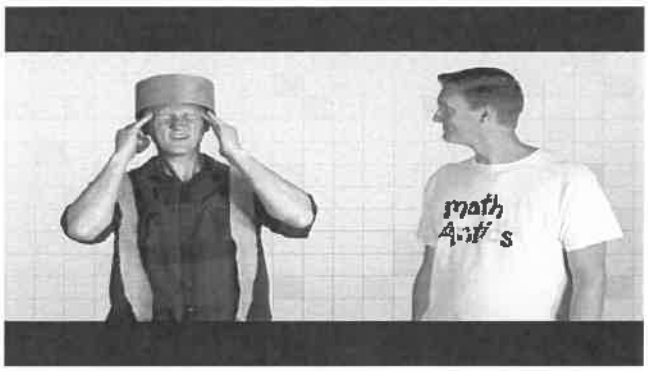
In fact, it kinda makes my head hurt just thinkin' about it.
Of course... it could be this daw-gone pot I wear on my head all the time."
Okay, so now that you know how decimal places work.
Let's talk briefly about how we can show their place value and how we can write decimal numbers in expanded form.
A digit's value is determined by the place that it's in.
So if a '2' is in tenths place... it stands for two-tenths, which can be written with the fraction '2 over 10'.
If a '3' is in the tenths place, that stands for three-tenths or '3 over 10'.
If a '4' is in the tenths place, that stands for four-tenths or '4 over 10', and so on...
And just like a '2' in the tenths place stands for the place value 'two-tenths',
a '2' in the hundredths place stands for the place value 'two-hundredths'
and a '2' in the thousandths place stands for the place value 'two-thousandths'.
Knowing that will help us write decimal numbers in expanded form... like the one we saw earlier: 126.53.
The expanded form of the whole number part is easy.
We learned how to do that in the last video: 126 is 100 + 20 + 6
But now we need to add the fractions represented by the decimal digits too.
Since there's a '5' in the tenths place, that stands for five-tenths,
so we need to add the fraction '5 over 10' to our expanded form.
But we also have the digit '3' in the hundredths place which stands for three-hundredths,
so we also need to add the fraction '3 over 100' to our expanded form.
Alright... so that's a basic intro to decimal number places.
There's still more to learn about them and as you can see,
decimal number places have a lot to do with fractions, which you may not have learned very much about yet.
But that's okay. Once you do learn more about fractions, it will help decimal number places make even more sense.

And there's several Math Antics videos about fractions that can help you with that,
like our video called "Converting Base-10 Fractions".
The main thing is you now know how the Base 10 number system works, which is really important since it's used all the time in math.
As always, thanks for watching Math Antics and I'll see ya next time.

Decimals, Day 1, May 4

* Required

1. Email address *



http://youtube.com/watch?v=KG6lLNOiMgM

2. What digit is in the tenths place in the number 34.285 * 1 point

Mark only one oval.

- 3
- 8
- 2
- 4

3. What digit is in the hundredths place in the number 1.067 1 point

Mark only one oval.

- 1
- 3
- 7
- 6

4. What digit is in the thousandths place in the number 410.528 * 1 point

Mark only one oval.

- 8
- 5
- 4
- 0

5. What digit is in the tenths place in the number 123.476 * 1 point

Mark only one oval.

- 2
- 0
- 1
- 4

6. What digit is in the ten thousandths place in the number 867.5309 * 1 point

Mark only one oval.

- 8
- 9
- 0
- 7

7. What digit is in the hundredths place in the number 452.251 * 1 point

Mark only one oval.

- 4
- 1
- 5
- 2

8. What digit is in the thousandths place in the number 2187.32546 * 1 point

Mark only one oval.

- 5
- 4
- 2
- 1

9. What digit is in the tenths place in the number 0.2479 * 1 point

Mark only one oval.

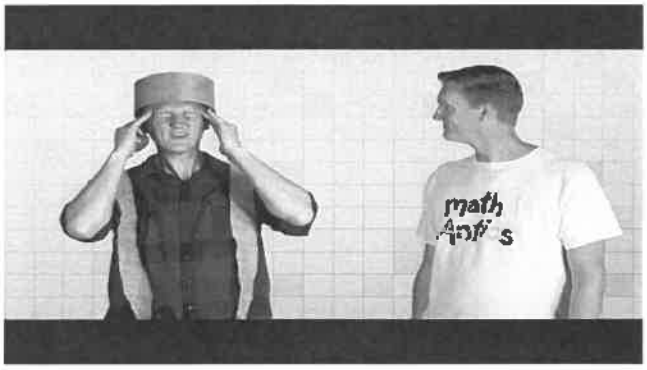
- 0
- 2
- 7
- 4

Math, Week 6, Day 2, May 5

Decimal Place Value

* Required

1. Email address *



http://youtube.com/watch?v=KG6lLNOiMgM

2. What is the place value of the digit 3 in the number 27.3 * 1 point

Mark only one oval.

- ◯ 3/100
- ◯ 3/10
- ◯ 3/1000
- ◯ 3

3. What is the place value of the digit in the number 327.205 * 1 point

Mark only one oval.

- 5
- chicken
- 5/1000
- 5/100

4. What is the place value of the digit 2 in the number 548.0236 * 1 point

Mark only one oval.

- 2
- 2/10
- 2/100
- 2/1000

5. What is the place value of the digit 7 in the number 102.347 * 1 point

Mark only one oval.

- 700
- 7/10
- 7/1000
- alligator

6. What is the value of the digit 9 in the number 0.900 * 1 point

Mark only one oval.

- 9
- 90
- 900
- 9/10

7. What is the value of the digit 0 in the number 78.306 * 0 points

Mark only one oval.

- 0
- 30
- hundredths
- tenths

8. What is the place value of the digit 5 in the number 2.05698 * 1 point

Mark only one oval.

- 5/10
- 5/100
- 5/1000
- 5

9. What is the value of the digit 1 in the number 23.0251 * 1 point

Mark only one oval.

- 1/10
- 1/100
- 1/1000
- 1/10,000

Math, Week 6, Day 3 and 4 (May 6, 7)

Hi, I'm Rob. Welcome to Math Antics.
In this lesson, we're gonna learn about decimal arithmetic.
But before we get started, if you don't already know how to do multi-digit arithmetic with regular whole numbers,
be sure to watch our videos that cover those subjects first.
That's really important because I'm just going to show you
how you can modify the procedures that we already learned in those videos so that they work for decimal numbers.
So if you don't know how to do those procedures already, this video won't make very much sense.
Specifically, you should make sure you've watched the videos about,
multi-digit addition, subtraction, multiplication and long division.
If you know how to do the problems in those videos, then decimal arithmetic won't be too hard.
That's because the procedures for decimal arithmetic are basically the same as they are for whole numbers,
but there's a few important differences that you need to know about.
And that's what I'm gonna show you in this video.
Are you ready? Let's start with an easy one: multi-digit addition.
When adding multi-digit whole numbers, the key was to stack the numbers up so that the ones place digits line up in a column,
which ensured that all of the other number places lined up in columns too.
Then, you just add up the digits in each column, starting with the ones place and working to the left.
Well, adding multi-digit decimal numbers works the same way.
The main difference is that instead of lining up the ones place digits when we stack the numbers,
we line up the decimal points instead.
But wait a minute!
I mean... isn't that the same thing as lining up the ones place digits.
Ah, yes it is! And that's because the decimal is our reference mark that always goes between the ones place and the tenths place.
So, lining up the decimal points is the same thing as lining up the ones places.
It makes sure ALL the number places line up in columns.
Now, you've probably noticed that decimal numbers can have different numbers of decimal digits.
For example, 10.8 has only one decimal digit, but 5.34 has two decimal digits.

And what that means is that when you line up the decimal points of the two decimal numbers,
they might not form a nice column on the right edge. Some of the digits might be missing.
But that's no problem! Remember, if there's not a digit in a particular number place, you can just put a zero there to help you keep track of things.
Now that these numbers are lined up by their decimal points, we can add them column-by-column.
But instead of starting with the ones place like we always did with whole numbers, we start with whatever number place column is the furthest to the right.
In this case, that's the hundredths place, so we'll start there.
So, we add the digits in each column, carrying (or regrouping) as needed, and we get 1 6 1 4
We're done, right?
Wrong! There's one last, REALLY important step!!
Remember, we're doing DECIMAL addition, so we can't just forget about that decimal point.
We need to bring a copy of it straight down into our answer line so we keep the same reference point for our number places.
Now we can see that the answer is really 16.14
That's not so hard is it? And I've got more good news.
Decimal subtraction works the same way. You start by lining up the decimal points of the two numbers.
(Remember that the order of the numbers matters in subtraction so be sure that the number you're taking away is in the bottom.)
Then, starting with whatever column is furthest to the right,
you subtract the digits column-by-column, borrowing if you need to.
After that, you just bring down a copy of the decimal point and you have your answer.
Okay, so decimal addition and subtraction are pretty easy.
Let's move on to something a little harder: decimal multiplication.
Now as you know, multi-digit multiplication is more complicated because there are so many multiplication steps,
but the good news is that decimal numbers don't really make the procedure much harder than it is with whole numbers.
That's because there's a clever way that we can make decimal multiplication look exactly like the multi-digit multiplication with whole numbers that you already know how to do.
The key is to pretend that the decimal points are not really there.
Hold on a minute! I mean... I like pretending as much as you do,

but if we just pretend that the decimal points aren't even there, we're aren't gonna get the right answer! Are we?
Well, no... but the only thing that will be wrong with the answers is that the decimal point won't be in the right spot,
so we'll need to fix that at the end.
I know it sounds a little confusing, so here's an example that should help you understand.
I knew you would say that!
Let's say that you need to multiply 3.65 by 2.4.
That seems a little tricky, but what if we just pretend that the decimal points are not there for now.
In other words, what if we pretended that the numbers were 365 and 24.
You already know how to do that problem!
You'd just follow the procedure we learned in "Multi-Digit Multiplication, Part 2" and you'd get the answer: 8,760.
But that's the answer to 365 times 24, NOT 3.65 times 2.4, so it's time to stop pretending.
To get the correct answer for the decimal problem,
we've got to understand what's going on with those decimal points and why we just pretended they weren't there.
The truth is, when we pretended that the decimal points weren't there,
what we were really doing is pretending that they had been shifted until both of our numbers became whole numbers.
Remember, the numbers 365 and 24 technically DO have decimal points.
They're right there next to the ones place.
We just don't need to show them since there aren't any decimal digits.
So, by ignoring the decimal points, what we were really doing is mentally SHIFTING the decimal points to the right.
We shifted the top decimal point two places to the right
and we shifted the bottom decimal point one place to the right.
But doing that changed the numbers!
It made the top number 100 times bigger than the decimal version,
and it made the bottom number 10 times bigger.
That's because every time you shift the decimal point one number place to the right, it's like multiplying by a factor of 10.
And that means, the answer we got is WAY too big!
It's too big by THREE factors of 10 because the decimal points in our problem got shifted a total of 3 places to the right
(2 on the top and 1 on the bottom)

So to fix that, we're going to have to shift the decimal point in our answer the same amount in the opposite direction.
In other words, we need to move the decimal point in our answer 3 places to the left which will make it smaller by 3 factors of 10.
So starting right here (where the decimal point would be if our answer was 8,760) we shift it 3 places to the left and we end up with 8.760 (or just 8.76)
And THAT is the answer to 3.65 times 2.4.
That's a cool trick, huh? It means that you can do decimal multiplication just like regular multi-digit multiplication.
You start by setting up your multiplication problem exactly like you would if the decimal points were invisible.
But don't just erase them,
because you'll need them at the end to figure out how many places to shift the decimal point in the answer.
Then, keep ignoring the decimal points while you follow the multiplication procedure.
Once you have an answer, count up how many places the decimal points are shifted in the problem you're working.
Don'f forget, it's the TOTAL shift of both the top and bottom decimal points.
And then shift the decimal point in your answer to the left that same number of places.
So decimal multiplication turns out to be not too bad after all.
But what about decimal division? That's gotta be hard, right?
Well, multi-digit division is always a little hard, but luckily, decimals don't really make it very much harder.
In fact, it's only when there's a decimal divisor that the procedure is a little different.
If you just have a decimal dividend, and the divisor is a whole number, it's really simple.
That's because you can just do the long division procedure
that we learned in the long division videos and the decimal point doesn't effect it at all.
You just need to make sure that you bring a copy of the decimal point up into the answer line when you're done.
So if you have the division problem, 12.64 divided by 4,
you would follow the division procedure as if the decimal point was not even there, and you'd get 3 1 6 in the answer line.
But then, you need to bring a copy of the decimal point straight up into the final answer making it 3.16
That's all there is to it! ...IF it's only the dividend that's a decimal number.
But what if BOTH the divisor AND the dividend are decimals?
Like what if you have to divide 6.45 by 1.5?

Well, the first step is don't panic! As you'll see, this isn't much harder.
It turns out that there's a very simple trick that we can use to make it so our divisor is not a decimal number.
We can just shift the decimal point in the divisor to the right until it's a whole number, BUT... if we do that, then we also need to shift the decimal in the dividend the same amount to the right.
So in this case, if we want to shift the decimal point in our divisor one place to the right so that it's 15,
we can do that as long as we ALSO shift the decimal point in the dividend by the same amount, which will turn it into 64.5
And here's the really cool part. If we do this new division problem (64.5 divided by 15) we will get exactly the same answer as we would have if we did the problem 6.45 divided by 1.5
That only works because we shifted the decimal point in the divisor AND the dividend by the same amount in the same direction.
And you'll realize why that works if you remember equivalent fractions.
Think about the fraction 1 over 2. That's the same as 1 divided by 2, right?
Okay, but what if I multiplied both the top and bottom number by 10.
That would give me 10 over 20 which is equivalent to 1 over 2, even though it uses different top and bottom numbers.
Both represent the value one-half. They're "equivalent" factions!
Well, that's what we did in our decimal division problem when we
shifted the decimal point in both the divisor and the dividend by one place... we multiplied each number by 10.
And since fractions and division are basically the same, we made "equivalent" division problems,
but now one of them has a whole number divisor. Pretty cool, huh?
That means if we solve 64.5 divided by 15, we get the answer 4.3,
which is EXACTLY the same answer we'd get if we did 6.45 divided by 1.5
And you can use that trick to avoid EVER having to divide with a decimal divisor, even if the dividend is a whole number.
For example, if you have the problem 148 divided by 1.6,
you can shift the decimal in both the divisor and the dividend one place to the right.
Remember, there's ALWAYS a decimal point, even in a whole number.
It's just that when you shift it to the right, you need to put a zero in the place that it shifts past.
That gives you the equivalent division problem 1,480 divided by 16.
And since these division problems are equivalent, you'll get the same answer for both.

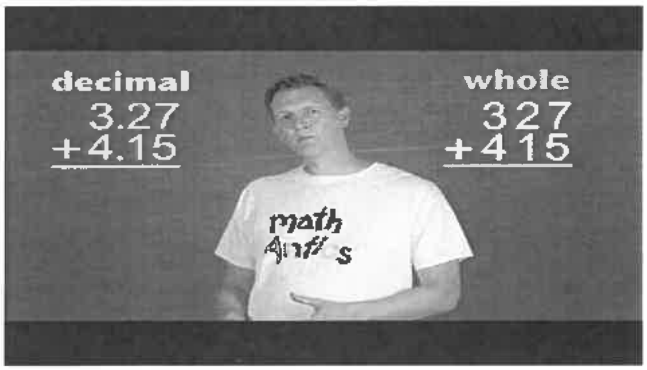
Alright, so that's how you can modify all the traditional arithmetic procedures to work with decimal numbers.
It can be a little tricky at first, since there's a few extra steps that you have to keep track of when the numbers are decimals,
but if you practice a lot, and check your answers with a calculator, you'll get it!
Remember, you can always re-watch this video if you need to, along with the other videos about multi-digit arithmetic.
As always, thanks for watching Math Antics, and I'll see ya next time!

Math, Week 6, Day 3, May 6

Find the sums of the following decimals

* Required

1. Email address *



http://youtube.com/watch?v=kwh4SD1ToFc

2. 24.25 + 73.75 * 1 point

Mark only one oval.

- ◯ 98
- ◯ 97.100
- ◯ 97.90
- ◯ Ms. Kinnander

3. 17.02 + 4.32 * 1 point

Mark only one oval.

- 13.30
- 21.34
- 21.30
- Mrs. Wendlund

4. 10.9 + 0.12 * 1 point

Mark only one oval.

- 10.21
- 131
- Mr. Shorter
- 11.02

5. 83.6 + 2.125 * 1 point

Mark only one oval.

- 85.725
- 85.131
- Mr. P
- 81.725

6. 0.412 + 0.65 * 1 point

Mark only one oval.

- 477
- Mrs. Henry
- 1.062
- 1062

7. 33.75 + 9.8 * 1 point

Mark only one oval.

- Mr. Smith
- 42.83
- 43.55
- 128.75

8. 83.6 + 2.125 * 1 point

Mark only one oval.

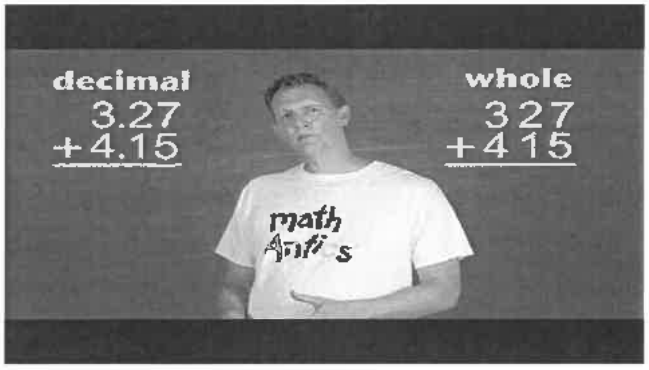
- 85.725
- 2961
- 85.131
- Mrs. Wade

Math, Week 6, Day 4, May 7

Find the difference in the following equations.

* Required

1. Email address *



http://youtube.com/watch?v=kwh4SD1ToFc

2. 9.23 – 4.5 * 1 point

Mark only one oval.

- ◯ 5.22
- ◯ 4.73
- ◯ duck
- ◯ 5.33

3. 8.0 – 0.6 * 1 point

Mark only one oval.

- 2
- eagle
- 7.4
- 8.6

4. 12 – 1.3 * 1 point

Mark only one oval.

- 10.7
- 11.3
- 11.7
- Gene Dillon

5. 8.9 – 5.7 * 1 point

Mark only one oval.

- 32
- 14.6
- 3.2
- play outside

6. 50.7 – 42.1 * 1 point

Mark only one oval.

- 8.6
- run around your house once
- 12.6
- 11.6

7. 81.3 – 6.75 * 1 point

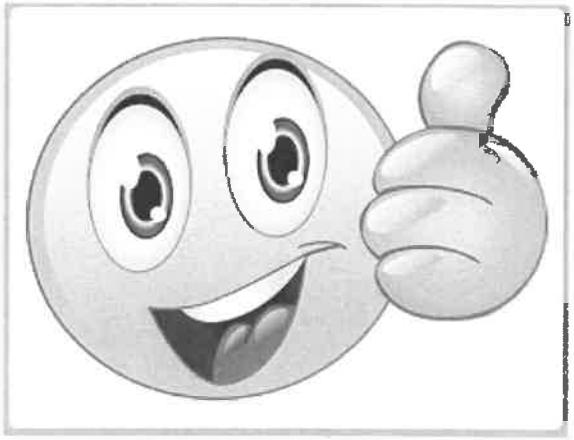
Mark only one oval.

- sing a song
- 85.72
- 74.55
- 85.45

8. 129.8 – 85.4 * 1 point

Mark only one oval.

- ( ) 44.4
- ( ) 164.4
- ( ) 144.4
- ( ) make someone smile today



Review Week 6 (May 8)

* Required

1. Email address *

2. 7,400-1,215= * 1 point

Mark only one oval.

- 6,185
- 6,615
- 8,615
- 6215

3. 614,702+339,808= * 1 point

Mark only one oval.

- 954,510
- 964,510
- 964,519
- 954,600

4. Solve the pattern * 1 point

$4 \times 6 = 24$
$4 \times 60 = 240$
$40 \times 60 = 2{,}400$
$4 \times 600 =$

5. $29 \div 4 =$ * 1 point

Check all that apply.

- [ ] 7 R1
- [ ] 7 1/4
- [ ] 8 R1
- [ ] 7

6. 5/6-3/6= * 1 point

Check all that apply.

- [ ] 2/6
- [ ] 1/3
- [ ] 8/6
- [ ] 8/12

7. 1.6 + 2.5= * 1 point

Mark only one oval.

- 4.1
- 3.11
- 3.1
- 4

Electricity Has Many Uses

How did your day start? Did an alarm clock wake you? Did you turn on a light? Did you eat something out of the refrigerator? Yes? Then you used electricity!

Active Reading As you read these two pages, draw a box around the sentence that contains the main idea.

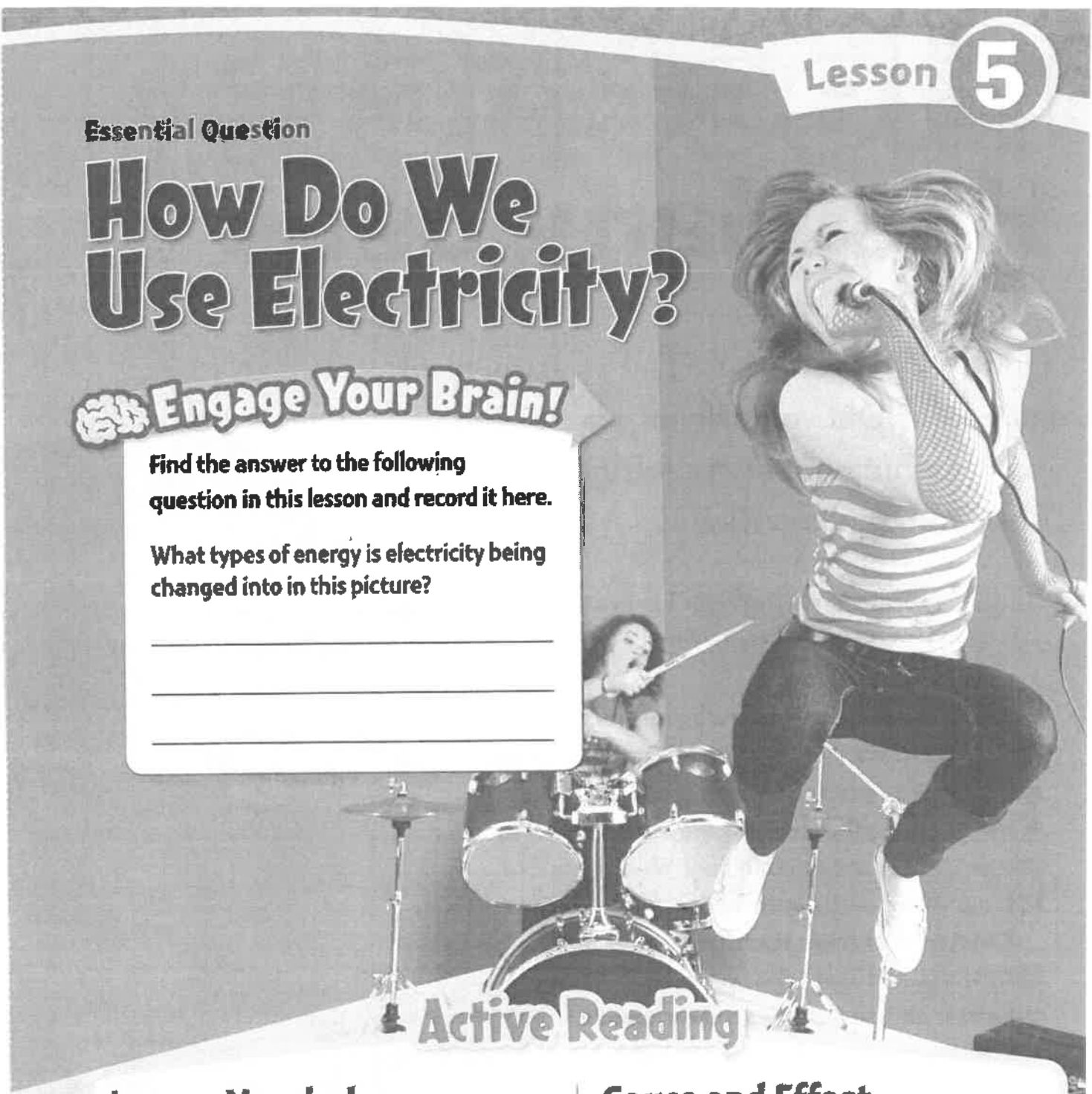
Think of all the things in your home or school that use electricity. What do they do? Devices that use electricity change electrical energy into other types of energy, such as light or heat. We use electricity to heat our homes and cook our food. We also use it to light our rooms and to keep foods cold.

A computer changes electrical energy into light, sound, and heat. When you turn on a computer, you see pictures and hear sounds. You feel heat coming off of it. A computer can be plugged into an electrical outlet. It can also run on batteries. How do the objects on these pages change electrical energy?

Lesson 5

Essential Question

How Do We Use Electricity?



Engage Your Brain!

Find the answer to the following question in this lesson and record it here.

What types of energy is electricity being changed into in this picture?

_____

_____

_____

Active Reading

Lesson Vocabulary

List the terms. As you learn about each one, make notes in the Interactive Glossary.

_____

_____

_____

_____

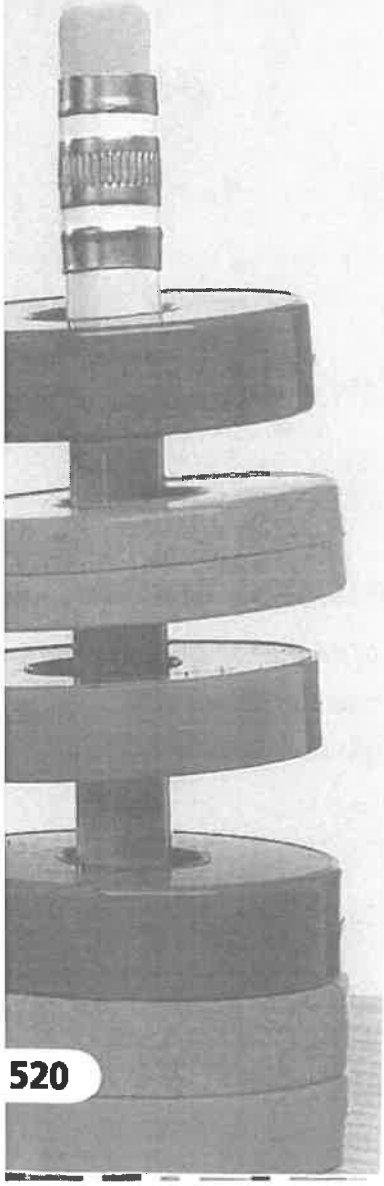
Cause and Effect

Some ideas in this lesson are connected by a cause-and-effect relationship. Why something happens is a cause. What happens as a result of something else is an effect. Active readers look for effects by asking themselves, What happened? They look for causes by asking, Why did it happen?

Magnets and Magnetism

You can feel the force between two magnets. You feel magnets pull together, and you feel them push apart. How do magnets work?

Active Reading As you read these two pages, underline words or phrases that describe what causes magnets to push or pull.



Each flat surface on a ring magnet is either an *N* pole or an *S* pole.

Magnets have been used for thousands of years. A **magnet** is an object that attracts iron and a few other metals. People make magnets, but they are also found in nature. Magnets are found in many common things.

Magnetism is a physical property of matter. Magnets push and pull because of their magnetic field. A *magnetic field* is the space around the magnet where the force of the magnet acts.

Each magnet has two ends, or *poles*. A magnetic pole is the part of a magnet where its magnetic field is the strongest. One end is called the *south-seeking* pole, or *S* pole. The other is the *north-seeking* pole, or *N* pole.

Two *N* poles or two *S* poles are similar, or like, poles. If you place the *N* poles of two magnets near each other, they repel, or push away. Two *S* poles push away, too. Like poles repel each other.

An *N* pole and an *S* pole are unlike poles. If you place unlike poles of two magnets near each other, they attract, or pull toward each other.

Many electrical devices have electric motors. An **electric motor** is a machine that changes electrical energy into energy of motion. An electric fan uses an electric motor to move air. A refrigerator uses an electric motor to keep foods cold. What other objects in your home have electric motors? Any electric device that makes motion probably does.

an electric stove

a hair dryer and a light

Making a Better Change

A light bulb produces heat and light. Why would an engineer want to reduce the amount of heat a light bulb produces?

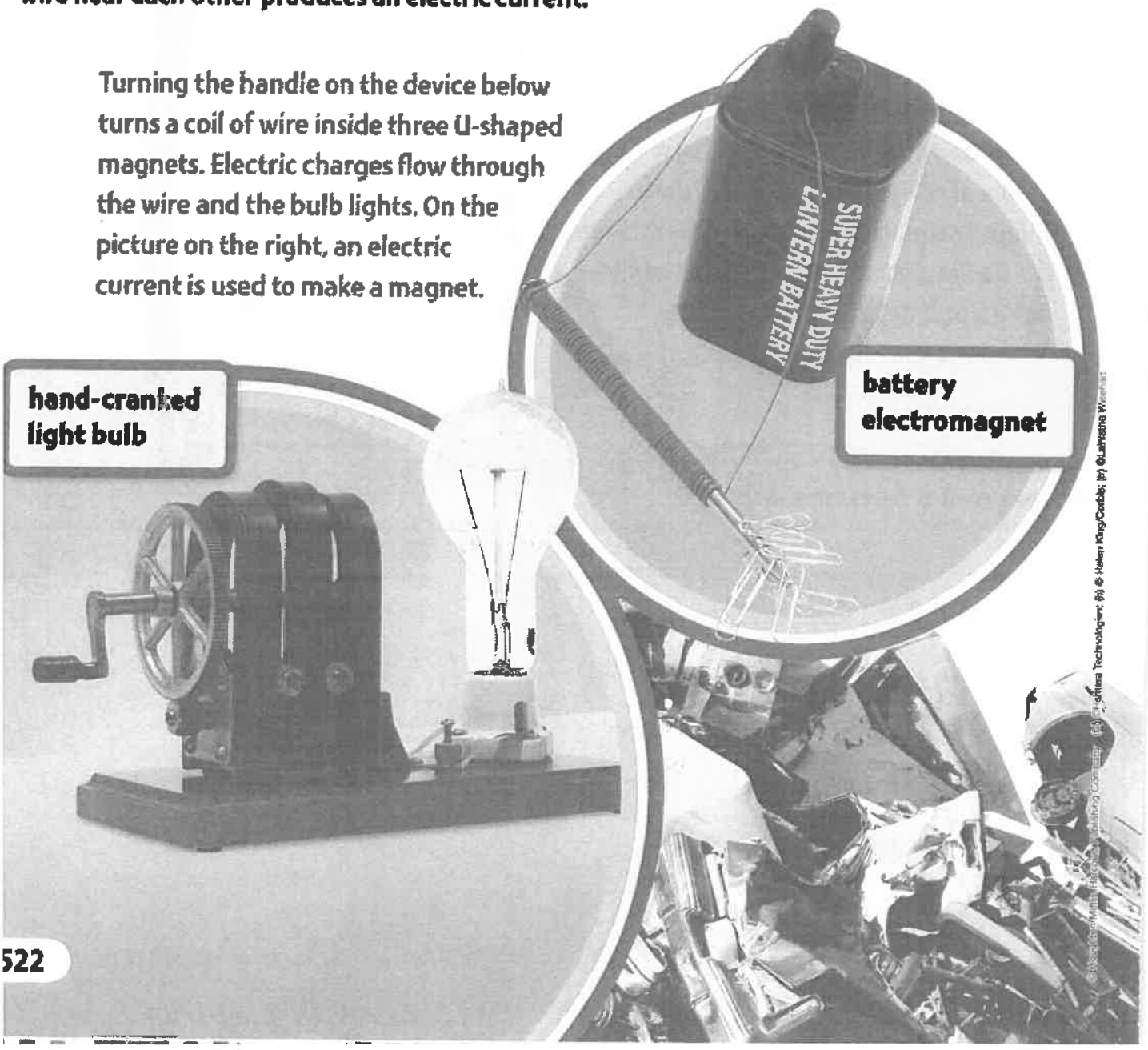
Electromagnets

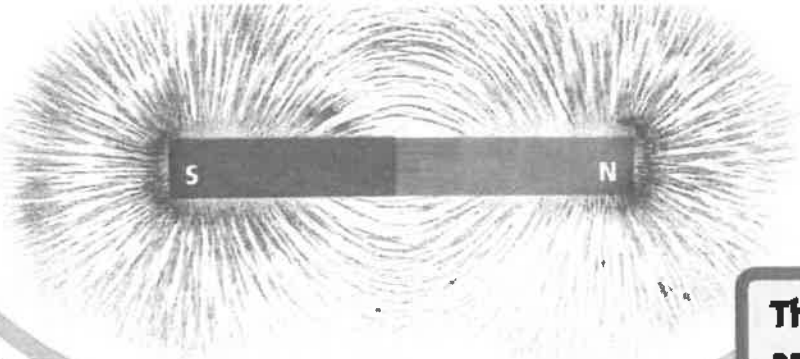
Electricity and magnetism are related. One can produce the other.

Active Reading **As you read this page, circle the sentence that explains how magnetism produces an electric current.**

Suppose you slide a coil of wire back and forth around a bar magnet. When the ends of the wire are attached to a light bulb, the bulb lights! Moving a magnet and a wire near each other produces an electric current.

Turning the handle on the device below turns a coil of wire inside three U-shaped magnets. Electric charges flow through the wire and the bulb lights. On the picture on the right, an electric current is used to make a magnet.

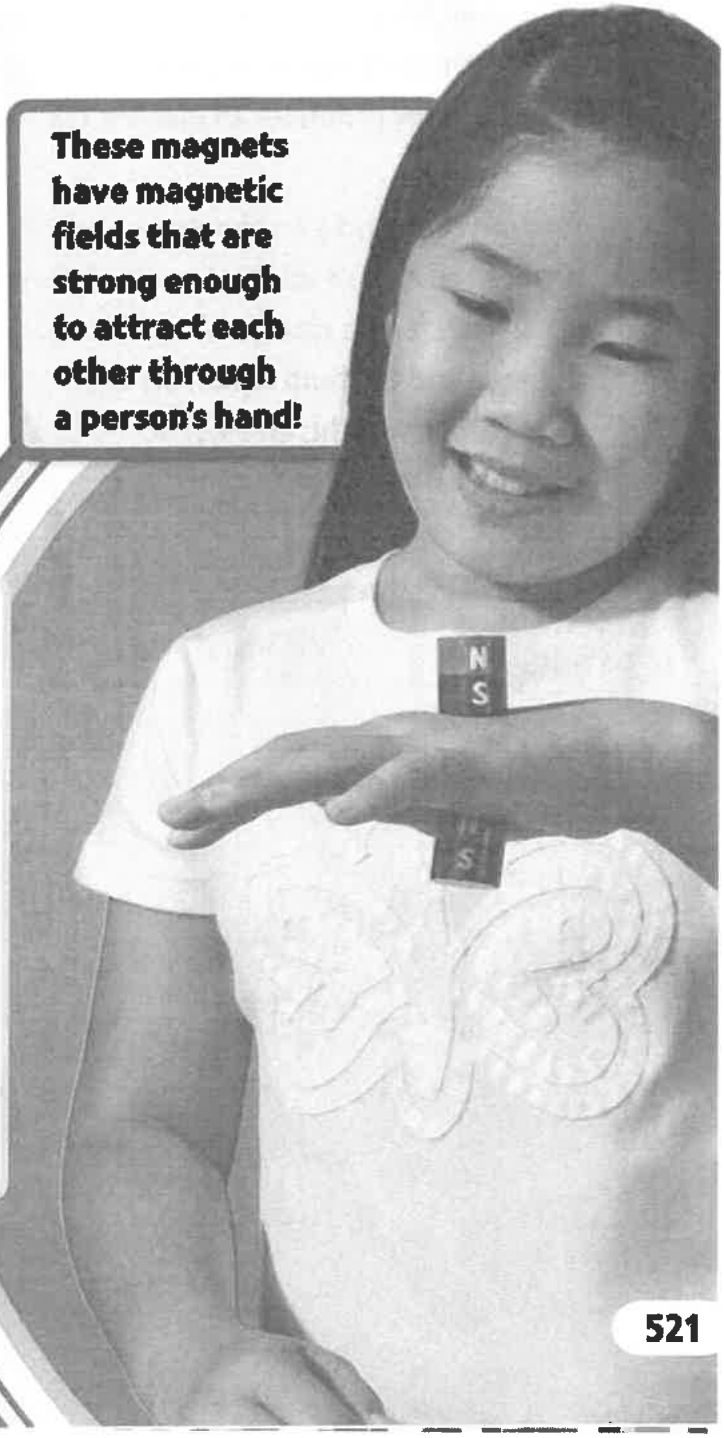




The magnetic forces are strongest around the poles.

The picture above shows a bar magnet. The iron filings around the magnet show the shape of the magnetic field. Where do you see the most iron filings? They are at the *S* and *N* poles of the magnet, which are where the magnetic field is strongest. Where do you see fewer iron filings? The middle of the magnet has fewer iron filings. The magnetic field is weakest there. The size and the type of material used to make a magnet affect its strength.

These magnets have magnetic fields that are strong enough to attract each other through a person's hand!

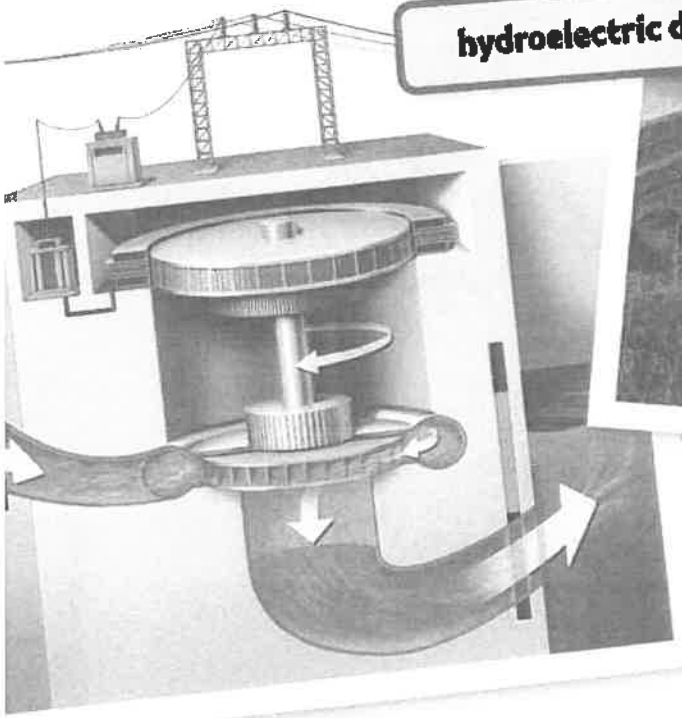


▶ Why are some magnets floating around the pencil in the picture on the left?

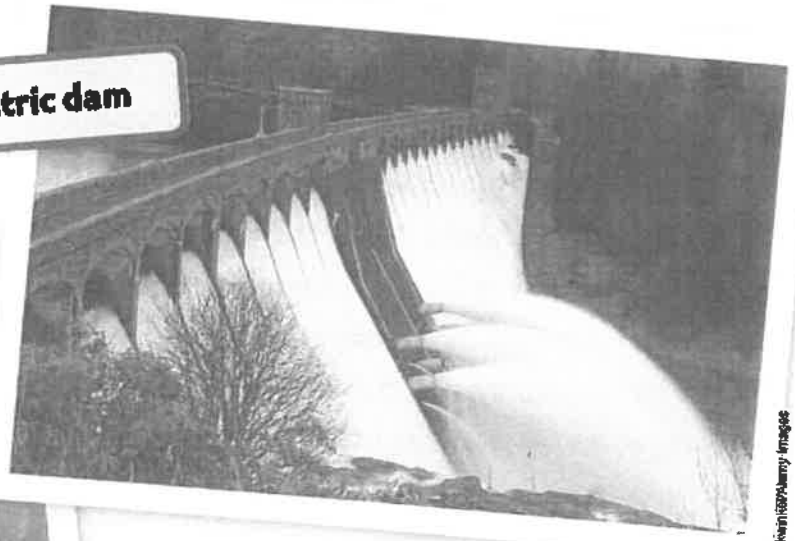
Generating Electricity

We use electricity every day. How does it get to our homes and schools?

Active Reading **As you read, circle the resources used to make electricity.**

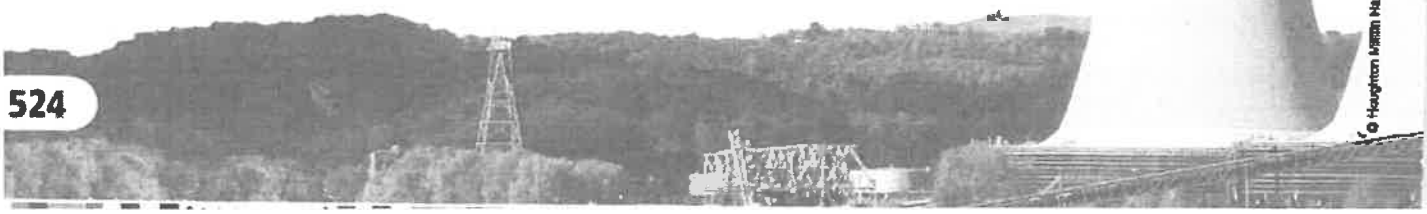


hydroelectric dam



Inside a hydroelectric [hy•droh•ee•LEK•trik] dam, the mechanical energy of falling water is used to turn generators, which change mechanical energy into electrical energy.

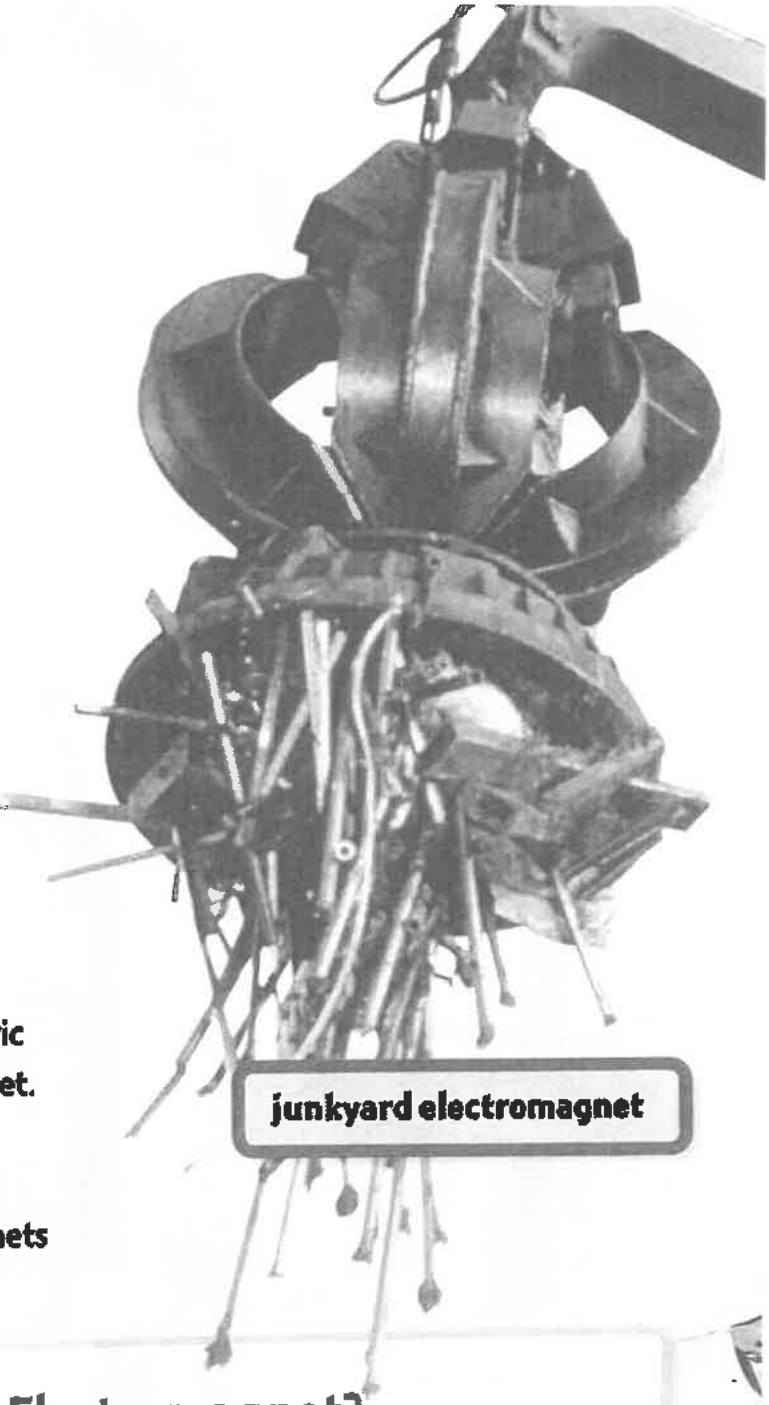
Electricity generating stations, also known as energy stations, may use water, coal, or atoms to produce the electricity you use.



If magnets produce electricity, can electricity make magnets? Yes! Wrapping a coil of current-carrying wire around an iron coil such as a nail makes a magnet. You can use this magnet to pick up small iron objects such as paper clips. A device in which current produces magnetism is called an **electromagnet.**

Huge electromagnets are used in junkyards. They separate iron and steel objects from other objects. The operator swings the electromagnet over a pile of junk. He turns on the current. All the iron pieces are attracted to the magnet. The operator then swings the magnet over a container and turns off the current. The magnetism stops, and the iron drops into the container.

Electromagnets have become very important and useful. Today, every electric motor contains at least one electromagnet. You can also find electromagnets in telephones, doorbells, speakers, and computers. Doctors can use electromagnets to take pictures of the inside of the body.



junkyard electromagnet

What Are the Parts of an Electromagnet?

List the parts of an electromagnet. Then draw an electromagnet in the space provided.

_____

_____

_____

_____

_____

Sum It Up!

When you're done, use the answer key to check and revise your work.

Use information in the summary to complete the graphic organizer.

Summarize

Electricity is used and produced in many ways. Electrical devices change electrical energy into other types of energy, such as heat, light, and sound. Many devices, including fans and refrigerators, have electric motors that change electrical energy into energy of motion. Electricity and magnetism are related. Magnets produce a magentic field. A magnetic field can be used to produce an electric current. An electric current may also be used to make an electromagnet. An electromagnet can be used in a generator at an energy station. A generator changes energy of motion into electrical energy. Energy stations produce the electrical energy we use. We need to conserve electricity because some resources used by energy stations will run out.

1 **Main Idea:**

_____

_____

2 **Detail:** Electrical devices convert

_____

_____

_____

_____

_____

3 **Detail:** Magnetism and electricty are related because

_____

_____

_____

_____

_____

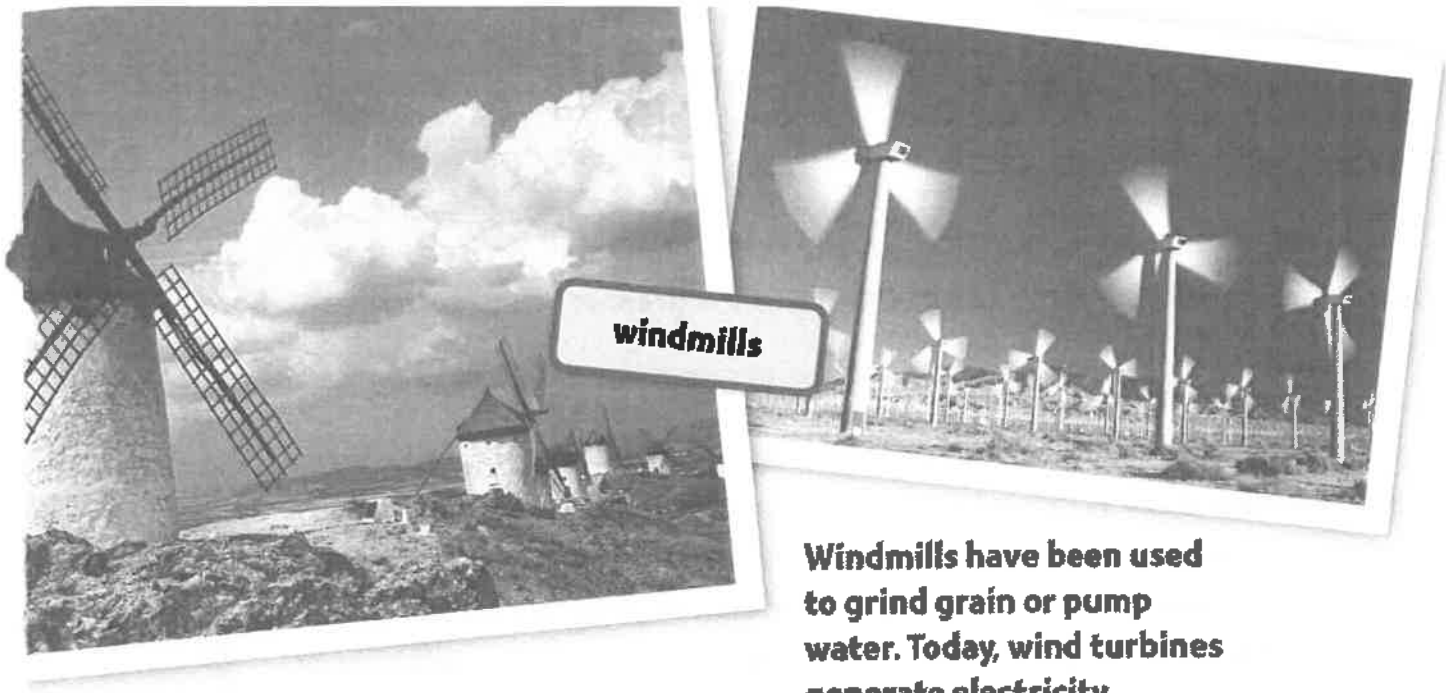
4 **Detail:** An electromagnet can be used in a generator at an energy station to produce

_____

_____

_____

Answer Key: 1. Electricity is used and produced in many ways. 2. electrical energy into other types of energy such as heat, sound, and light energy. 3. Sample answer: an electric current can produce an electromagnet. 4. electrical energy we use.



Windmills have been used to grind grain or pump water. Today, wind turbines generate electricity.

Suppose you spin a magnet inside a coil of wire. A current begins to flow through the wire. You've made a **generator**, a device that converts mechanical energy to electrical energy. Huge generators in energy stations produce electricity that travels through wires to homes, schools, and businesses.

Some energy stations use falling water or wind to turn generators. Other stations convert sunlight, or solar energy, into electrical energy. These resources are called renewable resources, because they can be replaced quickly.

Most energy stations burn coal or other fuels to heat water. The water rises as steam, which turns the generators. Coal is a nonrenewable resource that will eventually run out. That's why it's important for us to conserve, or use less, electricity.

Do the Math!

Solve a Problem

Sam's electric bill was $200 for the month of June. The air conditioner accounts for $\frac{1}{2}$ of the bill, and the water heater accounts for $\frac{1}{5}$ of the bill. How much did it cost to run each appliance in June?

Brain Check Review

Lesson 5

Name _____

Word Play

1 Unscramble each of the clues to form a word or a phrase from the word bank. Copy each letter in a numbered cell to the cell below with the same number.

TECGARLOETNEM | | | | | | | | | | 5 | | | |

RECLICTE ROOTM | | | 8 | | | | 3 | | | | | | | |

TORRAGEEN | | | 4 | | | | | | |

ONECREVS | | | | 2 | | | | |

REECUSROS | | | | | 1 | | | | |

GANETM | | | 10 | 7 | | |

CICLETERTIY | 6 | | | | | 9 | | | | | 11 |

Word Bank

conserve
electricity
electric motor
electromagnet
generator
magnet
resources

This lesson is about | 1 | 2 | 3 | 4 | 5 | | 6 | 7 | 8 | 9 | 10 | 11 | .

Apply Concepts

2 Draw a common electrical appliance. Then explain how it changes electrical energy to other forms of energy.

_____

_____

_____

_____

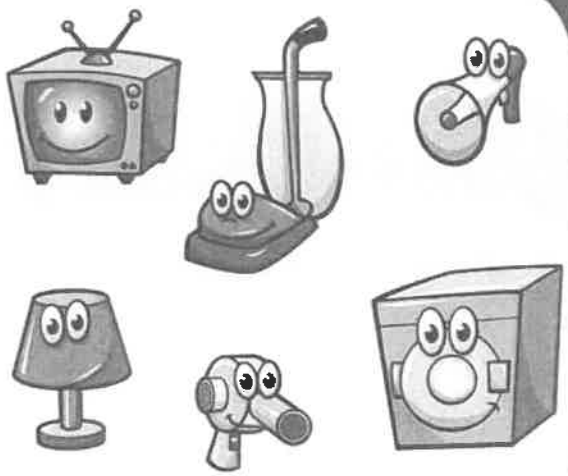
Apply Concepts

3 Draw an *X* over each appliance that changes electrical energy to mechanical energy. You may use an appliance more than once.

Circle each appliance that is designed to change electrical energy into heat energy.

Draw a square around each appliance that changes electrical energy to sound energy.

Draw a triangle around each appliance that changes electrical energy to light energy.



4 What is the device in the picture to the right called? What would happen if you put this device near a pile of iron nails?

_____

_____

_____

5 A. What are some resources used to generate electrical energy at energy stations?

_____

_____

_____

_____

B. Describe three ways that you can conserve electrical energy.

_____

_____

_____

_____

_____

Take It Home!

Discuss with your family ways that you could conserve electrical energy. You might talk about ways to use less energy or about things you can do by hand instead of using electrical appliances.

S.T.E.M.

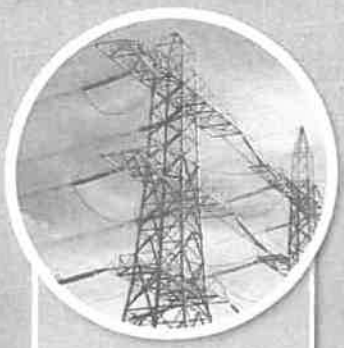
Engineering & Technology

How It Works:

The Electric Grid

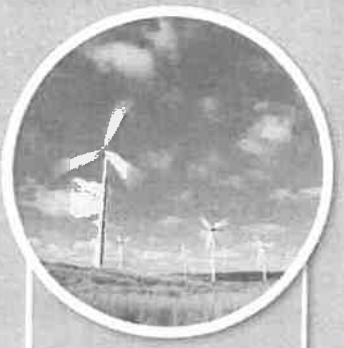
At home, you flip a switch and a light comes on. The electricity to power the light comes from generating stations. Generating stations are a part of a larger system know as the *electric grid*. Generators, high voltage steel towers, conductors, insulators, and your home appliances are all parts of this system.

At generating stations, generators transform kinetic energy into electrical energy.



From the generating stations, electrical energy travels over electrical lines on tall steel towers. These lines are made up of a conductor and an insulator.

Coal is a fossil fuel. There is plenty of it in the United States. Most of our electricity comes from burning coal.



Wind turbines are large generators. Turbines use energy from wind to generate electricity.

Troubleshooting

During prolonged hot weather, many people use air conditioning units to remain cool. How could this affect the electric grid and the environment?

_____

_____

S.T.E.M.

continued

Show How It Works

Water falling through a turbine can generate electricity. Most hydroelectric generating stations have a dam that blocks a river. A lake forms behind the dam and provides a constant source of falling water. The dam also floods areas that were once dry land. Draw a picture that shows what you think the area behind the dam looked like before the dam was built.

A hydroelectric dam uses energy from moving water to generate electricity.

Research the benefits and risks for each of the first three sources of electrical energy listed below. Fill out the chart. Then, identify the energy source described in the last entry.

Electrical energy source	Benefits	Risks
Wind turbines	do not pollute air, land, or water	
Coal-burning generating stations		Coal mines change the landscape; they can cause land, air, and water pollution.
Hydroelectric dams	use water, a renewable resource	
	do not pollute air, land, or water	These produce toxic wastes that must be stored for a very long time.

Build On It!

Rise to the engineering design challenge—complete **Build in Some Science: An Attractive Option** on the Inquiry Flipchart.

Unit 10 Review

Name _____

Vocabulary Review

Use the terms in the box to complete the sentences.

circuit
conductor
electric current
electric motor
generator
insulator
magnet
static electricity

1. A path along which electric charges flow is called a(n) _____.
2. An object that attracts iron and a few other metals is called a(n) _____.
3. A device that changes electrical energy into mechanical energy is a(n) _____.
4. A material through which electricity travels easily is called a(n) _____.
5. The buildup of electric charges on an object is called _____.
6. A material that resists the movement of electricity through it is called a(n) _____.
7. A device that produces an electric current by converting mechanical energy to electrical energy is a(n) _____.
8. The flow of electric charges along a path is called a(n) _____.

Science Concepts

Fill in the letter of the choice that best answers the question.

9. Carlita hangs two balloons from a desk. When they hang normally, they are close together but do not touch. Carlita rubs both balloons with a wool cloth. What happens when she lets the balloons hang near one another?

Ⓐ They push each other away.

Ⓑ They touch each other and pop.

Ⓒ They touch each other and stick together.

Ⓓ They are close together but do not touch.

10. Ari is combing his hair. After a while, he notices that the comb attracts the hairs on his head as shown below.

Which explanation **best** describes why the hairs are attracted to the comb?

Ⓐ Combing the hairs caused them to lose their static charge.

Ⓑ Combing the hairs caused the comb to lose its static charge.

Ⓒ Combing the hairs gave them a charge that is opposite the charge on the comb.

Ⓓ Combing the hairs gave them a charge that is the same as the charge on the comb.

11. Identify the parts of an electromagnet.

Ⓐ battery, battery holder, nail, copper wire

Ⓑ battery, battery holder, bulb, copper wire

Ⓒ battery, battery holder, nail, bulb

Ⓓ battery, battery holder, switch, copper wire

12. When an electric current runs through a doorbell buzzer, a mechanism inside vibrates back and forth to make the buzzer work. When someone pushes the button on a doorbell, how does energy transform?

Ⓐ Electrical energy transforms into heat, then sound.

Ⓑ Electrical energy transforms into motion, then sound.

Ⓒ Motion energy transforms into electrical energy, then back to motion.

Ⓓ Sound energy transforms into motion, then back to sound.

13. Jayden uses various objects to complete a circuit. He compares how brightly a bulb glows using each object. His results are shown below.

Object	Glow
nail	very bright
crayon	dim
eraser	very dim
pencil lead	bright

Which object is the **best** electrical conductor?

Ⓐ nail

Ⓑ eraser

Ⓒ crayon

Ⓓ pencil lead

14. While planning an investigation, Harini draws four ways she could connect a battery, a paper clip, a light bulb, and some wire. Which arrangement below would light the bulb?

Ⓐ 

Ⓒ 

Ⓑ 

Ⓓ 

15. You rub a balloon on your hair on a dry day. Then, you bring a second balloon near the first one. How would you describe what happens to the balloons?

Ⓐ They repel each other.

Ⓑ They attract each other.

Ⓒ They neither attract nor repel each other.

Ⓓ Opposite charges make one balloon become larger and one smaller.

16. People use many sources of mechanical energy to generate electricity. Which frequently used source will eventually run out?

Ⓐ wind

Ⓑ coal

Ⓒ solar energy

Ⓓ running water

17. The picture below shows a large dam used to produce electricity. Water flows from the lake behind the dam to the river below it. Water passes through turbines connected to electric generators.

Which energy transformation takes place in the hydroelectric power plant?

Ⓐ heat energy into electrical energy

Ⓑ energy of motion into electrical energy

Ⓒ electrical energy into energy of motion

Ⓓ energy of motion and sound energy into electrical energy

18. When Tony left the room, he flipped the light switch. The light bulb stopped giving off light. What caused it to go out?

Ⓐ The tiny wires inside the bulb stopped moving, so it could not make light.

Ⓑ The electric current stopped, so no more electrical energy was changed into light.

Ⓒ The bulb became cooler, so the light bulb stopped changing heat energy into light.

Ⓓ The electric current stopped, so light could not be changed into electrical energy.

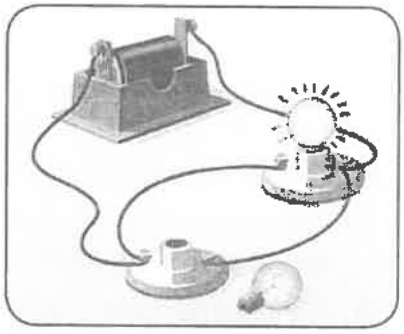
Apply Inquiry and Review the Big Idea

Write the answers to these questions.

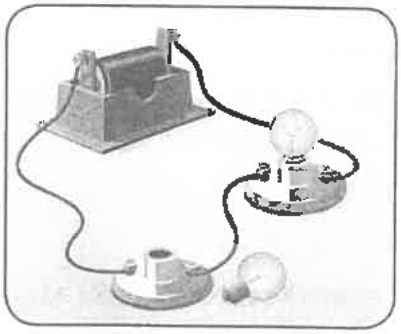
19. Explain how a magnet and some wire can be used to generate electricity.

20. The amount of static electricity on a balloon can be estimated by how many pieces of confetti the balloon picks up at a distance of 1 cm. Yuma wants to find out if a dryer sheet produces less static electricity on a balloon than a piece of wool. Describe an investigation she can carry out.

21. Eshe builds two circuits. After checking that all the bulbs work, she removes one bulb from each circuit, as shown below.



Circuit A



Circuit B

Explain why the bulb goes out in Circuit B but stays lighted in Circuit A.

1. How do we use electricity?

Complete the Unit 10 review on pages 531-534.

Week 7

May 11-15

4th Grade

Multiplication Facts to 81 (A)

Determine each product.

7 × 6	4 × 6	6 × 2	6 × 5	6 × 8	6 × 6	5 × 6	1 × 6	6 × 3	9 × 6
6 × 3	9 × 6	2 × 6	6 × 8	5 × 6	6 × 6	4 × 6	1 × 6	6 × 1	6 × 7
6 × 8	6 × 3	6 × 6	2 × 6	6 × 1	6 × 5	6 × 4	6 × 7	6 × 3	9 × 6
6 × 5	8 × 6	6 × 6	3 × 6	2 × 6	4 × 6	6 × 6	1 × 6	6 × 7	9 × 6
6 × 7	8 × 6	6 × 2	6 × 4	6 × 1	6 × 1	5 × 6	6 × 9	3 × 6	6 × 6
5 × 6	6 × 2	9 × 6	7 × 6	6 × 6	6 × 6	3 × 6	6 × 8	6 × 4	1 × 6
6 × 3	8 × 6	6 × 5	6 × 2	6 × 2	7 × 6	4 × 6	6 × 1	6 × 6	6 × 9
6 × 5	6 × 6	6 × 7	6 × 8	6 × 1	3 × 6	6 × 3	6 × 4	2 × 6	9 × 6
2 × 6	6 × 6	8 × 6	6 × 3	5 × 6	6 × 6	7 × 6	6 × 1	4 × 6	9 × 6
6 × 7	4 × 6	6 × 6	6 × 6	6 × 9	5 × 6	1 × 6	2 × 6	6 × 8	6 × 3

Multiplication Facts to 81 (A)

Determine each product.

8 × 5	6 × 3	9 × 0	2 × 5	6 × 0	3 × 9	8 × 6	1 × 2	5 × 8	6 × 8
7 × 6	7 × 8	7 × 0	5 × 3	7 × 3	2 × 9	0 × 6	5 × 5	2 × 1	8 × 1
0 × 8	5 × 1	8 × 3	4 × 1	9 × 3	1 × 4	3 × 5	5 × 0	3 × 2	4 × 4
9 × 5	9 × 6	9 × 9	0 × 5	0 × 3	2 × 2	6 × 5	8 × 8	2 × 6	1 × 7
9 × 4	2 × 4	5 × 4	8 × 0	5 × 2	9 × 8	3 × 4	1 × 3	0 × 1	5 × 7
3 × 3	1 × 8	4 × 6	8 × 2	7 × 1	4 × 9	7 × 9	3 × 6	2 × 3	8 × 7
1 × 1	7 × 4	8 × 4	4 × 2	1 × 6	9 × 1	8 × 9	2 × 7	6 × 7	7 × 2
6 × 2	5 × 9	4 × 7	6 × 6	0 × 9	0 × 0	1 × 5	4 × 8	4 × 3	3 × 8
1 × 0	2 × 0	7 × 5	9 × 7	7 × 7	3 × 0	0 × 2	5 × 6	4 × 5	6 × 9
0 × 7	3 × 1	6 × 4	6 × 1	0 × 4	2 × 8	4 × 0	9 × 2	1 × 9	3 × 7

Multiplying by 9

9 × 1 =	9 × 1 =	9 × 1 =	9 × 1 =
9 × 2 =	9 × 2 =	9 × 2 =	9 × 2 =
9 × 3 =	9 × 3 =	9 × 3 =	9 × 3 =
9 × 4 =	9 × 4 =	9 × 4 =	9 × 4 =
9 × 5 =	9 × 5 =	9 × 5 =	9 × 5 =
9 × 6 =	9 × 6 =	9 × 6 =	9 × 6 =
9 × 7 =	9 × 7 =	9 × 7 =	9 × 7 =
9 × 8 =	9 × 8 =	9 × 8 =	9 × 8 =
9 × 9 =	9 × 9 =	9 × 9 =	9 × 9 =
9 × 10 =	9 × 10 =	9 × 10 =	9 × 10 =
9 × 11 =	9 × 11 =	9 × 11 =	9 × 11 =
9 × 12 =	9 × 12 =	9 × 12 =	9 × 12 =

Extra Space

Multiplying by 9

9 × 1 =	9 × 1 =	9 × 1 =	9 × 1 =
9 × 2 =	9 × 2 =	9 × 2 =	9 × 2 =
9 × 3 =	9 × 3 =	9 × 3 =	9 × 3 =
9 × 4 =	9 × 4 =	9 × 4 =	9 × 4 =
9 × 5 =	9 × 5 =	9 × 5 =	9 × 5 =
9 × 6 =	9 × 6 =	9 × 6 =	9 × 6 =
9 × 7 =	9 × 7 =	9 × 7 =	9 × 7 =
9 × 8 =	9 × 8 =	9 × 8 =	9 × 8 =
9 × 9 =	9 × 9 =	9 × 9 =	9 × 9 =
9 × 10 =	9 × 10 =	9 × 10 =	9 × 10 =
9 × 11 =	9 × 11 =	9 × 11 =	9 × 11 =
9 × 12 =	9 × 12 =	9 × 12 =	9 × 12 =

Extra Space

Multiplying by 8

8 × 1 =	8 × 1 =	8 × 1 =	8 × 1 =
8 × 2 =	8 × 2 =	8 × 2 =	8 × 2 =
8 × 3 =	8 × 3 =	8 × 3 =	8 × 3 =
8 × 4 =	8 × 4 =	8 × 4 =	8 × 4 =
8 × 5 =	8 × 5 =	8 × 5 =	8 × 5 =
8 × 6 =	8 × 6 =	8 × 6 =	8 × 6 =
8 × 7 =	8 × 7 =	8 × 7 =	8 × 7 =
8 × 8 =	8 × 8 =	8 × 8 =	8 × 8 =
8 × 9 =	8 × 9 =	8 × 9 =	8 × 9 =
8 × 10 =	8 × 10 =	8 × 10 =	8 × 10 =
8 × 11 =	8 × 11 =	8 × 11 =	8 × 11 =
8 × 12 =	8 × 12 =	8 × 12 =	8 × 12 =

Extra Space

Multiplying by 7

7 × 1 =	7 × 1 =	7 × 1 =	7 × 1 =
7 × 2 =	7 × 2 =	7 × 2 =	7 × 2 =
7 × 3 =	7 × 3 =	7 × 3 =	7 × 3 =
7 × 4 =	7 × 4 =	7 × 4 =	7 × 4 =
7 × 5 =	7 × 5 =	7 × 5 =	7 × 5 =
7 × 6 =	7 × 6 =	7 × 6 =	7 × 6 =
7 × 7 =	7 × 7 =	7 × 7 =	7 × 7 =
7 × 8 =	7 × 8 =	7 × 8 =	7 × 8 =
7 × 9 =	7 × 9 =	7 × 9 =	7 × 9 =
7 × 10 =	7 × 10 =	7 × 10 =	7 × 10 =
7 × 11 =	7 × 11 =	7 × 11 =	7 × 11 =
7 × 12 =	7 × 12 =	7 × 12 =	7 × 12 =

Extra Space

Area/Perimeter Video One transcript

It's the Year 2060 in their common Isaac Mars you're about to buy a plot of land but you have a dog and you want to make sure he has enough space to run around you also want to build a fence so he can't escape the area that's the space inside for rectangle its length and width the multiply perimeter the distance around the shape just add the sides together and they're gonna be great with the area that's the space inside for a rectangle it's lengthen with the multiply every murder the distance around the shape just add the sides together and then you'll be great yeah Here I am on Mars trying to find out the size of my backyard well it's a rectangle right so what if we cut it into squares of the same size that a one you lived all by one unit wise are called square units add them all up surprise you got 72 square units or feet cuz that's the unit we're using who has time to count squares length times width is the quickest way to get there yeah that's how you find the area a nice little formula that'll take area and I need to hurry cuz my dog is starving let's find the area so I can feed mom in my yard is nine feet long by 8 feet wide I get the area when I multiply each side
[Music]
Another way for you to think it through basically you take the road was calling and figure how many square units fit inside of those so my backyard is why Daisy so that's eight rows with nine square units and each so multiplied a rose by the nine squares you get 72 yup you new area that's the space inside for a rectangle it's linking with the multiply a perimeter the distance around the shape just have the sides together and then you'll be great with the area that's the space inside for a rectangle it's lengthen with the multiply and perimeter the distance around a shape just add the sides together and then you'll be great now I've got my area for my yard on Mars and there's plenty of room for more than to live long but now I need a fence cuz I heard the animals on Mars could be incensed so I'll need the perimeter the distance around my whole yard how did you get it you just add up the lengths of the sides nine plus eight plus eight plus nine is a perimeter of thirty-four feet you know yeah that's regular units and night units squared so let's take a look from another to get the perimeter of a square rectangle you add two widths plus two lengths here's a formula don't forget to say thanks times length plus two times width to get a square rectangles perimeter great so let's try it with my Martian backyard come on get ready y'all it's not that hard two times the length of nine is 18 and two times the width of eight and 16 and 16 plus 18 is 34 now if I could stop Marvin from making a dirty floor!

Area and Perimeter Day 1 (May 11)

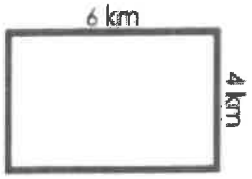
* Required

1. Email address *

http://youtube.com/watch?v=rSVMrPu0_U

2. Find the area * 1 point

a.



Mark only one oval.

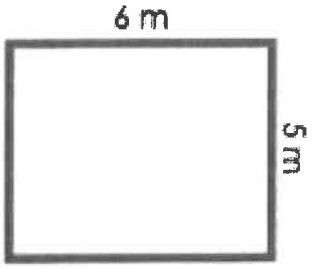
- 10 sq km
- 20 sq km
- 24 sq km
- 12sq km

3. Find the perimeter * 1 point

Mark only one oval.

- 9 cm
- 18 sq cm
- 36 sq cm
- 18 cm

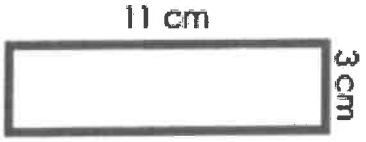
4. Find the Area * 1 point



Mark only one oval.

- 30 sq m
- 11 m
- 22 sq m
- 30 m

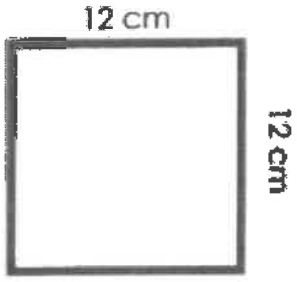
5. Find the Area * 1 point



Mark only one oval.

- 14 sq cm
- 33 cm
- 33 sq cm
- 28 sq cm

6. Find the Perimeter * 1 point



Mark only one oval.

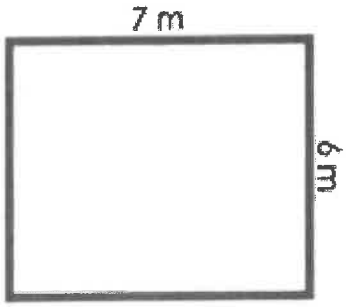
- 24 sq cm
- 144 sq cm
- 48 cm
- 24 cm

7. Find the Area * 1 point

Mark only one oval.

- 21 sq m
- 42 m
- 108 sq m
- 108 m

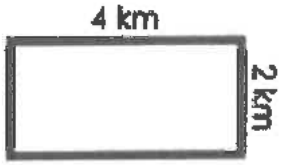
8. Find the Area * 1 point



Mark only one oval.

- 42 m
- 13 sq m
- 42 sq m
- 26 m

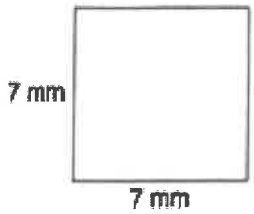
9. Find the Perimeter * 1 point



Mark only one oval.

- 8 km
- 12 km
- 6 sq km
- 8 sq km

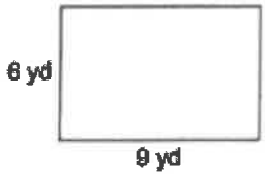
10. Find the Area * 1 point



Mark only one oval.

- 14 mm
- 28 mm
- 28 sq mm
- 49 sq mm

11. Find the AREA AND THE PERIMETER * 1 point



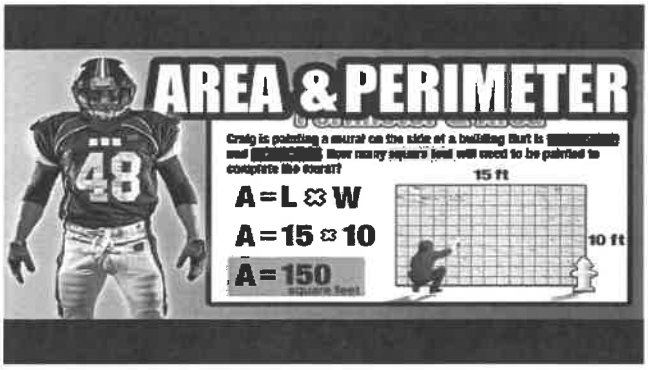
Mark only one oval.

- A= 54 yd / P=30 yd
- A= 54 sq yd / P=30 yd
- A= 15 sq yd / P= 54 yd
- A= 54 yd / P= 15 yd

Area/Perimeter Day 2 (May 12)

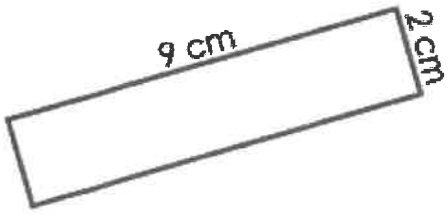
* Required

1. Email address *



http://youtube.com/watch?v=gNqml0f16QI

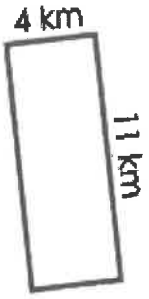
2. Find the Area * 1 point



Mark only one oval.

- 11 cm
- 18 sq cm
- 22 cm
- 7 sq cm

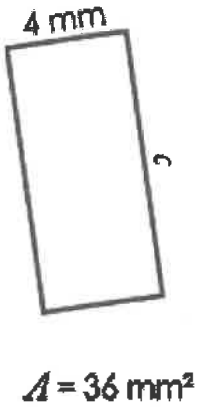
3. Find the Area * 1 point



Mark only one oval.

- 44 sq km
- 15 sq km
- 30 sq cm
- 15 km

4. Find the missing side length * 1 point

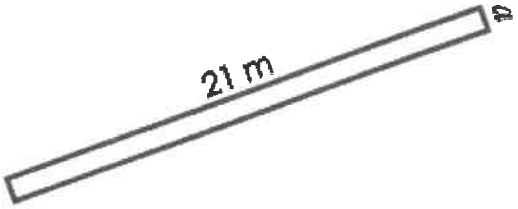


$A = 36\ mm^2$

Mark only one oval.

- 32 sq mm
- 40 sq mm
- 9 sq mm
- 9 mm

5. Find the missing side length * 1 point

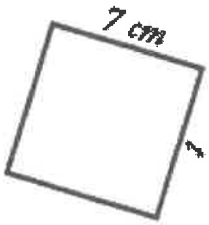


$A = 21\ m^2$

Mark only one oval.

- 1 m
- 1 sq m

6. Find the missing side length * 1 point

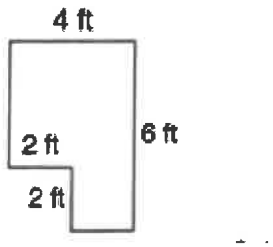


$A = 49\ cm^2$

Mark only one oval.

- 42 cm
- 7cm
- 7 Sq cm
- 14 cm

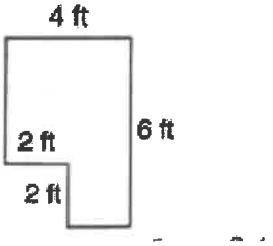
7. Find the Perimeter * 1 point



Mark only one oval.

- 14 ft
- 24 sq ft
- 20 sq ft
- 20 ft

8. Find the Area * 1 point



Mark only one oval.

- 14 ft
- 24 sq ft
- 20 sq ft
- 20 ft

Google Forms

Area/Perimeter Irregular Shapes

okay so we are going to go a little more in-depth today on finding area of rectangles and we're going to start doing a little bit more complicated rectangles you guys already know how to find the area of a rectangle we know that that formula is length times width now you could also say this a different way it means the same thing but you could also say that you're doing base times height either way you say it you're still going to find the area of a rectangle either by doing length times width or by doing the base times the height so let's do it just a really simple example just a regular rectangle and we're going to find the area so we're going to say that this is 12 inches and this will be our base or our length and then over here for our height or our width we're going to have will say is six inches so much about centimeters okay so we know that define the area of the rectangle all's we're going to do is multiply those together so I could do 6 inches times 12 inches and I know already that 6 times 12 is 72 and then my unit is going to be square inches or inches squared because that's how we measure area it's measured in square units this was a very simple example very simple rectangle so what we're going to look at today is how to find the area of some more complicated rectangle okay take a look at this shape this is obviously not a regular rectangle this is what we would call an irregular rectangle you can see that it's kind of missing a piece over here it's not the same as a four-sided shape our rectangles or our squares but we do need to know how to find the area of these kinds of shapes because we're not always going to have rectangles or squares sometimes we'll have shapes like this and there's three steps to finding the area of a shape like this and the first one is to split the shape in two rectangles we might not have had one to begin with but we do want to find some regular rectangles or squares so look here I went ahead and inserted this line so that now I have one rectangle up here and then I have it I'm not sure yet whether this is a rectangle or a square down here so step one is to draw that line now if you'll notice I could have drawn another line I could have probably taken my line this way if I wanted and look notice here I again have two different rectangles it doesn't matter which way you draw your line as long as you draw it so that you have two rectangles or squares now I'm going to go back to my first line and then we're going to look at step two step two is to find the area of each rectangle now let's take a look we've got my line and look at this top rectangle that we see well we already know that the formula to find area is to do length times width or we could call it base times height so in this top rectangle what do I have as my base well my base would be this right

here or this line right here and I could tell that that's nine feet because if this top one is nine feet whoopsies well if this line is nine feet then this line is going to be nine feet my height or my width is four feet I can do 9 times 4 is 36 and I know that I'm going to measure that in square feet so the area of this top rectangle is 36 square feet now let's look at the bottom the bottom one is going to be a little bit more complicated I see that this is 6 feet so if this line is 6 feet while I know that this line has to be 6 feet I don't know the length of this side and this is telling me 10 feet however that 10 feet isn't just for this red part down this 10 feet is for the entire line well I don't have the entire line in this square or this rectangle I only have part of it so how can I figure out what just this part of the line is well look at this I know that over here I had four feet this is four feet on this rectangle this part right here is going to be four feet okay I know this is four feet and the whole line is ten feet I need to figure out what this part is well I can do 10-4 10-4 is six so this part of the line is going to end up being six feet I could put these two parts together four feet and six feet and get ten feet if this part is six this part is six now I can use the formula to find the area of that bottom rectangle I'm going to do my length times width or my base times height and do six feet times six feet is going to give me 36 and we measure this in square feet so now I've done step one I've split the shape into two different rectangles step two was to find the area of each rectangle step three is now to add the two areas together so I went ahead and did that over here I added my 36 I should have put square feet with my other 36 square feet and I got 72 square feet this says feet squared square feet feet square it's going to mean the same thing and those are the three steps to really solving the area of irregular rectangles okay let's look at another example I have this shape right here and I put my three steps over on this side just as a reminder to us so that we can see them so the first thing we need to do is to split these shapes and there's two different ways I see that I could split I see one that I could do right here which would give you one rectangle at the top and other at the bottom and I also see a way that I could split right here and have a big one to the right and a smaller one to the left remember it doesn't matter which way you split the rectangles as long as they become split so I am going to go ahead and split my rectangles this way so that I have a top rectangle and a bottom rectangle and so I've done step one I went ahead and split now step two is telling me that I need to find the area so let's look first at this bottom rectangle well I have my length or my base that's telling me it's seven I'm not using this three because the three

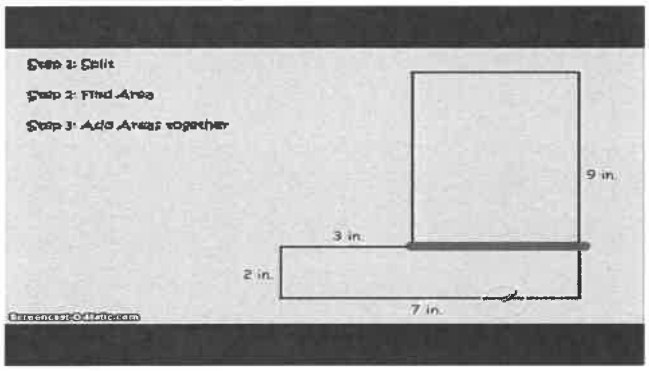
is only telling me from this point to this point it's not counting the line
that I added the three is only measuring the line that was already there so I'm
going to use the seven because that tells me the entire length of the
rectangle now my height or my width in this rectangle is 2 I'm going to
multiply those together 7 times 2 is 14 and I'm going to get inches square or
square inches now I also need to find the area of my
top rectangle now this one is going to be a little bit more difficult I know
that this height or this width is 9 and if this side is 9 I know this side is 9
but I need to know the length of this line or the length of this top line well
how can I figure that out I'm going to have to look to my bottom rectangle to
help me okay I know that the very bottom of this entire shape of 7 inches I know
that this little part is 3 inches what I need to know is this red part well if I
know the whole thing is 7 and this part is 3 and I need to figure out this part
I'm going to take the whole thing minus the part I know
and get the part that I don't know well I'm going to do 7 minus 3 7 minus 3 is 4
and then I can double check and make sure that what I did was correct if this
whole bottom line is 7 well this whole line is equal to it 3 plus 4 is 7
if this bottom is 4 I know that this top is going to be 4 inches and now I can go
ahead and find the area of this rectangle I'm going to do 9 times 4 is
36 and we know that we're measuring this in square inches or inches squared and
then the very last step to finding the area of this entire shape is to add the
area's together well 36 + 14 I can add 4 + 6 is 10 carry
my 1 3 + 1 is 4 plus 1 is 5 I know that the area of this shape is 50 square
inches okay so we're going to look at one more kind of shape now this is
obviously not even in the irregular rectangle we know that the first step
for irregular rectangles is to split up that shape into rectangles well there's
really no way that I could split up this shape in order for me to get rectangles
so what do we do if we have a shape like this and we need to figure out its area
well this is very simple what I like to do is to maybe get like a pen or a
pencil or even like a crayon that would something like that would work and the
first thing I'm going to do is I'm going to go through and I'm just going to
count how many whole squares that I see so I'm just art at the bottom or the top
or the right to the left and I just work my way across so I'll go ahead and start
at the bottom on this shape and I see that's one hole two holes if it's just a
little like this I think I would go ahead and count that as a hole 3 no 4 5
6 7 eight-nine that one I don't think I'm
gonna count as a whole no no no 10 11 12 13 14 15 16 17 18 I'm not going to count
that not going to count that 19 I'll count this one
20 21 22 23 24 25 26 27 28 I'm not going

to count that one 29 30 31 and now I have a couple of squares that I haven't quite marked off yet I'm at 31 total right now whoopsies
so right now I have 31 squares but I know that I'm probably going to end up with a few more I'm going to see which ones I can maybe try to combine as whole squares so if I look at this one right here and this one over here I might be able to say that's a whole square so I'm going to say 32 I think I'm going to add these and get 33 this one this one could make 34 this one
this one could probably make 35 this one and this one could make 36
and maybe then I could add these last two to get 37 now there's not an exact science to figuring out the area of shapes like this this is probably going to be your best method though to use some kind of pen or something and just kind of cross off squares as you go and to keep account always do the whole squares first figuring out how many holes there are and then at the end you want to kind of go back and maybe try to put pieces together now if you would have said there were 36 whole squid 30 Syria was 36 or the area was 38 you would have been correct because there's probably not exactly 37 you just want to make the best estimate that you can on a shape like this and the strategy that I just showed you is going to be the best one to get that estimate so hopefully you have learned a little bit about how to find the area of irregular rectangles and some strange shapes today and I will see you in class tomorrow

Area/Perimeter Day 3 (May 13)

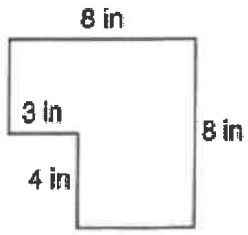
* Required

1. Email address *



http://youtube.com/watch?v=mmKJ_5Mv4Jo

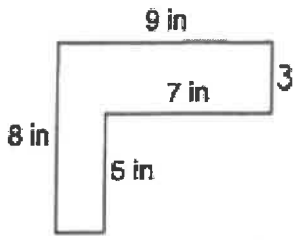
2. Find the Perimeter * 1 point



Mark only one oval.

- 52 in
- 52 sq in
- 32 sq in
- 32 in

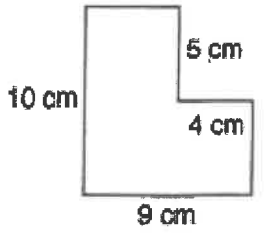
3. Find the Area * 1 point



Mark only one oval.

- 37 sq in
- 24 sq in
- 34 in
- 37 in

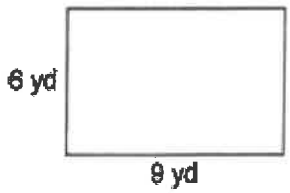
4. Find the Area * 1 point



Mark only one oval.

- 38 cm
- 38 sq cm
- 70 sq cn
- 28 cm

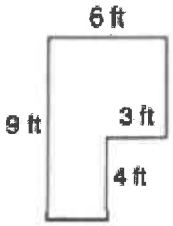
5. Find the Area * 1 point



Mark only one oval.

- 15 yd
- 3 sq yd
- 54 sq yd
- 30 yd

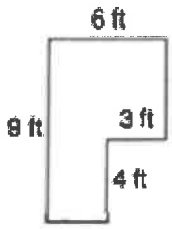
6. Find the Area * 1 point



Mark only one oval.

- 30 ft
- 42 sq ft
- 22 ft
- 54 sq ft

7. Find the Perimeter * 1 point



Mark only one oval.

- 42 ft
- 30 ft
- 21ft
- 42 sq ft

8. Find the Area * 1 point

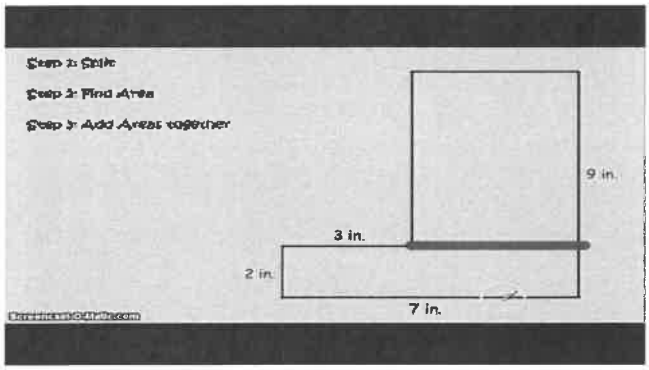
Mark only one oval.

- 26 mm
- 17 sq mm
- 36 sq mm
- 32 sq mm

Area/Perimeter Day 4 (May 14)

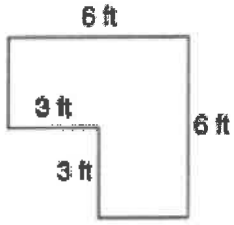
* Required

1. Email address *



http://youtube.com/watch?v=mmKJ_5Mv4Jo

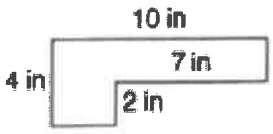
2. Find the Area * 1 point



Mark only one oval.

- 24 ft
- 27 sq ft
- 18 ft
- 36 sq ft

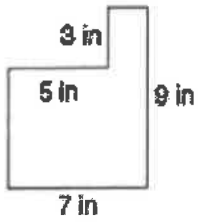
3. Find the Perimeter * 1 point



Mark only one oval.

- 26 sq in
- 23 in
- 40 sq in
- 28 in

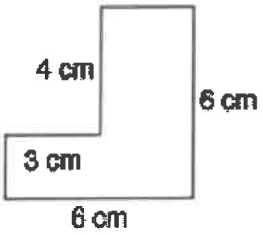
4. Find the Area * 1 point



Mark only one oval.

- 48 in
- 22 in
- 63 sq in
- 48 sq in

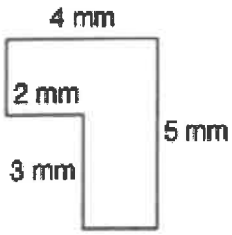
5. Find the Area * 1 point



Mark only one oval.

- 24 cm
- 24 sq cm
- 19 cm
- 36 sq cn

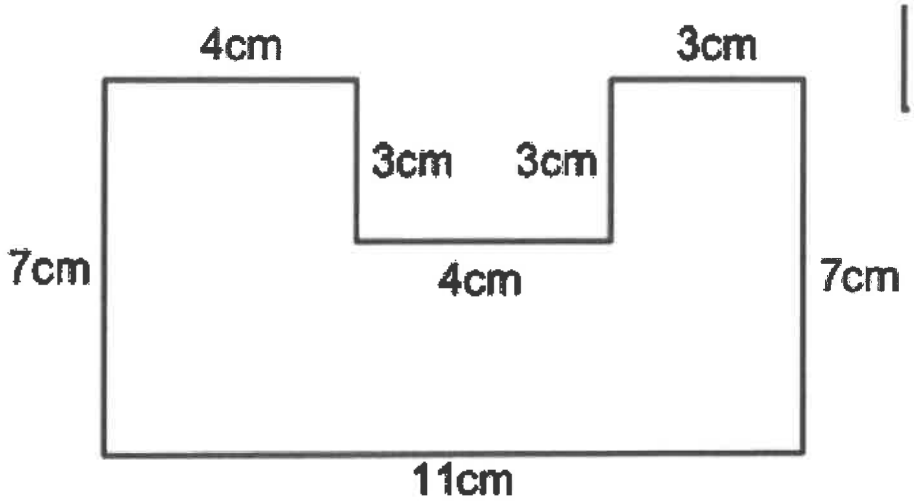
6. Find the Perimeter * 1 point



Mark only one oval.

- 14 sq mm
- 18 mm
- 14 mm
- 20 sq mm

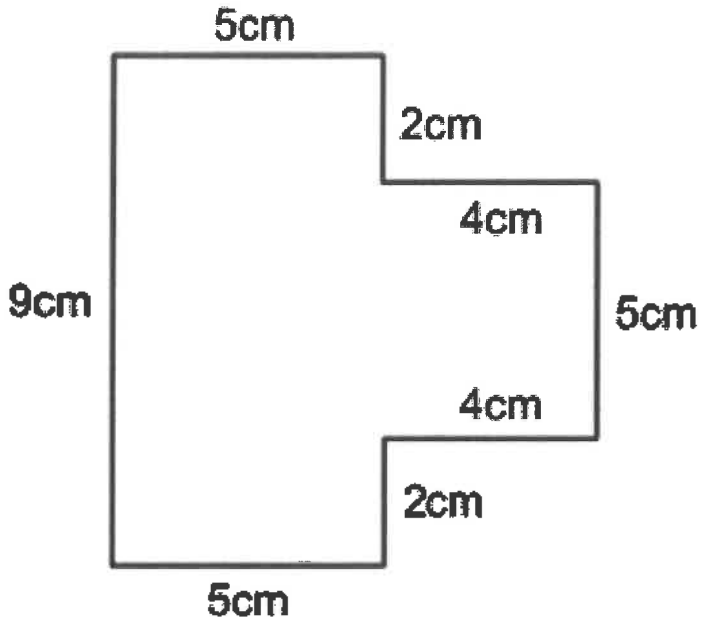
7. Find the Perimeter * 1 point



Mark only one oval.

- 77 sq cm
- 42 cm
- 32 cm
- 49 sq cm

8. Find the Area * 1 point



Mark only one oval.

- 36 cm
- 45 sq cm
- 65 cm
- 65 sq cm

Review Week 7 (May 15)

* Required

1. Email address *

2. 6,820 - 4,915= * 1 point

Mark only one oval.

- 1,905
- 1,935
- 1,915
- 9,110

3. 8,074 + 3,552= * 1 point

Mark only one oval.

- 11,626
- 11,526
- 12,626
- 12,826

4. 612 x 2= * 1 point

5. 738÷ 6= * 1 point

6. 5/9 + 2/9= * 1 point

Mark only one oval.

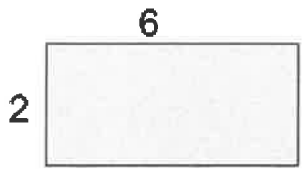
- 7/9
- 3/9
- 7/18
- 8/9

7. 4.4 + 1.7= * 1 point

Mark only one oval.

- 6.1
- 2.7
- 6.6
- 3.3

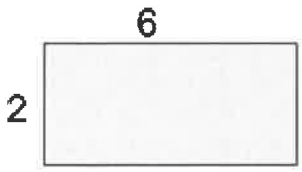
8. Find the Area 1 point



Mark only one oval.

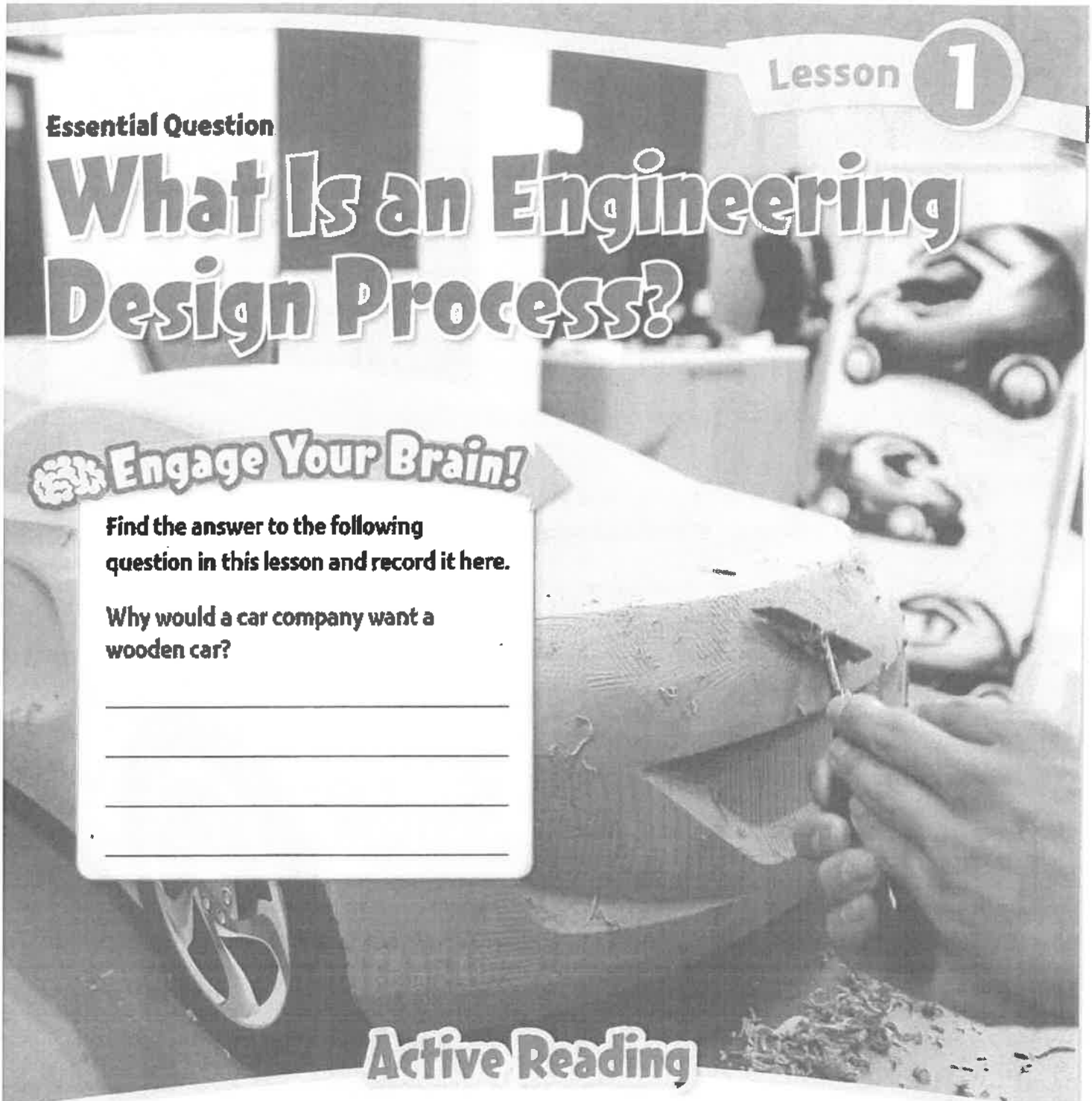
- 12 sq. Units
- 8 sq. units
- 16 sq. units
- 4 sq. units

9. Find the Perimeter 1 point



Mark only one oval.

- 12 Units
- 8 units
- 16 units
- 4 units



Lesson 1

Essential Question

What Is an Engineering Design Process?

Engage Your Brain!

Find the answer to the following question in this lesson and record it here.

Why would a car company want a wooden car?

_____

_____

_____

_____

Active Reading

Lesson Vocabulary

List the terms. As you learn about each one, make notes in the Interactive Glossary.

_____

_____

_____

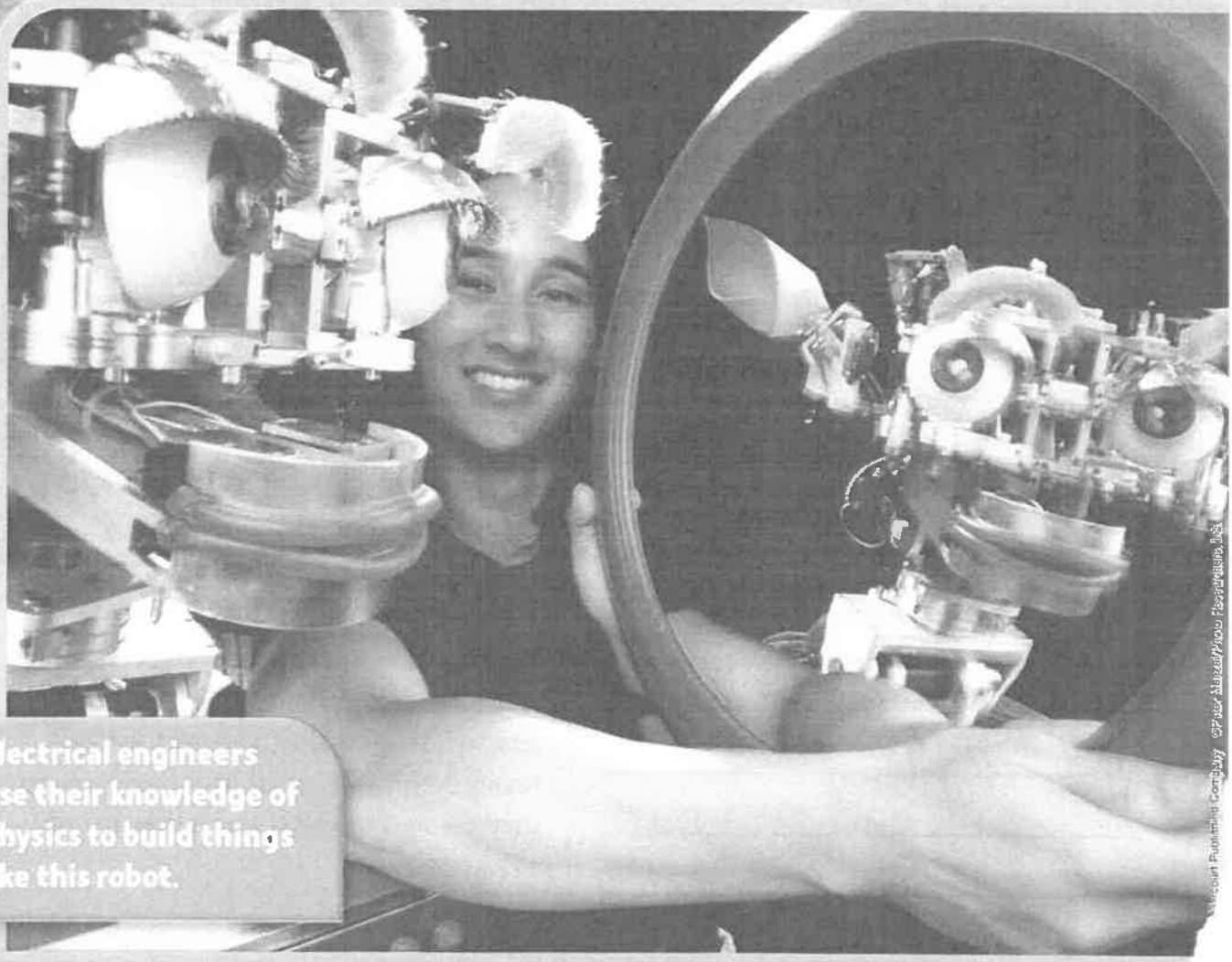
Signal Words: Sequence

Signal words show connections between ideas. Words that signal sequence include *now, before, after, first,* and *next*. Active readers remember what they read because they are alert to signal words that identify sequence.

What Is ENGINEERING?

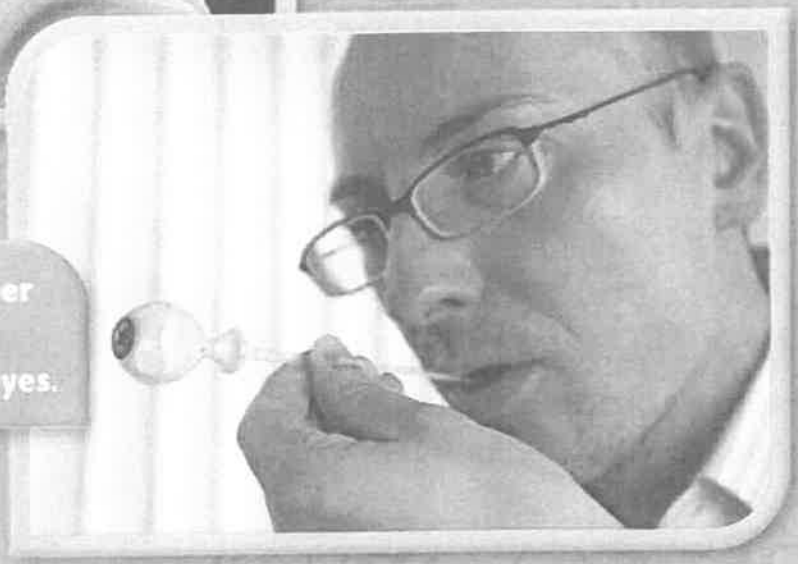
From the food we eat and the clothes we wear, to the cars we drive and the phones we talk on, science is at work in our lives every day.

Active Reading **As you read the next page, circle the main idea of the text, and put brackets [ ] around each detail sentence.**



Electrical engineers use their knowledge of physics to build things like this robot.

Knowledge of math and geology allows surveyors to make maps of Earth.



This biomedical engineer uses his knowledge of biology to make glass eyes.

Look around. Many of the things you see are products of engineering. **Engineering** is the use of scientific and mathematical principles to develop something practical. Some engineers use biology. Others use geology, chemistry, or physics.

Engineers use this knowledge to create something new. It might be a product, a system, or a process for doing things. Whatever it is, it's practical. People use it. Engineers develop things that people use.

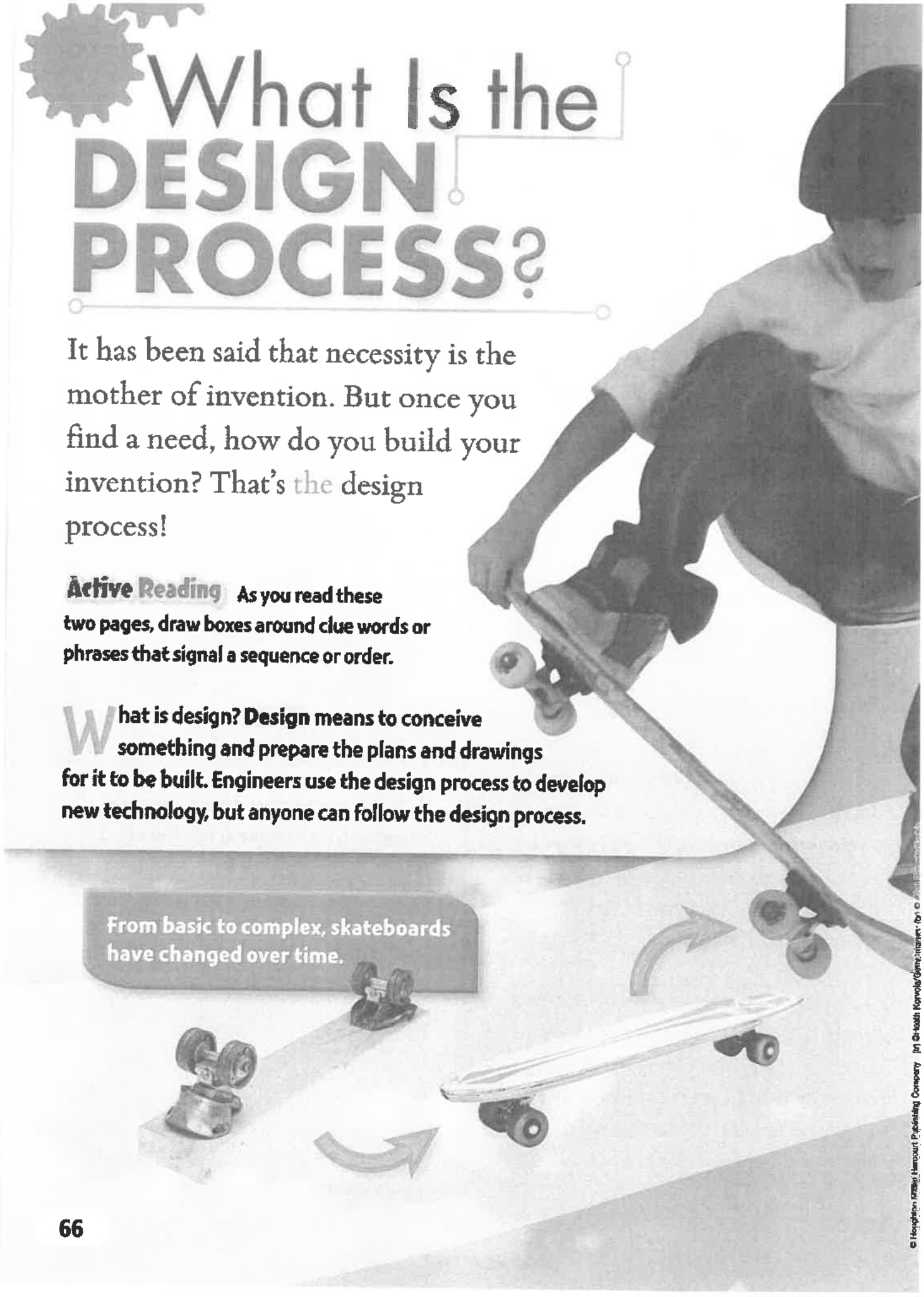
▶ In the space below, draw a picture of something you can see around you that was probably designed by an engineer.

What Is the DESIGN PROCESS?

It has been said that necessity is the mother of invention. But once you find a need, how do you build your invention? That's the design process!

Active Reading **As you read these two pages, draw boxes around clue words or phrases that signal a sequence or order.**

What is design? Design means to conceive something and prepare the plans and drawings for it to be built. Engineers use the design process to develop new technology, but anyone can follow the design process.



From basic to complex, skateboards have changed over time.

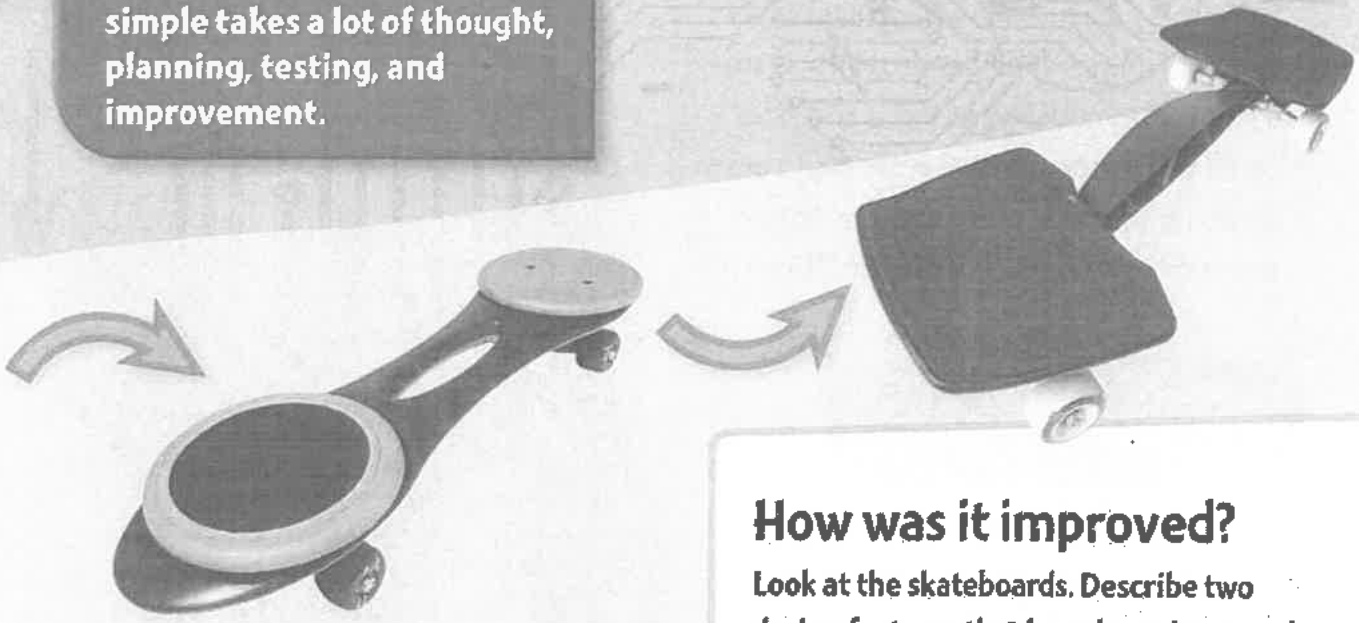
The design process starts with identifying a need or a problem. Next, you brainstorm and write down ideas on how to plan and build a potential solution. Once you have some options, select a solution to try. Usually, engineers test possible solutions using a prototype.

A **prototype** is an original or test model on which a real product is based. If the prototype works, then the real product is made. Usually, after testing a prototype, improvements have to be made. The prototype is then tested again. Finally, a finished product is made.

Design Process Steps

- **Find a problem**
- **Plan and build**
- **Test and improve**
- **Redesign**
- **Communicate**

Even something seemingly simple takes a lot of thought, planning, testing, and improvement.



How was it improved?

Look at the skateboards. Describe two design features that have been improved over time.

Design YOU CAN USE

Look around you at all the things you use every day. Do you have ideas about improving them?

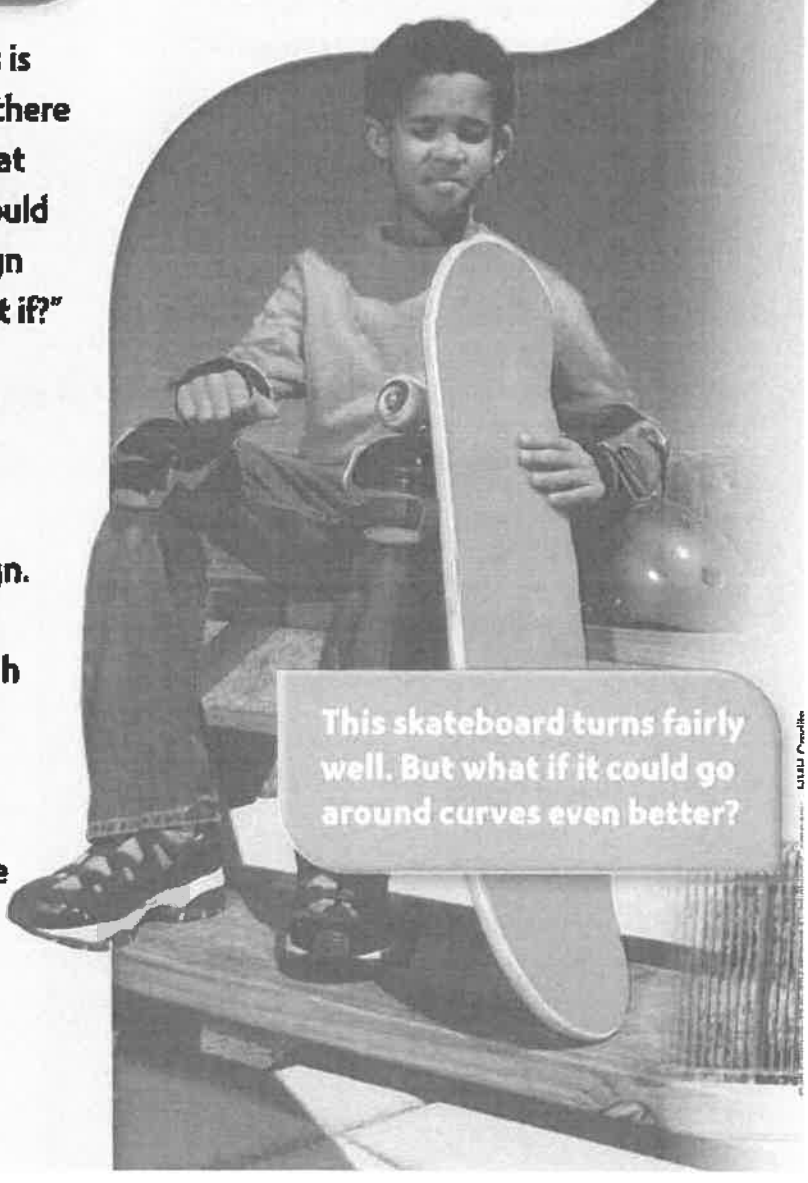
Active Reading **As you read these two pages, find and underline the meaning of the word *prototype*.**

Who Needs It?

The first step in any design process is identifying a need or problem. Is there a chore that could be easier, a tool that could work much better, a car that could go faster or be safer? Often, the design process begins with the phrase "What if?"

Prototype!

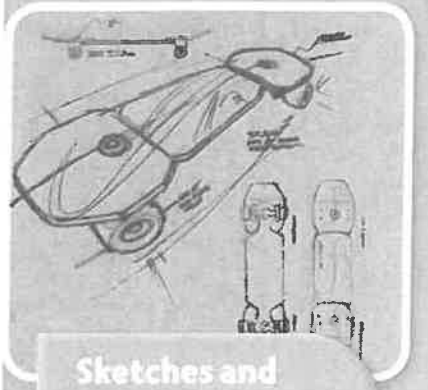
A prototype is a test version of a design. To build a prototype, a person has to have plans. Early sketches give a rough idea. More detailed drawings provide exact measurements for every piece. Keeping good records and drawings helps to make sure that the prototype can be replicated.



This skateboard turns fairly well. But what if it could go around curves even better?

Details

Draw a blueprint of a school supply, favorite toy, or tool. Label its parts and include exact measurements.



Sketches and detailed drawings are an important step in planning a product.

wheel

trucks

deck

Every part of a product can become an opportunity for a design change.

Are We DONE YET?

Now that the prototype has been built, can the final product be far behind? Yes, it can. But it might not be. It all depends.

Active Reading **As you read these two pages, draw a box around the clue word or phrase that signals one thing is being contrasted with another.**

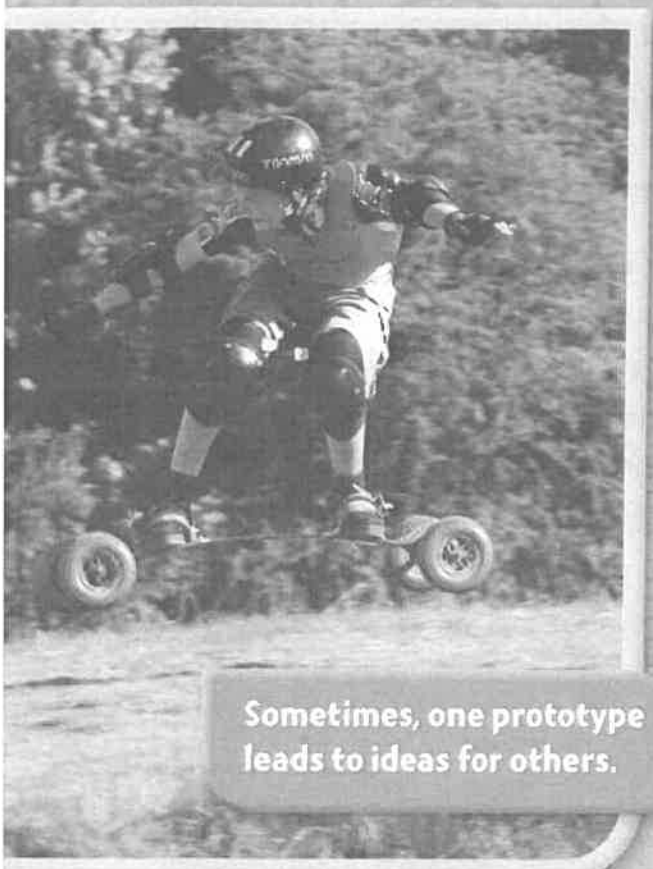
Test It and Improve It!

Prototypes are carefully tested. This testing helps answer questions such as, ***Does it work the way it should? Is it easy to use? How does it hold up under normal working conditions?***

The first prototype you build may pass all its tests. If so, the prototype can go into production. However, it is more likely that testing shows that the design needs to change. Once the test results are analyzed, it's back to the drawing board. The product may need only a few minor improvements, or it may need to be completely redesigned.

If a prototype works as expected, it will become a finished product.

Redesign and Share



Sometimes, one prototype leads to ideas for others.

When a prototype fails to meet a design goal, it may be redesigned. Redesign takes advantage of all work done before. Good design features are kept, and those that fail are discarded.

When the final working prototype is done, team members communicate the design. Sketches, blueprints, and test data and analysis are shared. Often, the product details are recorded in a legal document called a *patent*.

Spin Off!

Imagine a normal bicycle. Now think of three ways it could be modified to work better in different environments.

New ideas keep the engineering design process constantly moving forward.

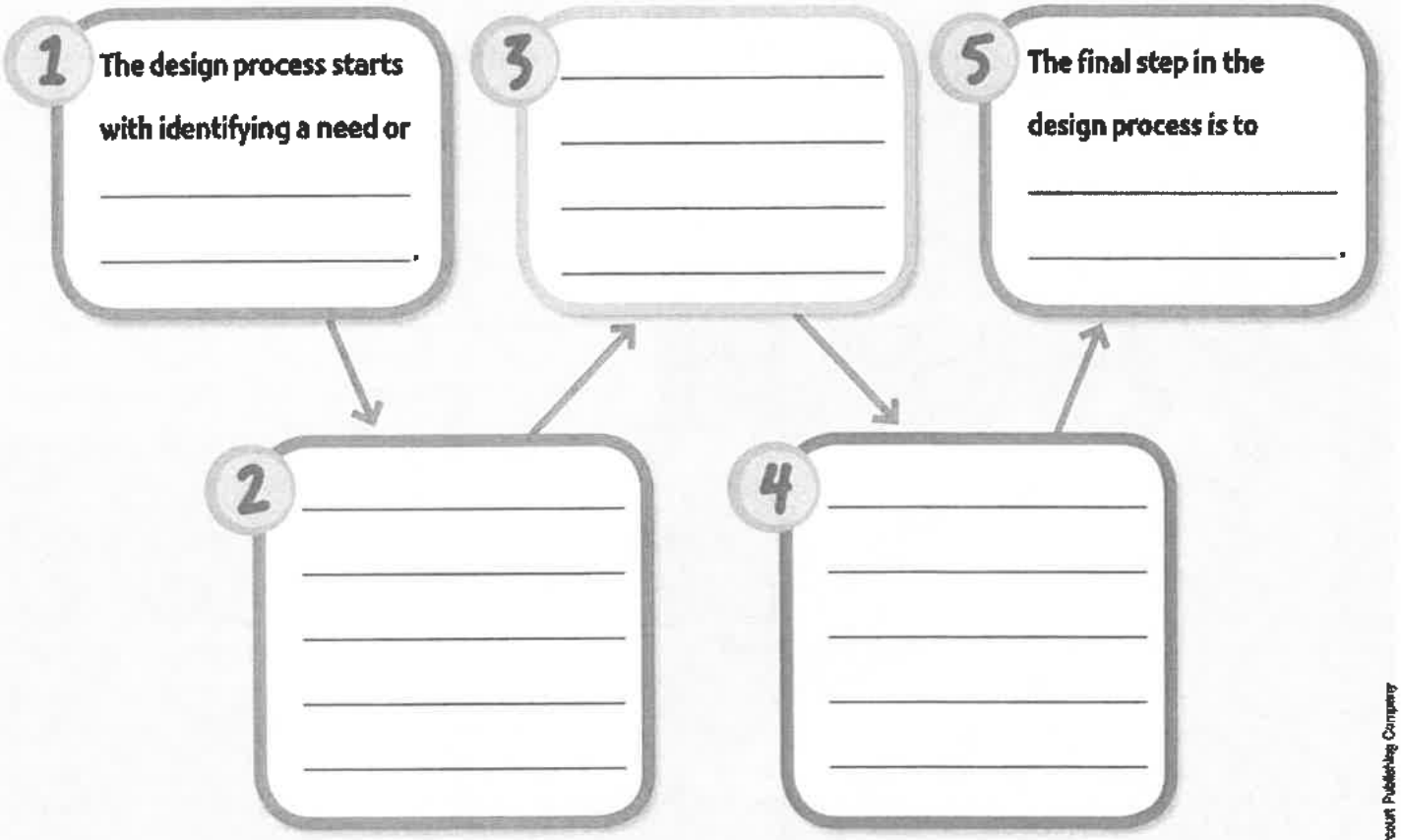
Sum It Up!

When you're done, use the answer key to check and revise your work.

Use information in the summary to complete the graphic organizer.

Summarize

The first step in the design process is to identify a need or a problem to be solved. The next step is to plan and build a prototype. Brainstorming ideas and drawing detailed sketches of potential solutions are important parts of this step. The third step is to test and improve a prototype. After testing, a prototype might need to be redesigned and tested again. A prototype that meets all its design goals is ready for production. The final step in the design process is to communicate to others the details of a working prototype.



Answer Key: 1. problem to be solved 2. The second step in the design process is to plan and build a prototype. 3. The third step is to test and improve the prototype. 4. After testing, a prototype might need to be redesigned and tested again. 5. communicate

Brain Check

Lesson 1

Name _____

Word Play

1 Use the clues to help you write the correct word in each row. Some boxes have been filled in for you.

A. To conceive something and prepare plans to build it

B. The use of scientific and mathematical principles to develop something practical

C. A prototype may undergo many rounds of this.

D. Engineers have to be familiar with these principles.

E. The answer to a problem

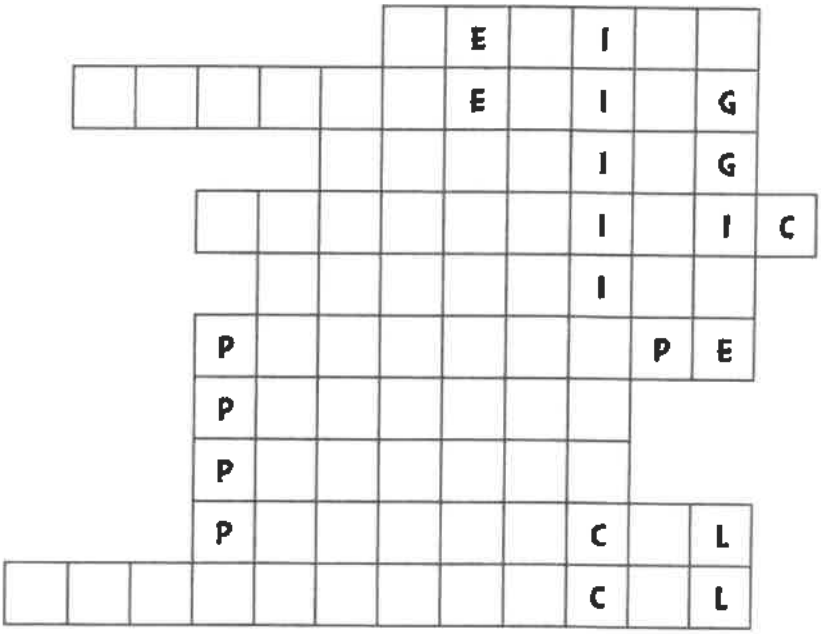
F. A test version of something

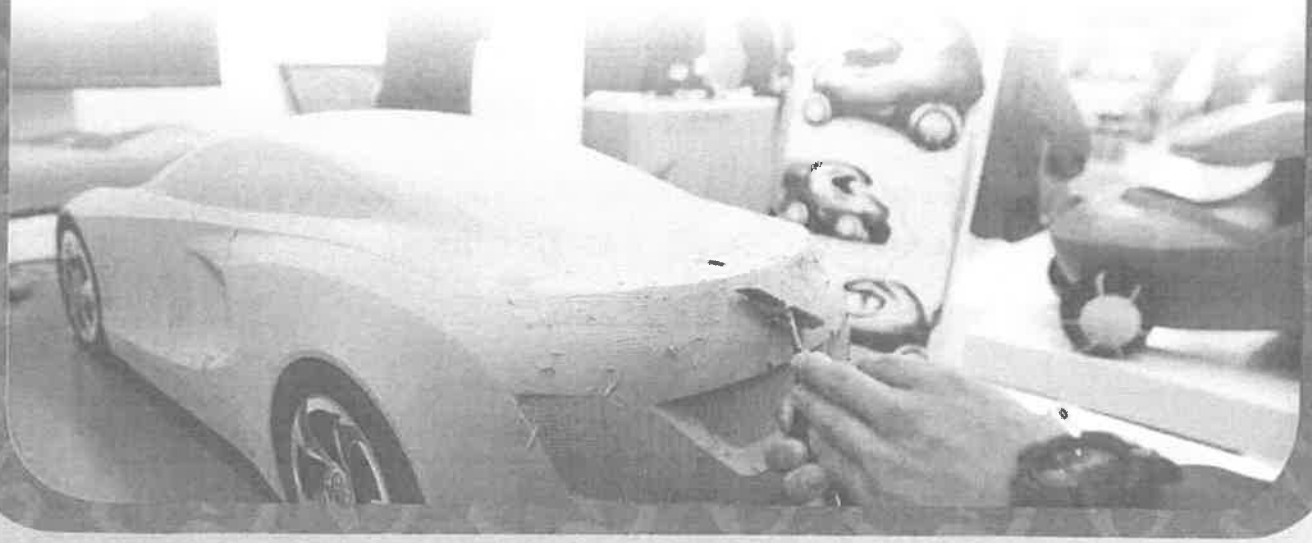
G. Is identified during the first step in the design process

H. What comes after sketches, plans, and the prototype?

I. Something that people will use is described as this.

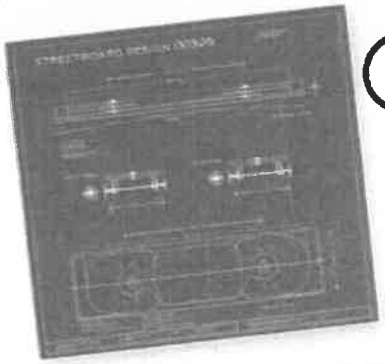
J. Engineers have to be familiar with these principles.

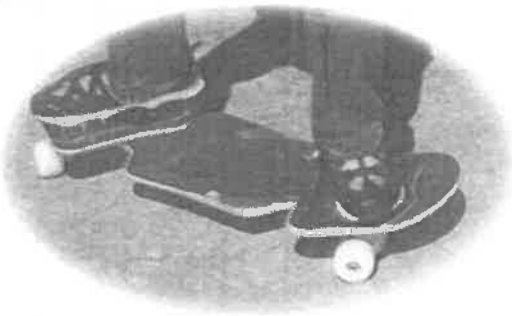


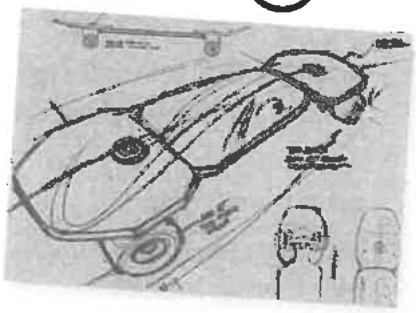


Apply Concepts

2 Write numbers in the circles to put the pictures in the correct order.







3 How is a prototype different from the finished product?

_____

_____

_____

_____

_____

4 Why is it better to build and test a prototype of a product than to produce tens of thousands of the product and then test it?

_____

_____

_____

Name _____

5 **The owner of a safety apparel company asks an engineer to "design a better helmet for skateboarders." How would you improve this instruction?**

6 **Which job is more likely to be done by an engineer? Why?**

Developing a new material that will be used to make the outer covering of vitamin capsules	**Determining how vitamins are absorbed into the bloodstream**

7 The engineers at an appliance company have developed a new dishwasher. It looks very different from previous models. The controls look different and work differently. The part of the machine that heats the water has been completely redesigned. Now that the plans are completed, should the company start producing thousands of these dishwashers? Why or why not?

With your family, find a product in your home that needs improving. Suppose you work for the company that makes this product and brainstorm a new prototype to test.

4th Grade Distance Learning

Week 8

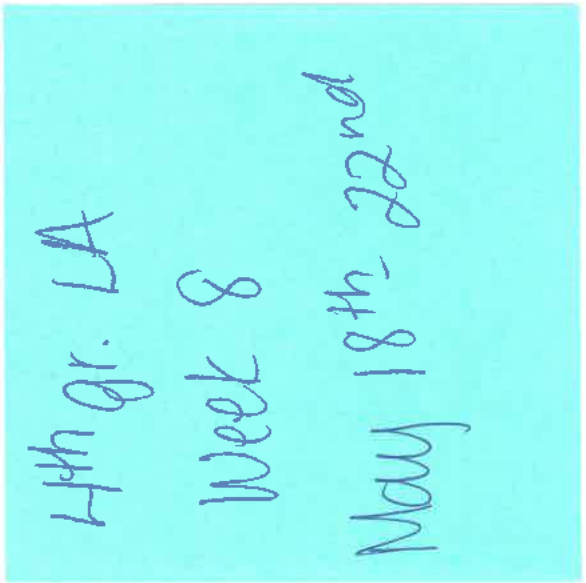
(May 18th-22nd)

Name:

Teacher:

Book Report Instructions

For this assignment, you may choose any chapter book that you have read over the last 8 weeks. Complete the following slides. Remember to write in complete sentences with capitalization and punctuation.



Book Title:

Name:

About

Title:

Author:

Summary

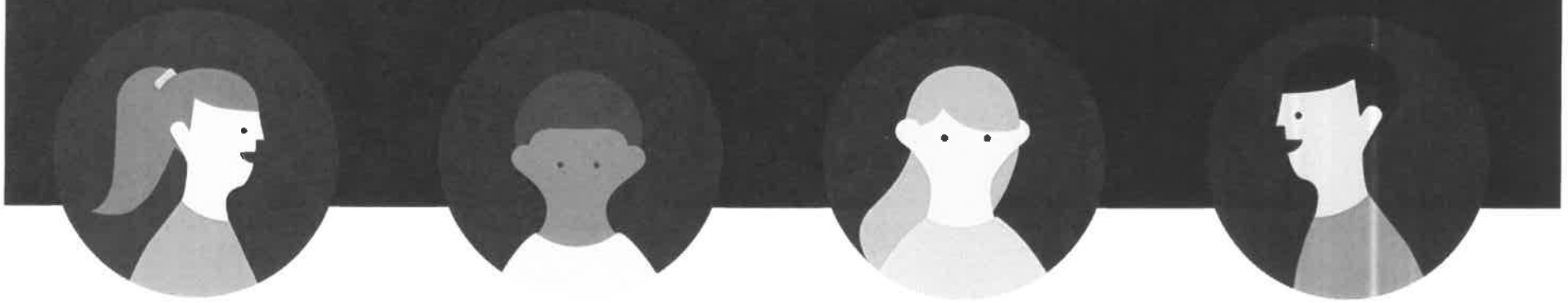
Setting

Where did it happen?

How about when??

Main Characters

If there are fewer than 4 characters, only include the characters in the story.



Character 1:

Character 2:

Character 3:

Character 4:

Conflict

Solution

What's the book's main message?

Review

Would you recommend this book? Write your review here.

Multiplying By 3 (A)

Find each product.

3 × 1	3 × 10	3 × 6	2 × 3	4 × 3	8 × 3	3 × 9	5 × 3	7 × 3	3 × 3
3 × 4	3 × 10	3 × 3	8 × 3	3 × 9	5 × 3	3 × 6	3 × 2	3 × 1	3 × 7
3 × 10	3 × 1	8 × 3	6 × 3	3 × 4	3 × 5	3 × 2	9 × 3	3 × 7	3 × 3
3 × 1	3 × 8	10 × 3	3 × 3	4 × 3	3 × 6	7 × 3	9 × 3	3 × 5	3 × 2
2 × 3	3 × 10	5 × 3	3 × 3	8 × 3	3 × 4	9 × 3	6 × 3	7 × 3	3 × 1
9 × 3	3 × 1	3 × 10	3 × 4	3 × 8	3 × 2	3 × 3	3 × 7	6 × 3	5 × 3
3 × 2	3 × 10	3 × 7	3 × 5	3 × 6	3 × 1	3 × 8	3 × 3	4 × 3	9 × 3
3 × 5	3 × 4	3 × 10	3 × 6	3 × 3	3 × 8	9 × 3	7 × 3	1 × 3	2 × 3
3 × 3	9 × 3	3 × 5	2 × 3	6 × 3	3 × 1	8 × 3	4 × 3	7 × 3	10 × 3
3 × 3	9 × 3	10 × 3	3 × 5	3 × 2	3 × 8	3 × 1	3 × 7	4 × 3	3 × 6

Multiplying By 4 (A)

Find each product.

1 × 4	8 × 4	4 × 10	9 × 4	4 × 4	4 × 5	4 × 7	6 × 4	3 × 4	2 × 4
9 × 4	8 × 4	4 × 7	4 × 5	4 × 2	4 × 6	4 × 10	4 × 4	3 × 4	1 × 4
4 × 1	4 × 2	5 × 4	6 × 4	4 × 4	4 × 7	10 × 4	4 × 9	8 × 4	3 × 4
4 × 9	4 × 5	4 × 10	4 × 2	1 × 4	4 × 3	8 × 4	4 × 4	7 × 4	4 × 6
4 × 10	4 × 7	9 × 4	4 × 8	4 × 6	4 × 4	3 × 4	2 × 4	1 × 4	5 × 4
4 × 10	7 × 4	2 × 4	6 × 4	3 × 4	8 × 4	4 × 4	4 × 9	4 × 5	4 × 1
7 × 4	4 × 10	6 × 4	4 × 1	4 × 4	5 × 4	4 × 3	8 × 4	4 × 2	4 × 9
4 × 4	1 × 4	2 × 4	4 × 8	4 × 6	4 × 3	4 × 10	5 × 4	9 × 4	7 × 4
2 × 4	6 × 4	4 × 4	4 × 7	4 × 10	5 × 4	4 × 8	4 × 9	1 × 4	4 × 3
4 × 3	4 × 2	5 × 4	4 × 4	6 × 4	4 × 8	4 × 9	4 × 7	4 × 10	1 × 4

Multiplying By 6 (A)

Find each product.

6 × 1	4 × 6	5 × 6	6 × 6	3 × 6	10 × 6	2 × 6	6 × 8	9 × 6	6 × 7
6 × 7	6 × 8	6 × 5	6 × 10	6 × 2	1 × 6	3 × 6	6 × 6	6 × 4	9 × 6
4 × 6	6 × 6	3 × 6	6 × 2	7 × 6	8 × 6	6 × 1	10 × 6	9 × 6	6 × 5
1 × 6	8 × 6	4 × 6	6 × 10	6 × 6	2 × 6	5 × 6	7 × 6	3 × 6	6 × 9
5 × 6	3 × 6	6 × 6	8 × 6	10 × 6	6 × 1	7 × 6	4 × 6	2 × 6	6 × 9
2 × 6	6 × 5	6 × 9	1 × 6	6 × 7	3 × 6	6 × 8	6 × 4	10 × 6	6 × 6
4 × 6	6 × 2	8 × 6	3 × 6	7 × 6	9 × 6	6 × 1	5 × 6	10 × 6	6 × 6
6 × 2	6 × 3	6 × 7	6 × 4	5 × 6	1 × 6	6 × 10	6 × 8	6 × 9	6 × 6
6 × 9	6 × 7	10 × 6	6 × 2	6 × 4	6 × 1	6 × 8	5 × 6	6 × 6	6 × 3
1 × 6	6 × 3	6 × 8	7 × 6	9 × 6	2 × 6	10 × 6	6 × 5	6 × 6	6 × 4

Five Minute Multiplying Frenzy (C)

Name: _____ Date: _____

Multiply each row number by each column number.
(Range 5 to 15)

×	9	11	6	7	14	13	12	5	10	8
9										
6										
8										
15										
11										
5										
14										
13										
10										
7										

Time: _____ Score: _____ /100

Multiplying by Nine (9) (A)

Name: _____ Date: _____ Score: ____ /100

Calculate each product.

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

Geometry: Angles, Shapes, Transformations Wk 8 Day 1 (May 18)

* Required

1. Email address *

2. Classify the angles as acute, obtuse or right. * 1 point

3. Classify the angles as acute, obtuse or right. * 1 point

6. Classify the angles as acute, obtuse or right. * 1 point

Mark only one oval.

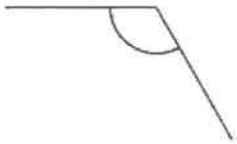
- acute
- right
- reflex
- obtuse

7. Classify the angles as acute, obtuse or right. * 1 point

Mark only one oval.

- obtuse
- right
- acute
- straight

8. Classify the angles as acute, obtuse or right. * 1 point



Mark only one oval.

- right
- obtuse
- reflex
- acute

9. Classify the angles as acute, obtuse or right. * 1 point

Mark only one oval.

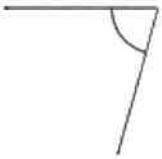
- right
- obtuse
- reflex
- acute

10. Classify the angles as acute, obtuse or right. * 1 point

Mark only one oval.

- ◯ obtuse
- ◯ acute
- ◯ right
- ◯ straight

11. Classify the angles as acute, obtuse or right. * 1 point



Mark only one oval.

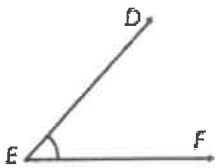
- ◯ right
- ◯ obtuse
- ◯ reflex
- ◯ acute

Geometry: Angles, Shapes, Transformations Wk 8 Day 2

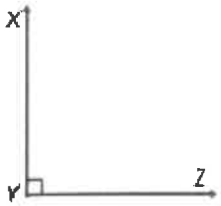
* Required

1. Email address *

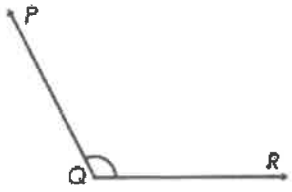
How to identify triangles by their sides



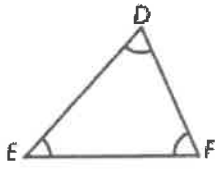
An **acute angle** is less than 90°



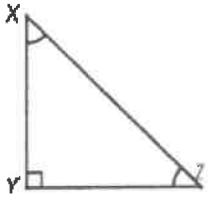
A **right angle** is exactly 90°



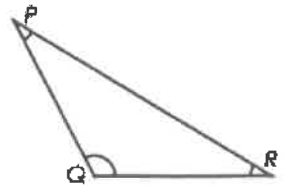
An **obtuse angle** is greater than 90°



An **acute triangle** has 3 acute angles.



A **right triangle** has 1 right angle and 2 acute angles.



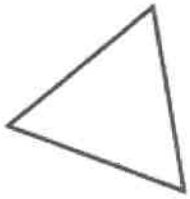
An **obtuse triangle** has 1 obtuse angle and 2 acute angles.

2. Identify each type of triangle as acute, right or obtuse * 1 point

Mark only one oval.

- acute
- right
- obtuse

3. Identify each type of triangle as acute, right or obtuse * 1 point



Mark only one oval.

- acute
- right
- obtuse

4. Identify each type of triangle as acute, right or obtuse * 1 point

Mark only one oval.

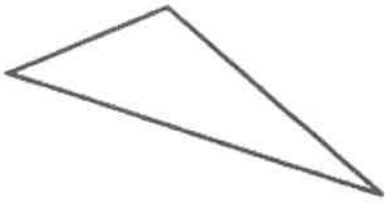
- acute
- right
- obtuse
- Option 3

5. Identify each type of triangle as acute, right or obtuse * 1 point

Mark only one oval.

- acute
- right
- obtuse

6. Identify each type of triangle as acute, right or obtuse * 1 point



Mark only one oval.

- ◯ acute
- ◯ right
- ◯ obtuse

7. Identify each type of triangle as acute, right or obtuse * 1 point

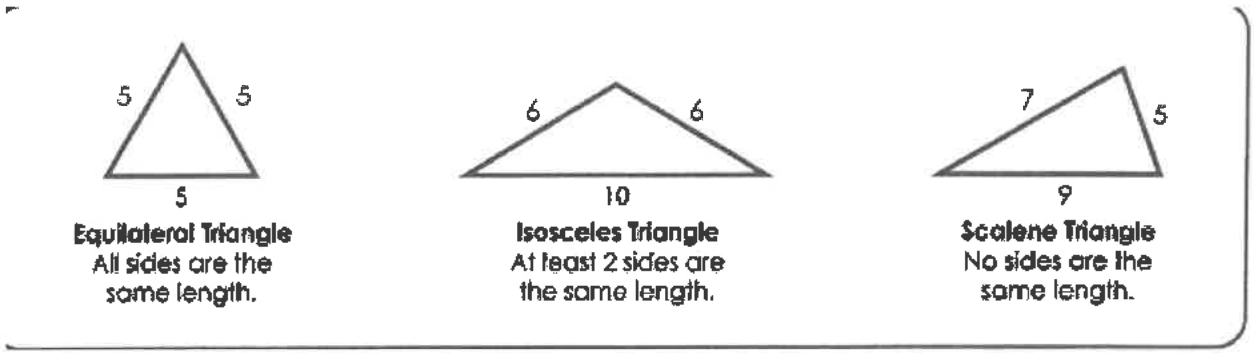
Mark only one oval.

- ◯ acute
- ◯ right
- ◯ obtuse

Geometry: Angles, Shapes, Transformations Wk 8 Day 3 (May 20)

* Required

1. Email address *



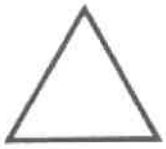
2. Name each triangle by the lengths of its sides * 0 points

3 in., 5 in., 3 in.

Mark only one oval.

- equilateral
- isosceles
- scalene

3. Name the triangle by its side lengths * 1 point



Mark only one oval.

- isoscles
- scalene
- equilateral

4. Name the triangle by its side lengths * 1 point

Mark only one oval.

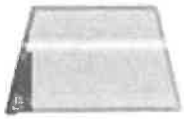
- isosceles
- scalene
- equilateral

6. Select the BEST name for the quadrilateral * 1 point

Mark only one oval.

- ◯ trapezoid
- ◯ rhombus
- ◯ square
- ◯ circle

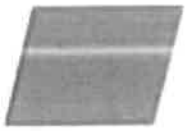
7. Select the BEST name for the quadrilateral * 1 point



Mark only one oval.

- ◯ square
- ◯ parallelogram
- ◯ trapezoid
- ◯ kite

8. Select the BEST name for the quadrilateral * 1 point



Mark only one oval.

- rhombus
- parallelogram
- kite
- rectangle

9. Select the BEST name for the quadrilateral * 1 point

Mark only one oval.

- square
- kite
- trapezoid
- parallelogram

10. Select the BEST name for the quadrilateral * 1 point

Mark only one oval.

- kite
- rhombus
- square
- triangle

11. Select the BEST name for the quadrilateral * 1 point

Mark only one oval.

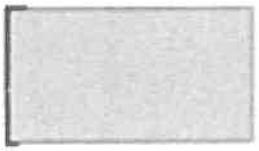
- rhombus
- square
- parallelogram
- kite

12. Select the BEST name for the quadrilateral * 1 point

Mark only one oval.

- rectangle
- parallelogram
- Option 3
- rhombus

13. Select the BEST name for the quadrilateral * 1 point



Mark only one oval.

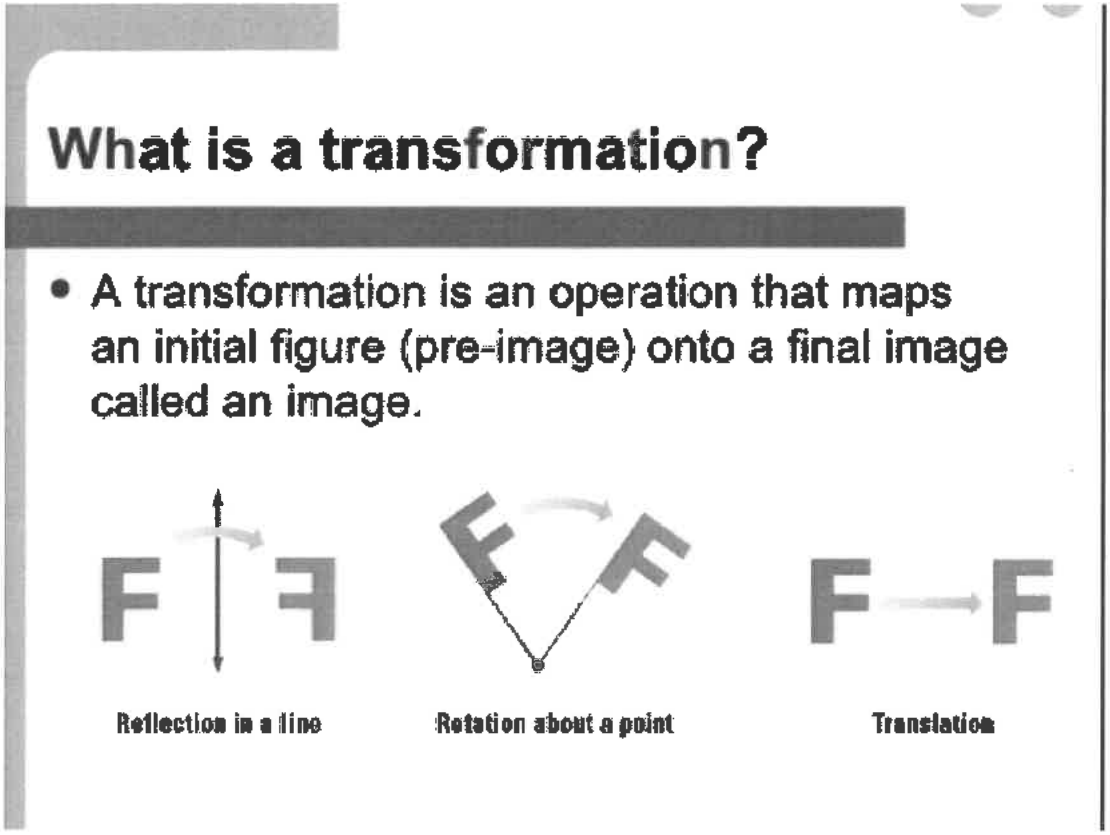
- square
- trapezoid
- parallelogram
- rectangle

Geometry: Angles, Shapes, Transformations Wk8 Day 4

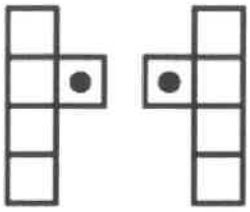
* Required

1. Email address *

Identifying how a shape moves...Transformations



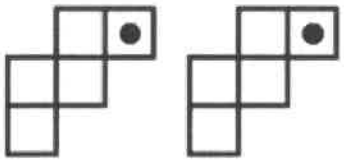
2. Tell how each figure was moved. Write translation (slide), rotation (turn), or reflection (flip) * 1 point



Mark only one oval.

- translation - slide
- rotation - turn
- reflection - flip

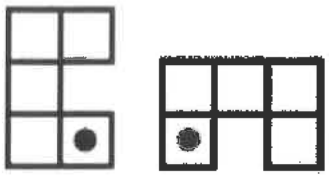
3. Tell how each figure was moved. Write translation (slide), rotation (turn), or reflection (flip) * 1 point



Mark only one oval.

- translation - slide
- rotation - turn
- reflection - flip

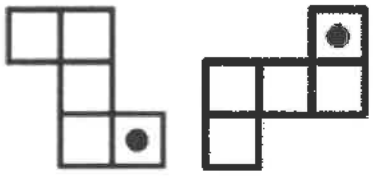
4. Tell how each figure was moved. Write translation (slide), rotation (turn), or reflection (flip) * 1 point



Mark only one oval.

- translation - slide
- rotation - turn
- reflection - flip

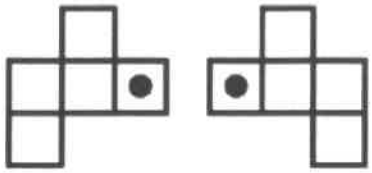
5. Tell how each figure was moved. Write translation (slide), rotation (turn), or reflection (flip) * 1 point



Mark only one oval.

- translation - slide
- rotation - turn
- reflection - flip

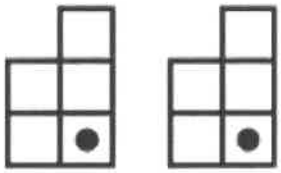
6. Tell how each figure was moved. Write translation (slide), rotation (turn), or reflection (flip) * 1 point



Mark only one oval.

- translation - slide
- rotation - turn
- reflection - flip

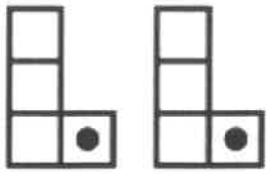
7. Tell how each figure was moved. Write translation (slide), rotation (turn), or reflection (flip) * 1 point



Mark only one oval.

- translation - slide
- rotations - turn
- reflection - flip

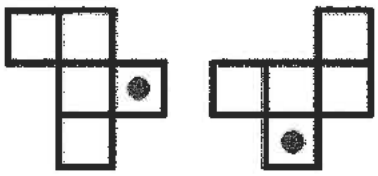
8. Tell how each figure was moved. Write translation (slide), rotation (turn), or reflection (flip) * 1 point



Mark only one oval.

- ◯ translation - slide
- ◯ rotation - turn
- ◯ reflection - flip

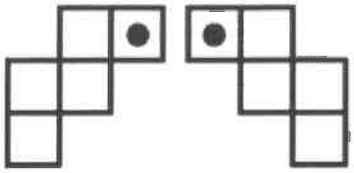
9. Tell how each figure was moved. Write translation (slide), rotation (turn), or reflection (flip) * 1 point



Mark only one oval.

- ◯ translation - slide
- ◯ rotation - turn
- ◯ reflection - flip

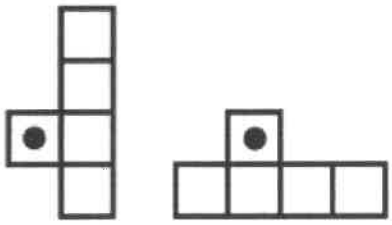
10. Tell how each figure was moved. Write translation (slide), rotation (turn), or reflection (flip) * 1 point



Mark only one oval.

- translation -slide
- rotation - turn
- reflection - flip

11. Tell how each figure was moved. Write translation (slide), rotation (turn), or reflection (flip) * 1 point



Mark only one oval.

- translation - slide
- rotation - turn
- reflection - flip

Review Week 8 (May 22)

* Required

1. Email address *

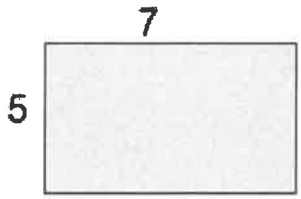
2. 853 x 6= * 1 point

3. 145 ÷ 5= * 1 point

4. 10/12 = ?/12 + 3/12 * 1 point

5. 8.3 - 6.1= * 1 point

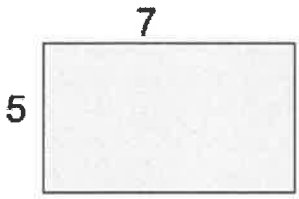
6. Find the Area 1 point



Mark only one oval.

- 35 sq. Units
- 12 sq. units
- 24 sq. units
- 20 sq. units

7. Find the Perimeter 1 point

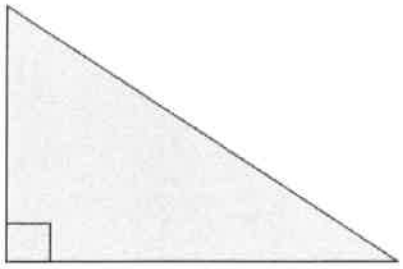


Mark only one oval.

- 35 Units
- 12 units
- 24 units
- 20 units

8. Name this Geometric Shape

0 points



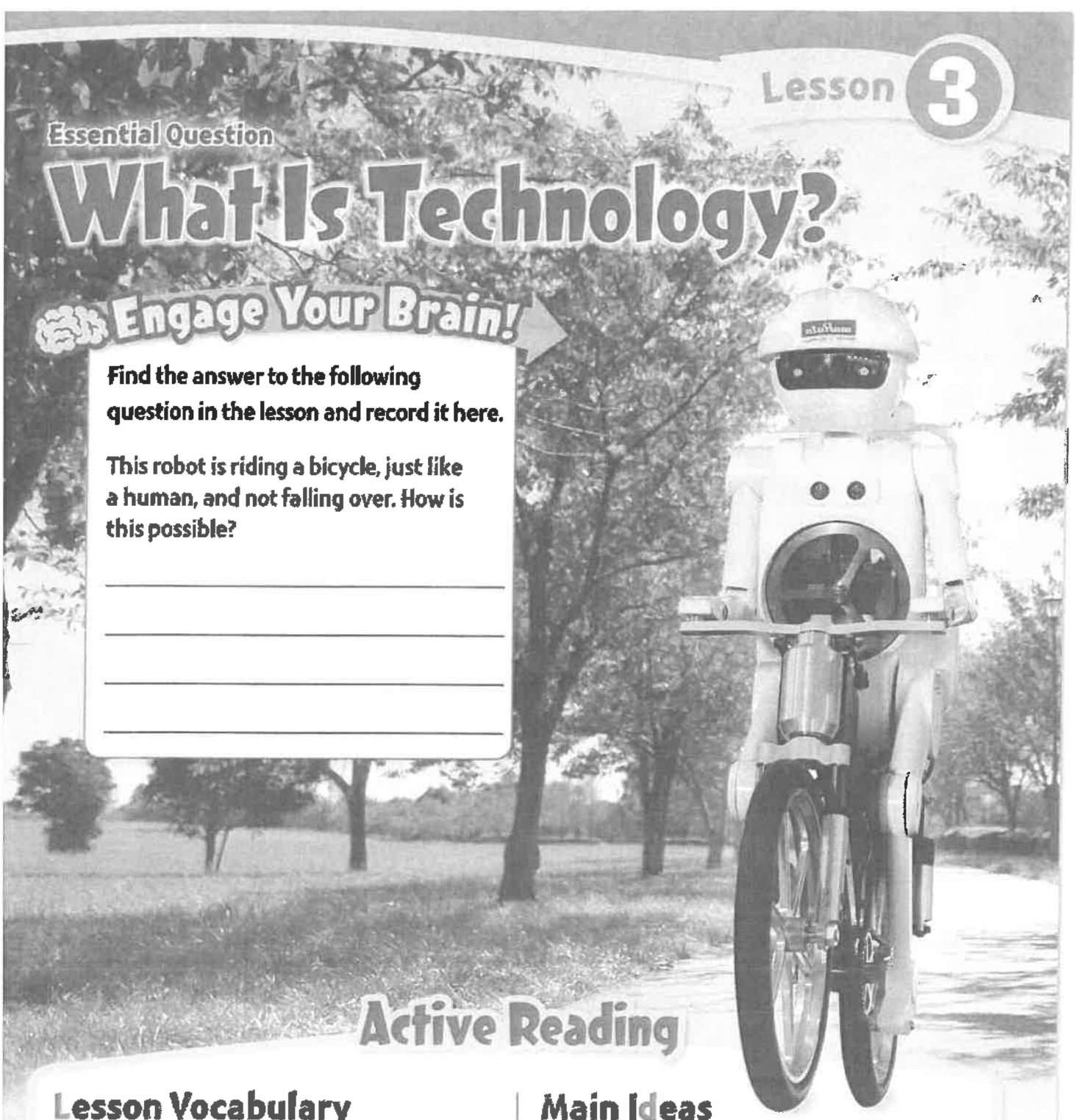
Mark only one oval.

- ◯ Scalene, Right Triangle
- ◯ Scalene square
- ◯ Isosceles Triangle
- ◯ Equilateral Triangle

Lesson 3

Essential Question

What Is Technology?



Engage Your Brain!

Find the answer to the following question in the lesson and record it here.

This robot is riding a bicycle, just like a human, and not falling over. How is this possible?

_____

_____

_____

_____

Active Reading

Lesson Vocabulary

List the terms. As you learn about each one, make notes in the Interactive Glossary.

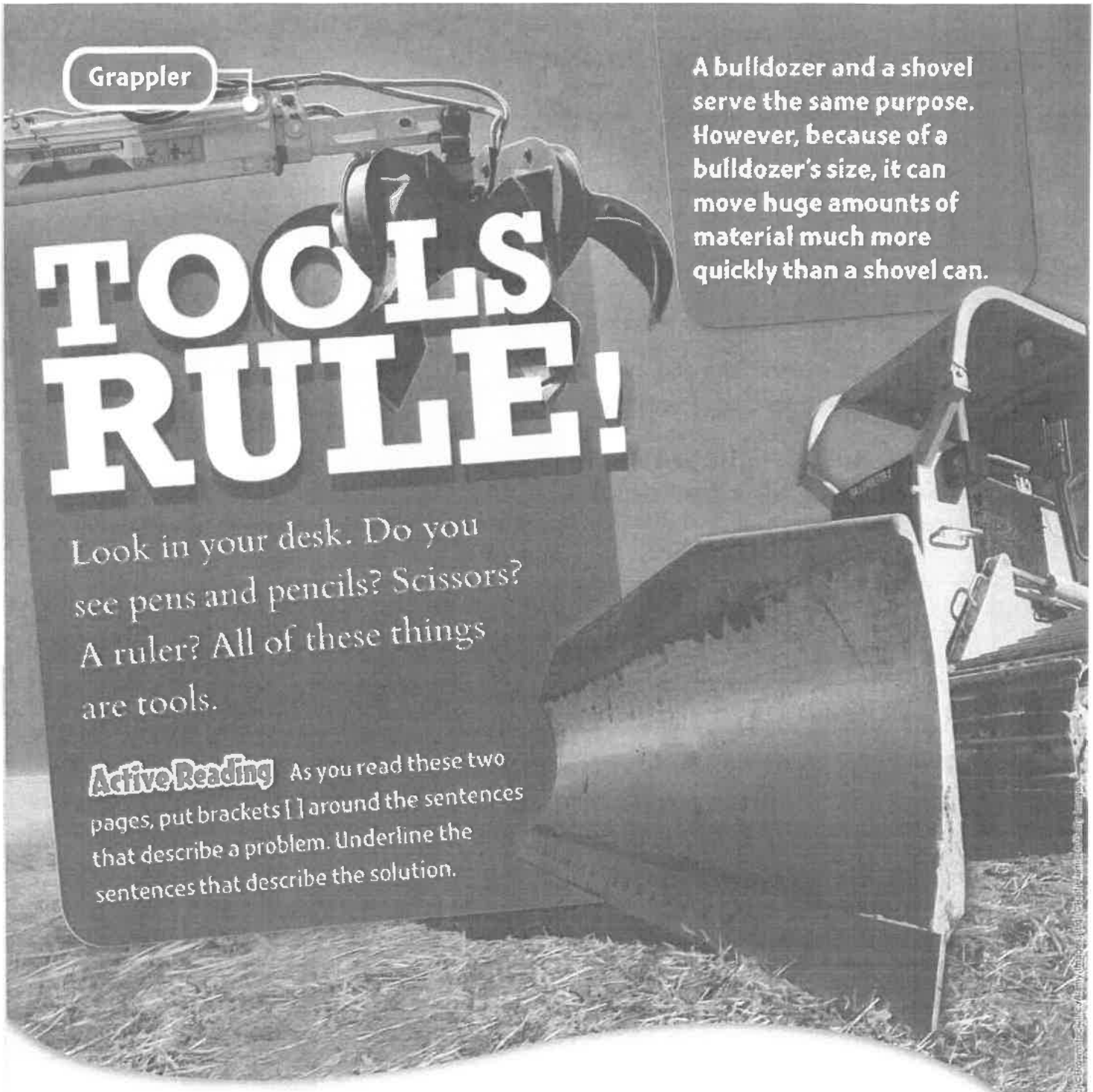
_____

_____

_____

Main Ideas

The main idea of a paragraph is the most important idea. The main idea may be stated in the first sentence, or it may be stated elsewhere. Active readers look for main ideas by asking themselves, What is this paragraph mostly about?



A bulldozer and a shovel serve the same purpose. However, because of a bulldozer's size, it can move huge amounts of material much more quickly than a shovel can.

TOOLS RULE!

Look in your desk. Do you see pens and pencils? Scissors? A ruler? All of these things are tools.

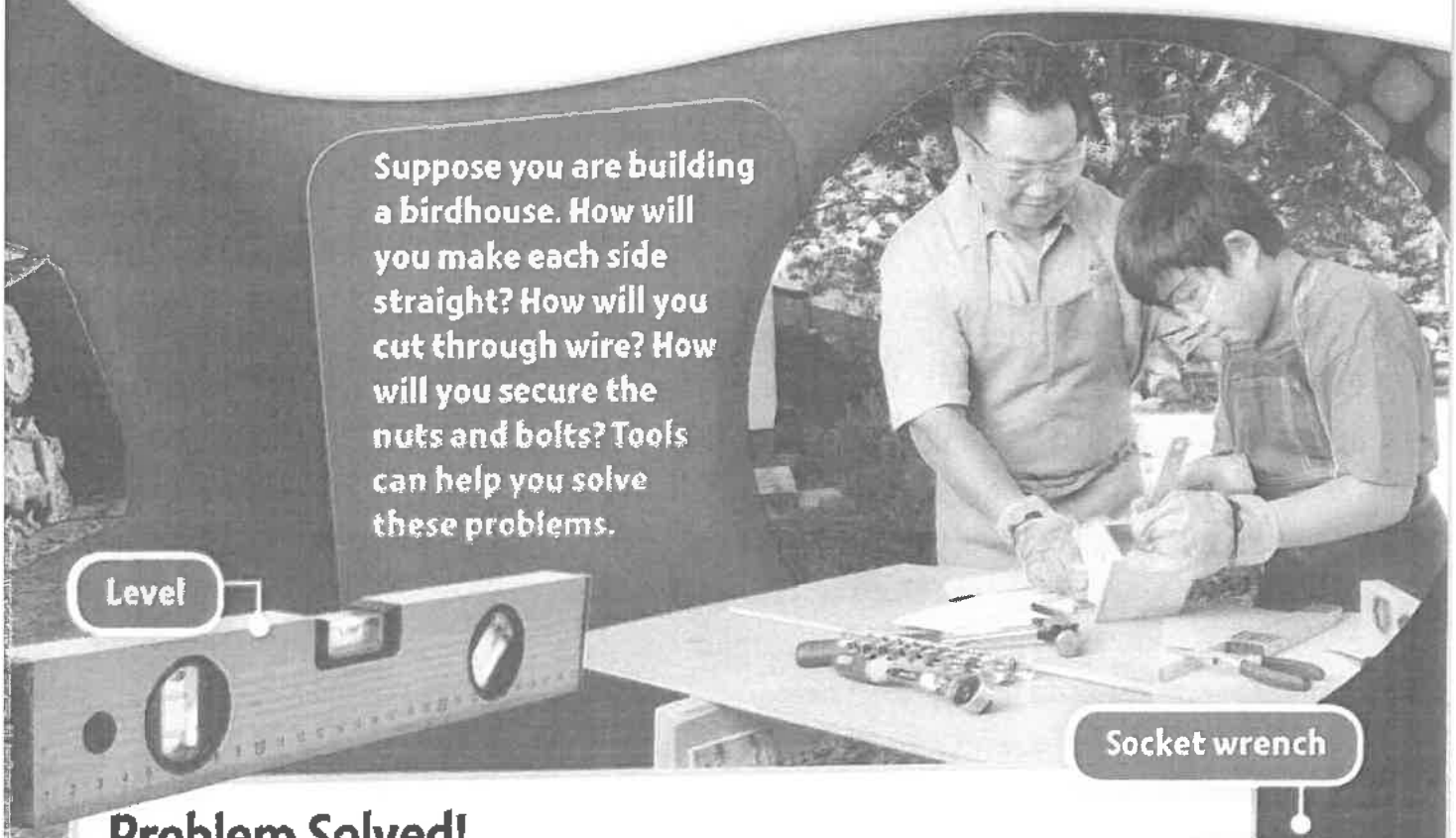
Active Reading As you read these two pages, put brackets [ ] around the sentences that describe a problem. Underline the sentences that describe the solution.

Planting a vegetable garden? You'll need a shovel, a rake; and a spade. All these items are tools. A tool is anything that helps people shape, build, or produce things to meet their needs.

Your family's toolbox probably contains a hammer and screwdrivers. Construction workers have similar tools that do the same jobs, only on a larger scale. Instead of hammering nails by hand, construction workers use tools that quickly drive nails into wood with the push of a button. Their tools are sized and powered differently to meet different needs.

Some tools are designed to do one task. You use a pen to write a note to a friend. You keep your science notes organized in a notebook. You talk to your grandmother on the phone. What if you had one tool that could do all these tasks? A smartphone is a tool that can help you send a message, organize information, *and* talk to people.

A smartphone, like all tools, is an example of technology. **Technology** is any designed system, product, or process that people use to solve problems. Technology doesn't have to be complex. The pencil you write with and the cell phone you text with are both technology. Technology changes as the needs of people change.



Problem Solved!

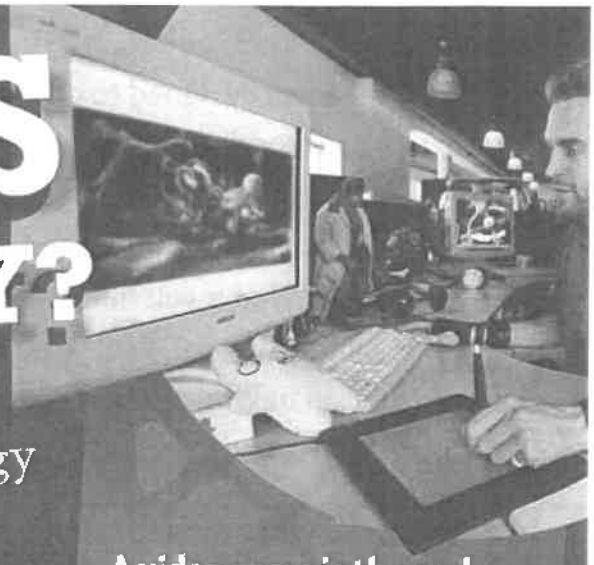
Fill in the chart to show problems and their solutions. In the last row, make up your own problem and identify the tool that helps solve it.

Problem	Tool that Solves It
Collect and save rainwater for later use.	
	multiplication table

WHAT IS TECHNOLOGY?

Vending machines, televisions, and video games are examples of technology products you know—but there are more. Technology is all around you.

Active Reading As you read this page, underline technology products. On the next page, circle the paragraph that describes examples of a technology process.



A video game is the end product of a technology process. Programming a video game involves technology you can't hold in the palm of your hand.

You've learned that technology is any designed system, product, or process. A *technology product* is anything designed to meet a need or desire. Some people think that electronics are the only type of technology product. However, most technology products do not use electricity!

This book, the desk it is on, and the backpack you use to take it home are all technology products. Your bike and the sidewalk you ride it on are technology products, too. Technology products can be very large or very small. They can be a single thing like a stone brick or made of many things put together. Some technology products, such as medicine, are made to keep us healthy. Others, such as construction tools, are made to shape the world around us. We also invent technology products just to have fun.

▶ Circle three examples of technology in this photo.

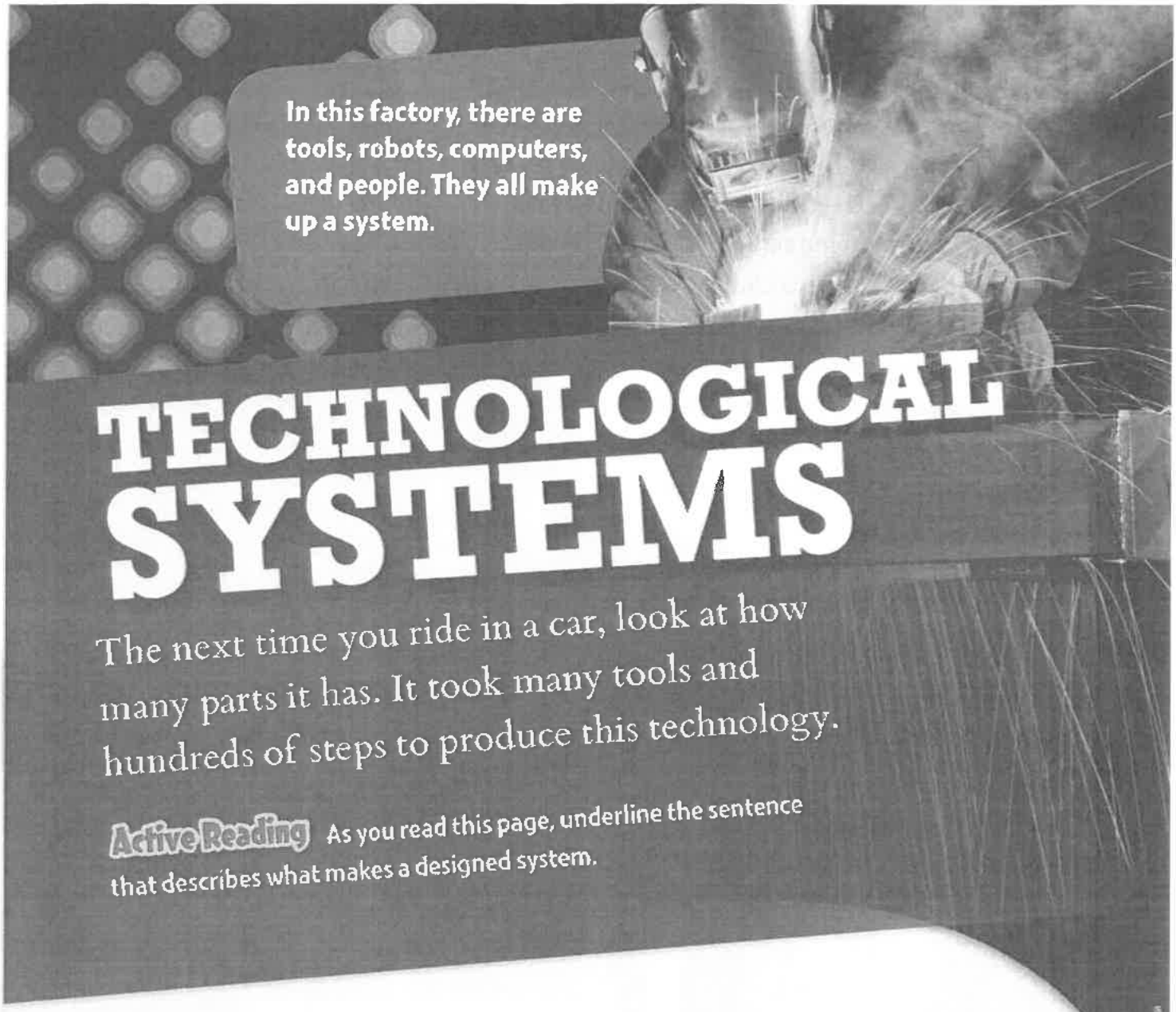
The way a product is made is also a form of technology. A *technology process* is a series of steps used to achieve a goal or make a product. The steps in a technology process are like the steps in a scientific investigation. They are carefully designed for doing something a certain way.

Many things you do are a technology process. You follow a series of steps to make gelatin dessert, tie your shoelaces, and add music to your MP3 player. If you have ever played baseball, you are familiar with its rules. The rules of a game are a technology process.

Safety gear and clothing are types of technology that help baseball players perform. The bleachers and the backstop are types of technology that let spectators watch safely.

Play Ball

The ballpark, scoreboard, rules, and baseball equipment are all examples of technology. How can technology help deliver the game's events to people who aren't at the ballpark?



In this factory, there are tools, robots, computers, and people. They all make up a system.

TECHNOLOGICAL SYSTEMS

The next time you ride in a car, look at how many parts it has. It took many tools and hundreds of steps to produce this technology.

Active Reading As you read this page, underline the sentence that describes what makes a designed system.

Groups of things that work together to achieve a goal make up a *system*. Tools, parts, and processes that work together form a *designed system*. Designed systems help us travel and ship goods. They help us communicate and grow our foods.

You are a part of many designed systems. Whether you ride the bus or walk to school, you are a part of a transportation system. This system is made up of the sidewalks, roads, and traffic signs. It also includes the cars, buses, planes, and trains that move people and materials from place to place.

Designed systems help us shape the world around us. When you ride around your town, you might see cars, roadways, buildings, or farm fields. All these things make up the *designed world*. The designed world is the part of your community that is designed and built by people.

Many designed systems work together in the designed world. For example, the agricultural system produces the food that we need. Ships, trains, and trucks in the transportation system carry food where it is needed.

A water irrigation system is a tool that helps farmers grow crops. It includes water, hoses, and pipes. It also includes the people who run the system and fix it when it breaks down.

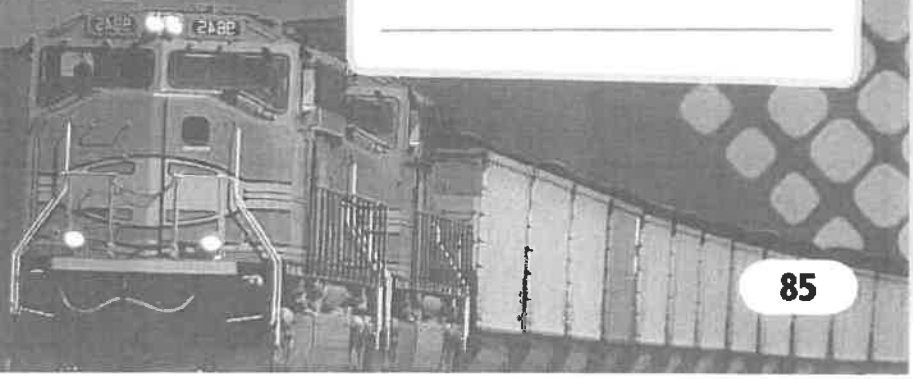
PARTS OF A DESIGNED SYSTEM

Part	Example: Rail Transportation System
Goal—what the system aims to do	Goal—to move cargo and passengers safely from place to place
Input—what is put into the system to meet the goal	Inputs—fuel for the train, cargo, and people to ride the train
Processes—describe how the goal is to be achieved	Processes—train tracks and departure and arrival schedules
Output—the end product	Output—safe and timely delivery of people and cargo
Feedback—information that tells whether or not the output is successful	Feedback—records of whether trains left and arrived on time

A railroad system includes trains, rails, and safety signals at road crossings. The system also has parts you can't see. Radio signals keep track of where trains are. The signals raise and lower crossing arms, too.

Tech Systems

What do you think would be the goal of a farming system?



THE GOOD AND THE BAD OF IT

Compact fluorescent lights (CFLs) and light emitting diodes (LEDs) use less energy than incandescent bulbs. However, CFLs contain mercury, which can be hazardous if the bulbs break open, and LEDs are more expensive than regular light bulbs.

A light bulb that can save you $100 a year? What's the catch?

Active Reading As you read this page, draw a box around the main idea.

Technology is constantly changing. Anyone can invent or improve a technology product or process. It takes new ideas and knowledge for technology to change. The goal of any new technology is to better meet people's needs. However, new technology can also bring new risks.

Changes in technology often involve making things safer, quicker, easier, or cheaper. For example, people once used candles and lanterns to light their homes. These things helped people see at night, but they could also cause fires. Electricity and incandescent light bulbs helped solve this problem, but this technology also has its risks.

We burn coal to generate electricity. When coal burns, harmful ash and gases are produced. The potential harm these substances can cause leads to negative feedback. Such feedback helps people think of ways to improve technology.

Sometimes the problems with a technology are caused by the way people use technology. For instance, pesticides are helpful technology products. They are used to protect people, crops, and farm animals from harmful organisms. However, when used incorrectly, they can contaminate the soil, the water, and the air. Living things exposed to pesticides by accident can get sick and die.

Do the Math!

Interpret a Table

Use the data in the table to answer the questions below.

Light Bulb Cost Comparisons		
	25-Watt CFL	100-Watt incandescent
Cost of bulb	$3.40	$0.60
Bulb life	1,667 days (4.5 years)	167 days (about half a year)
Energy cost per year	$6.00	$25.00
Total cost over 4.5 years	$27.00	$118.50

1. How much more is the total cost of an incandescent bulb than a CFL?

_____

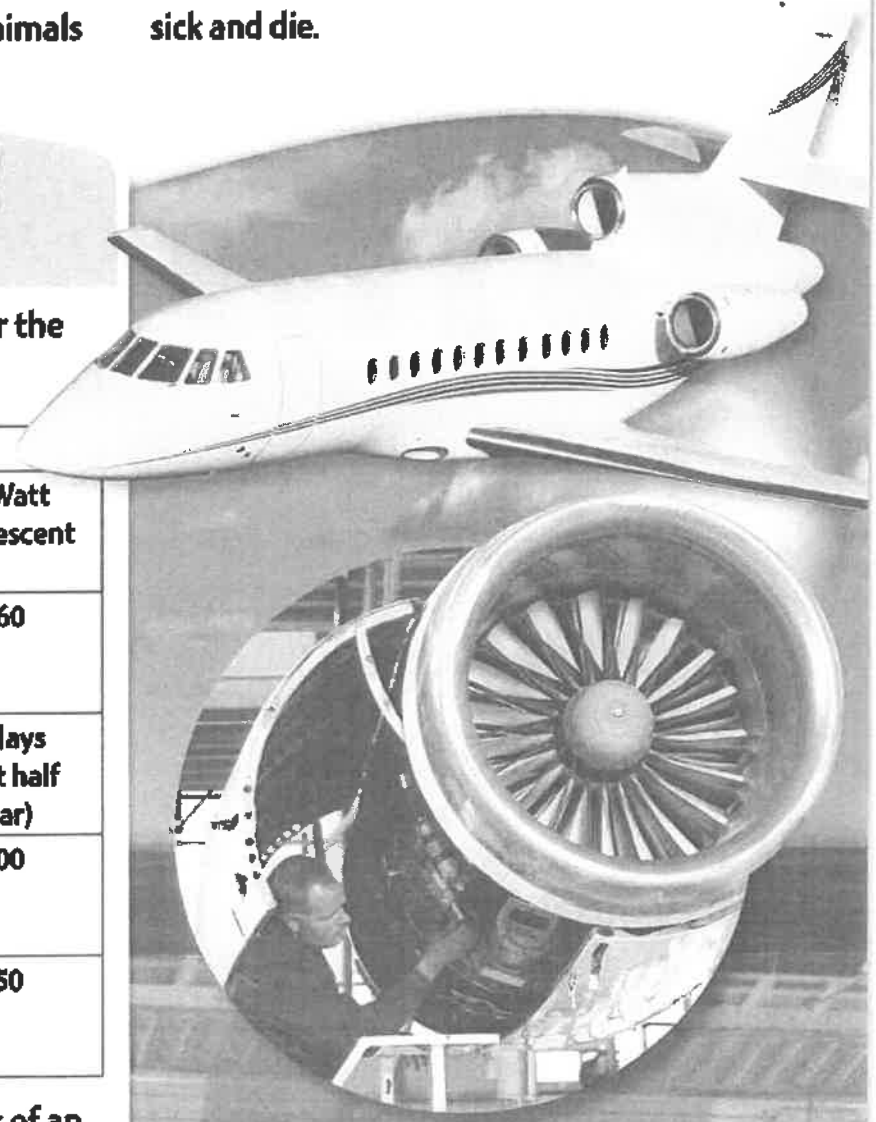
2. How much would your yearly energy cost be if you had 20 CFL bulbs in your home?

_____

3. Which bulb lasts longer?

_____

_____



Airplanes can transport a lot of people at one time. However, they burn a lot of fuel and release pollution into the atmosphere. Engineers redesign airplanes to improve their performance.

OUT WITH THE OLD

Computers, cell phones, and flat-screen TVs are fun and useful. But like all technology, electronic gadgets have drawbacks.

Electronic technology seems to change at the blink of an eye. New electronic devices rapidly replace old ones. People benefit from new or improved electronic devices, but they also bring new problems.

Not long ago, most televisions and computer monitors were large, bulky things. New technology has made these large devices a thing of the past. They have been replaced by thin, lightweight flat screens.

But what do we do with old electronics? Some are taken apart and recycled; however, like the devices shown on this page, most end up in landfills. At landfills, electronics may release harmful chemicals into the environment.

Many electronic devices contain lead. Lead can be harmful to people and other organisms in the environment.

Electronics are helpful communication, work, and entertainment tools. They can also be a distraction. Some people spend a lot of time playing video games or on the Internet. They send text messages or listen to MP3 players while they are with other people. Some might even operate electronics while driving and cause a safety hazard for themselves and others.

People can solve these problems. They can set limits on computer and game time. They can put the phone away and pay attention to people and driving. These are ways to be responsible with technology.

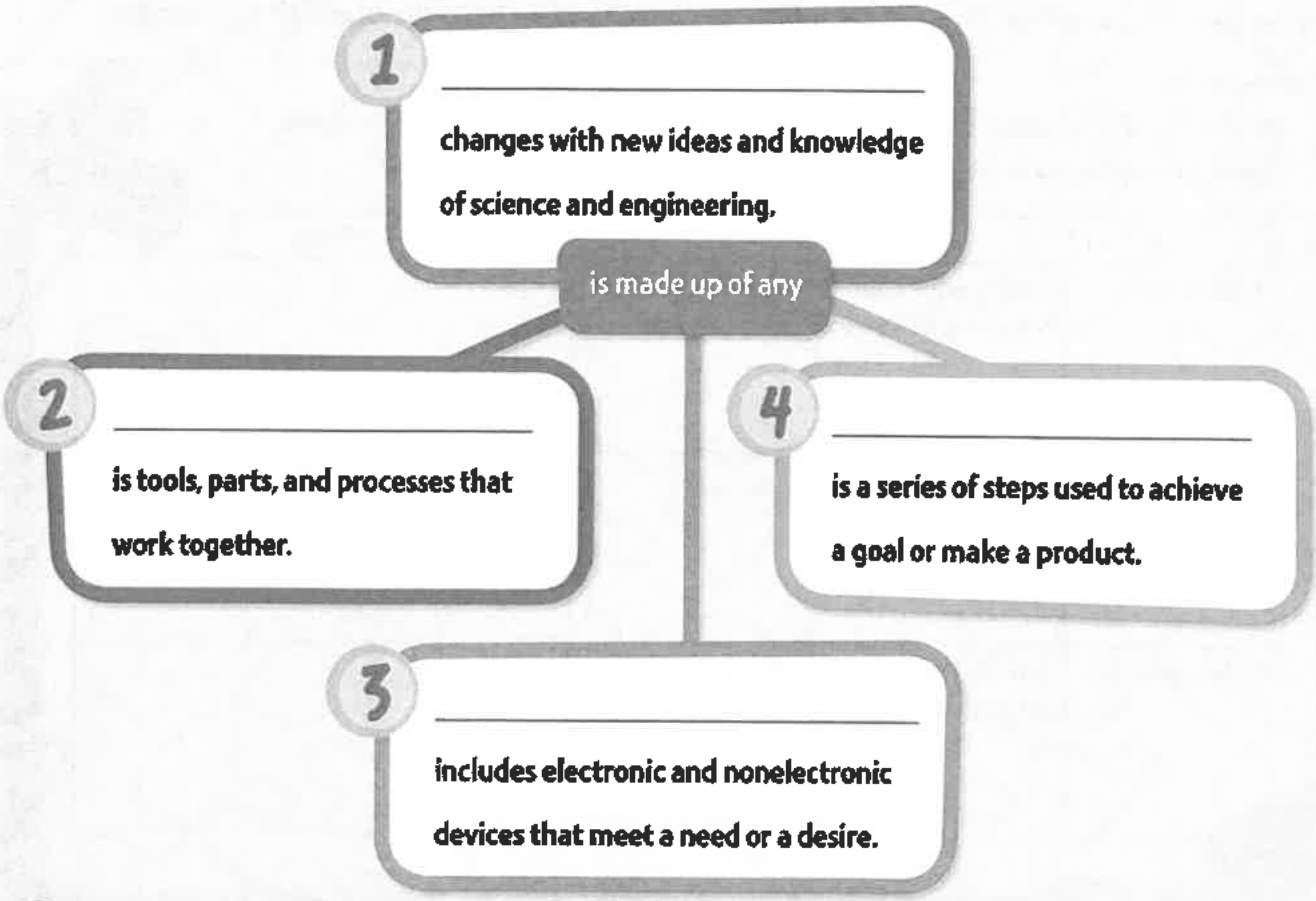
▶ On the chart below, fill in the pros and cons of each electronic technology. Some examples have been provided for you.

	Pros	Cons
Television	can be educational; can provide breaking news quickly	
Smartphones		can take time away from doing other activities or being social; can cause drivers to be a hazard
Video games	fun; can be social when played with others	

Sum It Up!

When you're done, use the answer key to check and revise your work.

Complete the graphic organizer below.



Summarize

Fill in the missing words that help summarize ideas about technology.

A shovel is a tool that can help move dirt. A [5]_____ can do the same job in a bigger way. Tools are technology that help people shape, build, or produce things. [6]_____ changes to meet the growing needs and desires of people.

A computer is an electronic product of technology. A [7]_____ is a nonelectronic product of technology. [8]_____ and [9]_____ often work in teams to develop new technology.

With technology, there is often risk to people and to the [10]_____.

Answer Key: 1. technology 2. designed system 3. product 4. process 5. bulldozer 6. Technology 7. Sample answer: wrench 8.–9. (in any order) scientists/engineers 10. environment

Brain Check

Lesson 3

Name _____

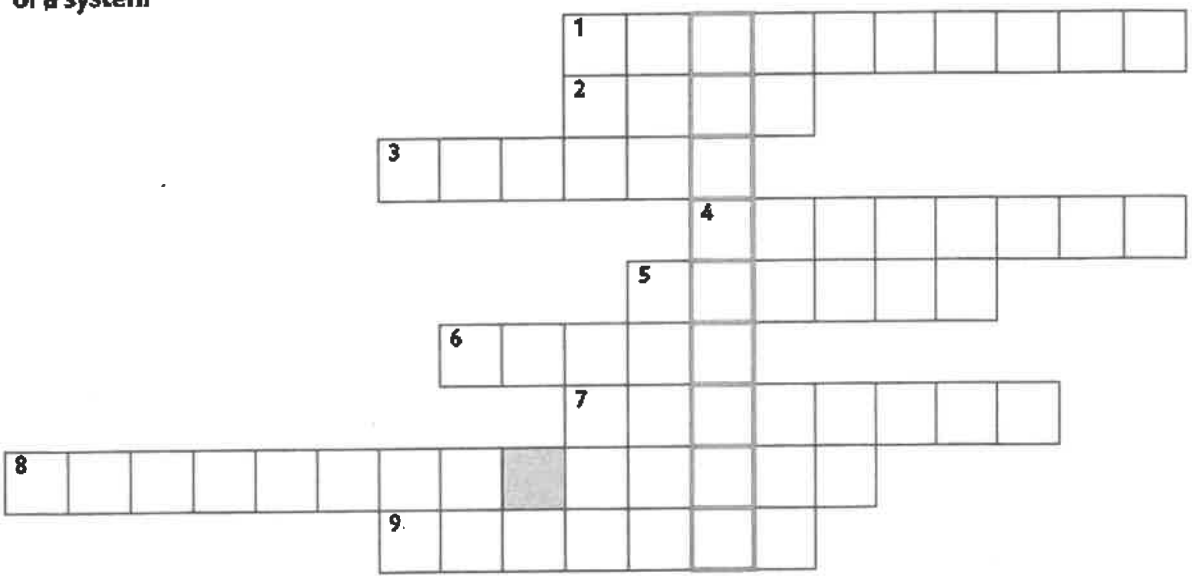
Word Play

1 **Use the clues below to fill in the words of the puzzle.**

1. Any designed system, product, or process
2. Anything that helps people shape, build, or produce things to meet their needs
3. Tools, parts, and processes that work together
4. Things that are made to meet a need
5. The end product or service of a system
6. Anything that is put into a system to meet a goal
7. Information that tells whether or not the output is successful
8. This is made up of all products of technology
9. A series of steps that result in a product

designed
world
feedback
input
process
products
output
system
technology*
tool*

* Key Lesson Vocabulary



Read down the squares with red borders. The word will answer the question below.

Murata Boy is a bicycling robot. He can ride forward, backward, and stop without falling over. Where does he get the ability to do it?

___ ___ ___ ___ ___ ___ ___ ___ ___

Apply Concepts

Passenger jets can transport people quickly from one place to another. Modern computer electronics help pilots fly these planes.

2 Describe two technological systems that are related to airplanes.

_____

_____

_____

3 What are some of the risks of global airline travel? What are some of the benefits?

_____

_____

_____

4 Write a problem associated with each example of electronic technology.

1. Compact fluorescent light bulbs	2. Video games	3. Cell phones
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Take It Home!

Work with a family member to make a list of tools found in your kitchen. Sort the items in your list into simple and complex tools. Share your work with your class. Explain how you categorized the items in your list.

1. What is technology?

4th Grade Distance Learning

Week 9

(May 26-29th)

Name:

Teacher:

Minnesota

By:

4th gr.
Language
Arts
Week 9
(May 26-29th)

History

State Flag

Year Minnesota became a state:

Minnesota was the _____ state to enter the union.

Minnesota is the Native American word for:

History

State Nicknames:

State Motto:

Minnesota's Largest Immigrant Groups:

State Seal

History

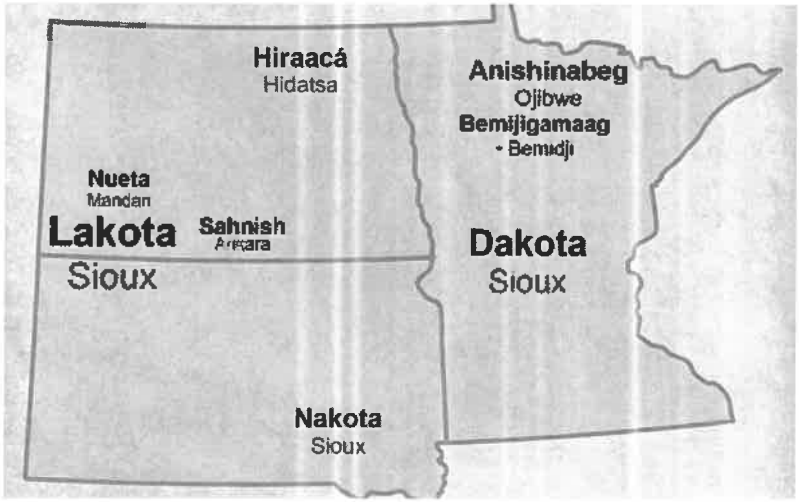
Before Europeans came to Minnesota the Native American tribes living here were:

1.

2.

In the 1600s, the first Europeans to explore Minnesota came from:

The fur traders hunted:



Historical Native American Tribe Map

History

Facts about the Ojibwe/Chippewa:

1.

2.

3.

Facts about the Dakota/Sioux:

1.

2.

3.

Geography

Region:

States that Border Minnesota:

1.

2.

3.

4.

Geography

Minnesota's size in square miles:

5 Largest Lakes:

5 Largest Cities:

3 Rivers:

Headwaters of the Mississippi River

Resources

Resources in Minnesota:

1.

2.

3.

4.

5.

Harvesting Wild Rice

Fun Facts

State Capital:

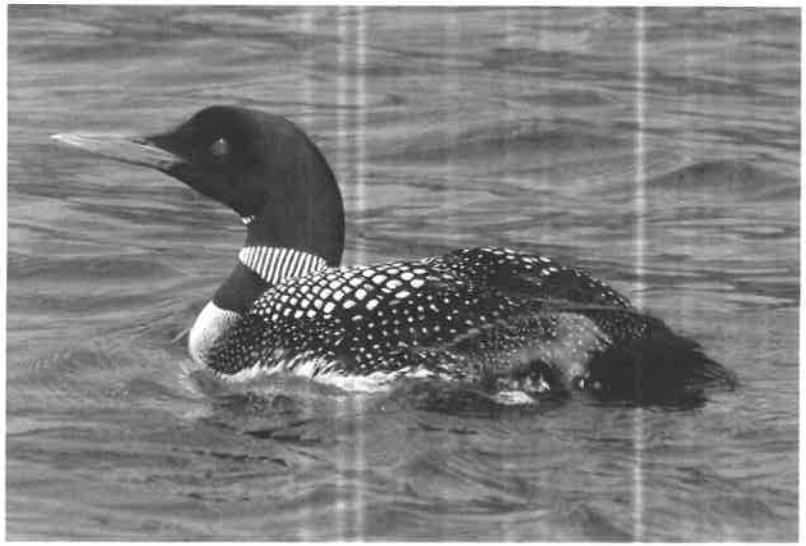
State Bird:

State Tree:

State Flower:

State Fish:

State Muffin:



Minnesota State Bird

Fun Facts

Write down 3 other fun facts about Minnesota that you learned.

1.

2.

3.

Resources for Minnesota Project

Week 9 (May 26-29)

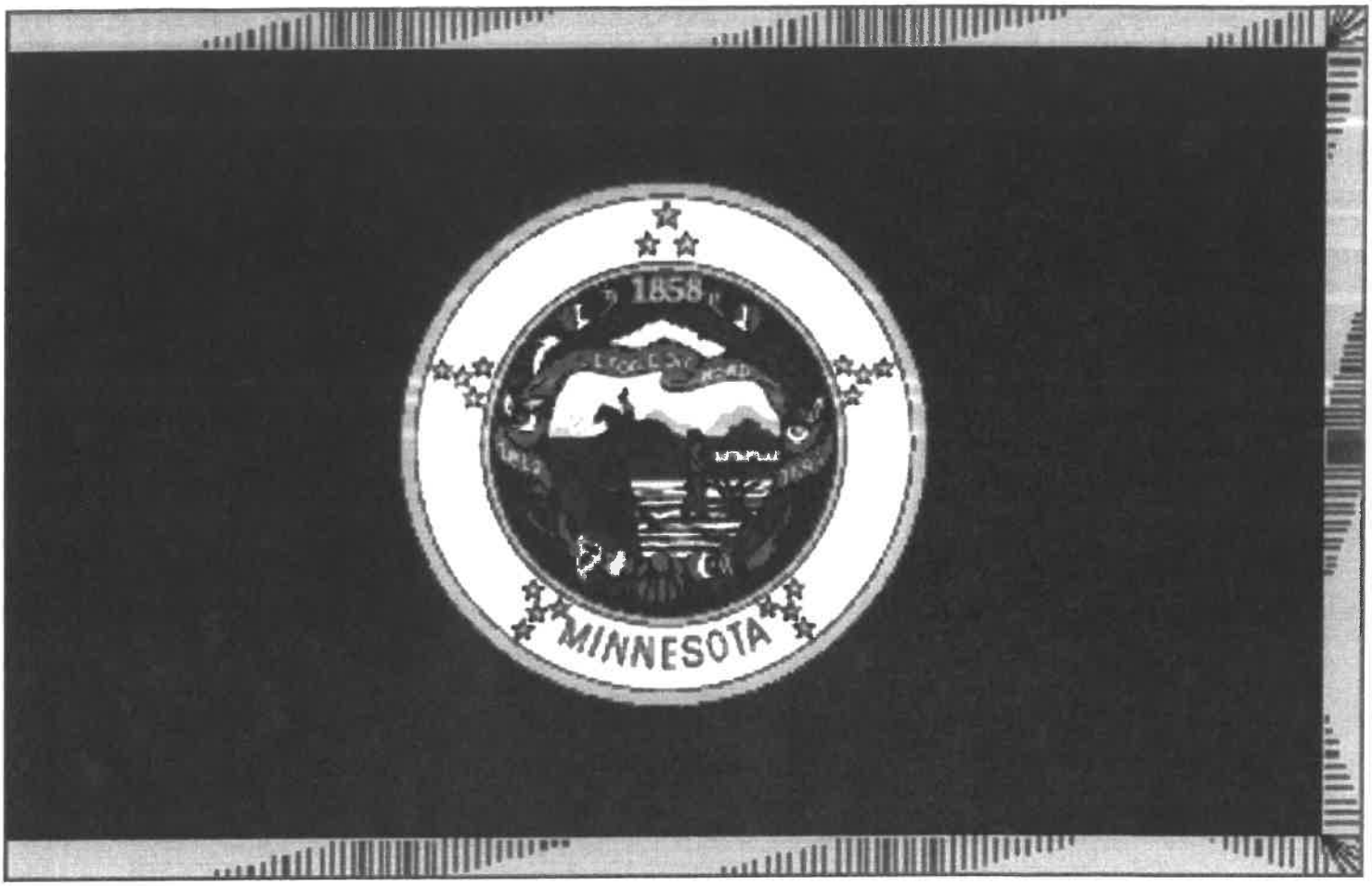
Minnesota Facts

- "Minnesota" is the Native American word for "Land of Sky-Tinted Waters"
- "Mississippi" is the Native American word for "Father of Waters"
- "Lake Superior is the Native American word for "Big Sea, Shining Waters"
- Germans and Scandinavians are Minnesota's are Minnesota's largest immigrant groups
- State nickname: The North Star State
- State tree: Red (Norway) Pine
- State Bird: Common loon
- State Flower: Showy Ladyslipper
- State Rock: Lake Superior Agate
- State muffin: Blueberry
- State fish: Walleye
- The population of Minnesota is about 5.457 million (2014)
- Minnesota's five largest cities, in order from largest to smallest are: Minneapolis, St. Paul, Rochester, Duluth, and Bloomington.
- The capital of Minnesota is St. Paul
- The five largest lakes in Minnesota, in order from largest to smallest, are: Red Lake, Lake Mille Lacs, Leech Lake, Lake Winnebigoshish, and Lake Vermillion.
- The largest fresh-water lake in the world is Lake Superior, which borders Minnesota
- Lake-of-the-Woods is shared by Minnesota and Canada

State Capitol

The State Capitol of Minnesota is located in St. Paul, Minnesota. This is where the legislators make the laws for our state. Work began on the capitol in 1896, and construction was completed in 1905. It is the third building to serve this purpose: the first capitol was destroyed by fire in 1881, and the second was completed in 1883, but was considered to be too small almost immediately.

State Flag



The Minnesota state flag is royal blue, with a gold fringe. In the center of the flag is the state seal. Around the state seal is a wreath of the state flower, the lady slipper. Three dates are woven into the wreath: 1858, the year Minnesota became a state; 1819, the year Fort Snelling was established; and 1893, the year the official flag was adopted. Nineteen stars ring the wreath. The largest star represents Minnesota.

State Seal

The State Seal of Minnesota is also found in the Minnesota state flag. The state motto "L'Etoile Du Nord" which means Star of the North

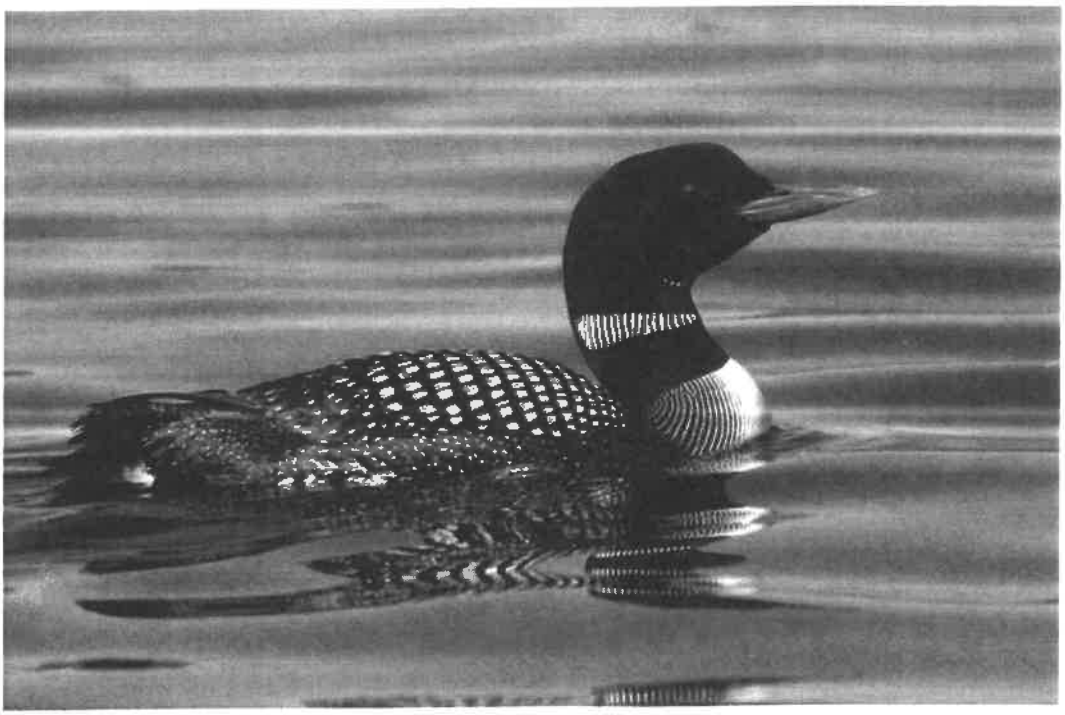
State Tree

This is the state tree of Minnesota. It is a Red (Norway) Pine Tree. Minnesota's largest Norway Pine is found in Itasca State Park. It is 120 feet tall and over 300 years old.

State Flower

This is the state flower of Minnesota. It is the pink and white ladyslipper. It is a wild flower found in the swamp area bank in the woods of northern Minnesota. It blooms in late June or early July.

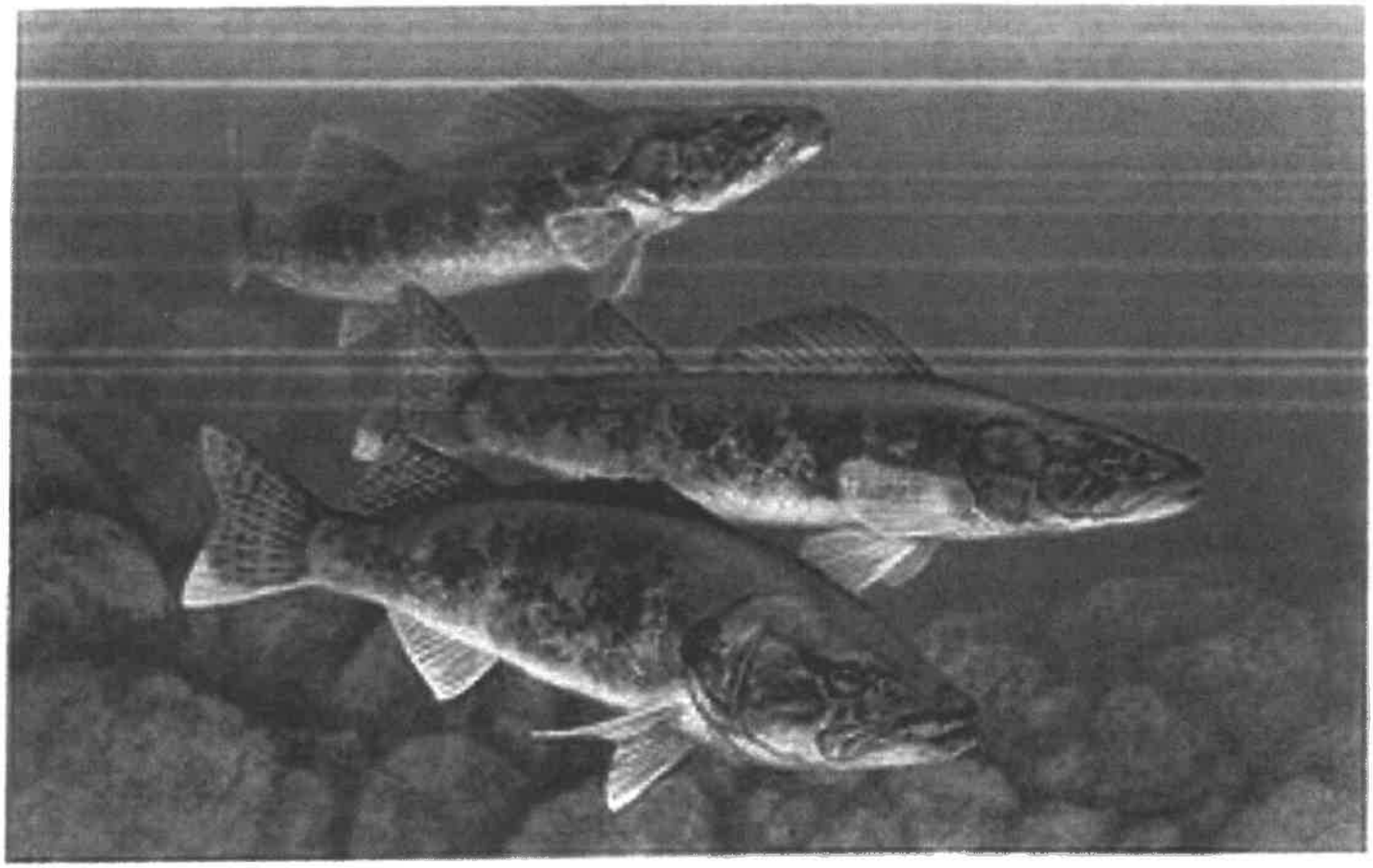
State Bird



The common loon was adopted as the official state bird of Minnesota in 1961. Loons are known for their cries, wails, and yodels - their eerie, echoing calls are a distinctive feature of Minnesota's northern lakes.

Loons are large black and white birds with red eyes. They have wingspans up to five feet and body lengths up to three feet. Although clumsy on land, they are high-speed flyers and excellent underwater swimmers (they will dive to depths of 90 feet in pursuit of fish). Approximately 12,000 of these unique birds make their summer homes in Minnesota.

State Fish



Minnesota designated walleye as the official state fish in 1965. Walleyes are a popular game fish found throughout Minnesota's lakes and rivers.

Walleyes are most at home in the large, clear, cool lakes of Minnesota's northern forests. Their eyes are sensitive to light, so they go to deep, dark waters during the day and move to shallow areas at night.

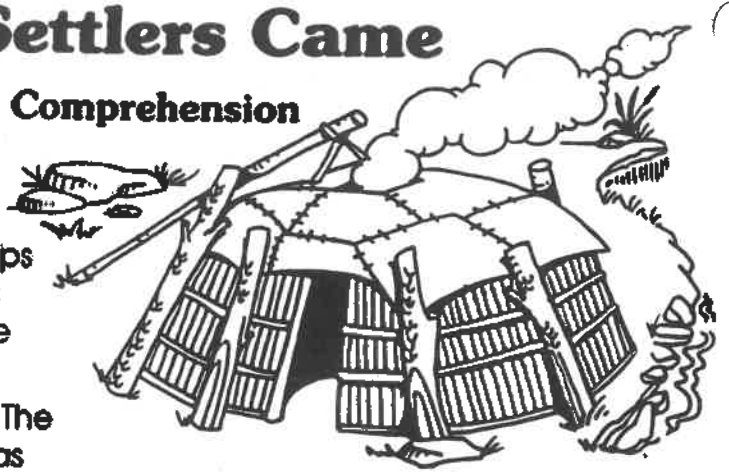
Gopher State Geography

Skill: Map Reading

Minnesota is filled with many beautiful geographical features, including over 15,000 lakes! Use the map below to answer the questions on page 15 to learn more about Gopher State geography.

Before the Settlers Came

Skill: Reading Comprehension



The Chippewa and the Sioux Indians lived in Minnesota many years before the Europeans came over to settle the area. These two groups of Indians waged war amongst each other as both sought to possess the finest lands and the richest hunting.

The Chippewa were originally forest dwellers. The deer was of great importance to them as it was not only a source of food, but its hide was used for clothing and other useful purposes. These Indians also knew how to tap the maple tree for syrup and boil it to make maple sugar. Most of their clothing was made from rabbit fur, deer skin or other animal hides. They made miraculously light birchbark canoes and traveled by dogsled or snowshoes in winter.

The buffalo was the principal source of food for the Sioux. Its skin was used for tepees, robes, clothing and many other necessities. These Indians used buffalo-skin bull boats and pulled heavy loads on an arrangement of sticks called a *travois*, which was dragged behind a horse.

Despite the differences between them, the Sioux and Chippewa Indians did have some things in common. Both dried and stored blueberries. Wild rice, the bearberry, dried cornsilk, pumpkin, squash and celery were other foods common to these Indians. Both carried their babies in cradleboards and smoked pipes. And both sought to conquer the fine Minnesota lands.

Fill in the chart below to compare the similarities and differences between the Chippewa and Sioux Indians.

	Ojibwe (**Chippewa**)	Dakota (**Sioux**)
food		
clothing		
transportation		
unique qualities/customs		
shared qualities/customs		

Minnesota Motivation

Prepare a report with a friend on one of the Indian tribes that once lived in Minnesota. Include illustrations or models of various aspects of the Indians' lifestyle. Present it to the class.

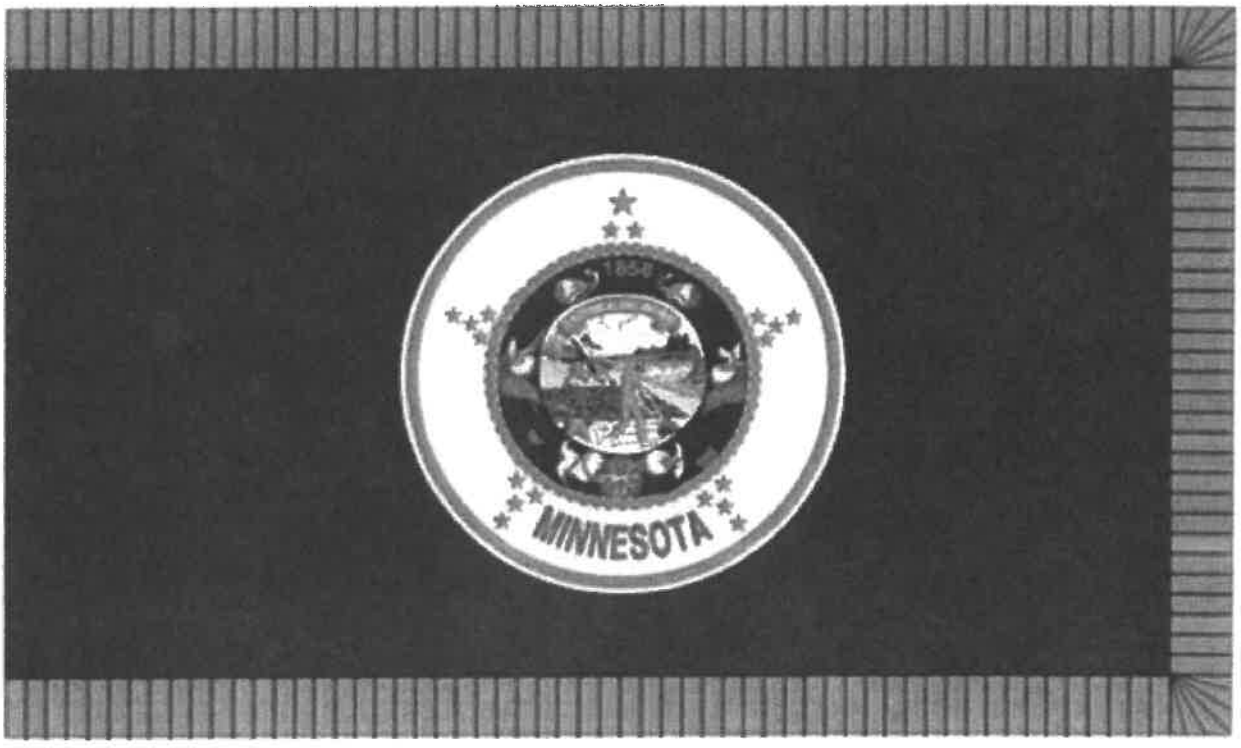
Home
Minnesota
Document

Minnesota
Blackbirch Kid's Visual Reference of the United States Online. Farmington Hills, MI: Gale, 2014.

Full Text:

Land Area Rank: 12
Population Rank: 21
Name: Minnesota is from Sioux words that mean "sky-tinted water" or "cloudy water"
State Motto: L'etoile du nord (The star of the north)
Nicknames: North Star State, Gopher State, The Land of 10,000 Lakes
Capital City: St. Paul
Size: 86,938 sq mi (225,171 sq km)
Population: 5,303,925
Statehood: Minnesota became the 32nd state on May 11, 1858
Electoral Votes: 10
U.S. Representatives: 8
State Tree: red Norway pine
State Flower: pink and white lady's slipper
State Bird: common loon
Highest Point: Eagle Mountain, 2,301 ft (701 m)

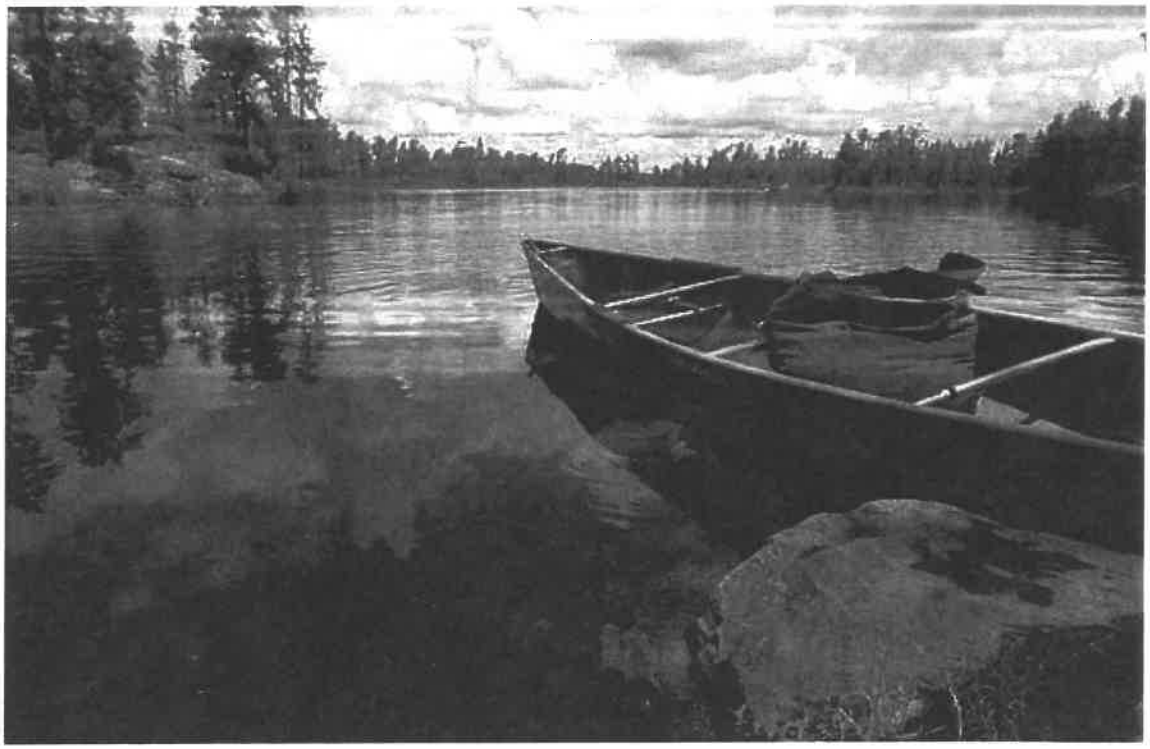
The Place



Junior Worldmark Encyclopedia of the States

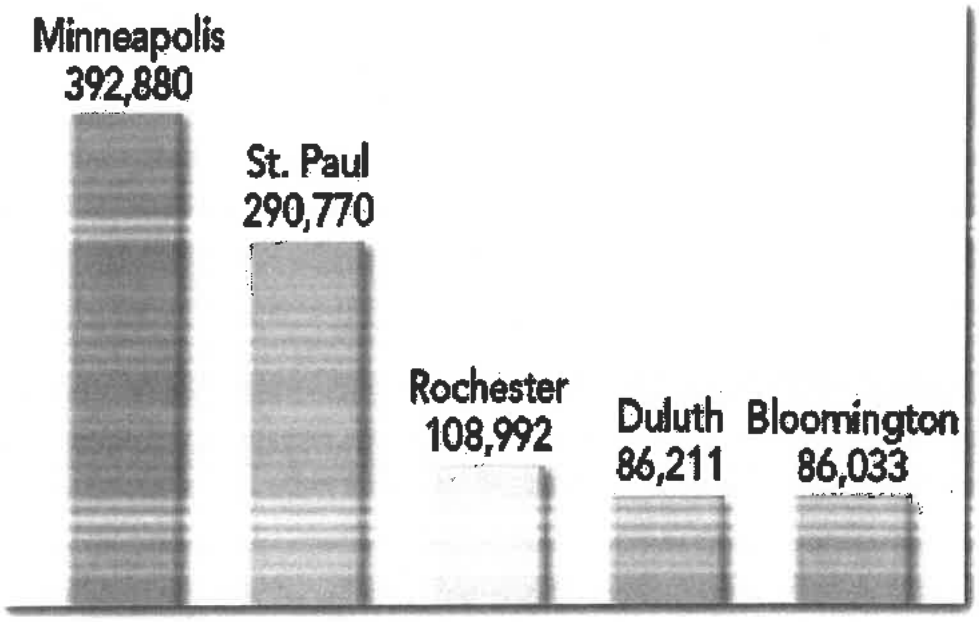
Blackbirch Press Archives

Minnesota is one of several large agricultural states in the Midwest. Lake Superior forms part of Minnesota's eastern border. Less than 20,000 years ago, large glaciers covered the land. These glaciers flattened much of the terrain into low, rolling hills. In many places, the glaciers left behind rich soil. Depressions in the ground left by the glaciers became marshes, lakes, and swamps. Although Minnesota is called the Land of 10,000 Lakes, most of these lakes are small and cover little more than 8 percent of the state.



Lakes cover little more than 8 percent of Minnesota.
© Layne Kennedy/CORBIS.

Population of Major Cities in Minnesota



Source: U.S. Census Bureau, 2012 Population Estimates.

About 40 percent of Minnesota's land is forested with trees such as balsam fir, pine, spruce, and white birch. Minnesota has valuable deposits of granite, iron ore, and manganese, which is an important element in making steel.

Winters are cold and snowy, especially in the northeastern part of the state, which can receive up to 70 inches (178 cm) of snowfall a year. Summers are generally warm.

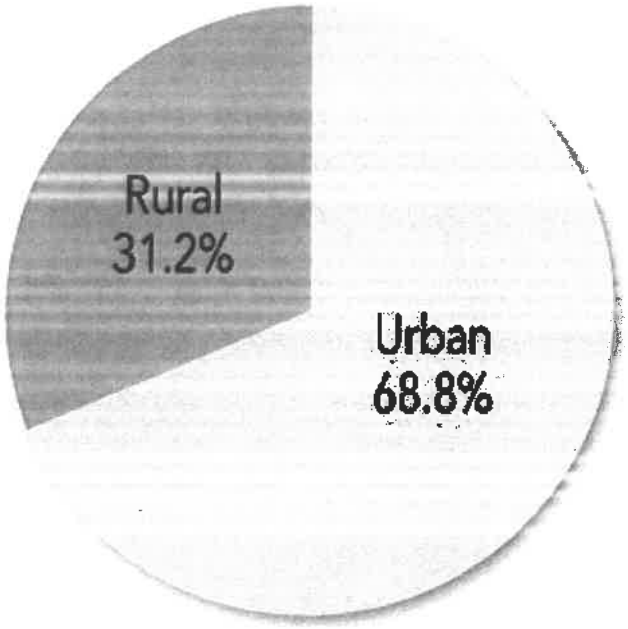
Junior Worldmark Encyclopedia of the States

Red Norway pine
Visuals Unlimited

The History of Minnesota

The first Europeans to explore Minnesota were French fur traders. When they arrived in the 1600s, they found Minnesota settled by Sioux and Chippewa. The French continued to trade valuable animal furs in Minnesota even after France lost control of the area to Spain.

Population Distribution in Minnesota



Source: *U.S. Census Bureau, 2006 American Community Survey.*

The region was under Spanish, British, and French rule at different times. Minnesota finally became part of the United States in 1803 through the Louisiana Purchase, a large area of land sold by France that more than doubled the size of the United States.

Lumber became an important industry, and lumberjacks came to Minnesota to take advantage of the state's thick forests. When the government signed a treaty with the Sioux and took over their lands in 1851, settlers poured into the region and established farms. In 1858, Minnesota became the nation's 32nd state.

During the Civil War (1861–65), Minnesota was the first state to offer troops for the Union army. After the war's end, railroads across the state were completed, and mills that produced huge amounts of flour were built throughout Minnesota's farmland. In the 1870s, settlers from Europe, especially the Scandinavian countries of Norway, Sweden, and Finland, arrived in the state.

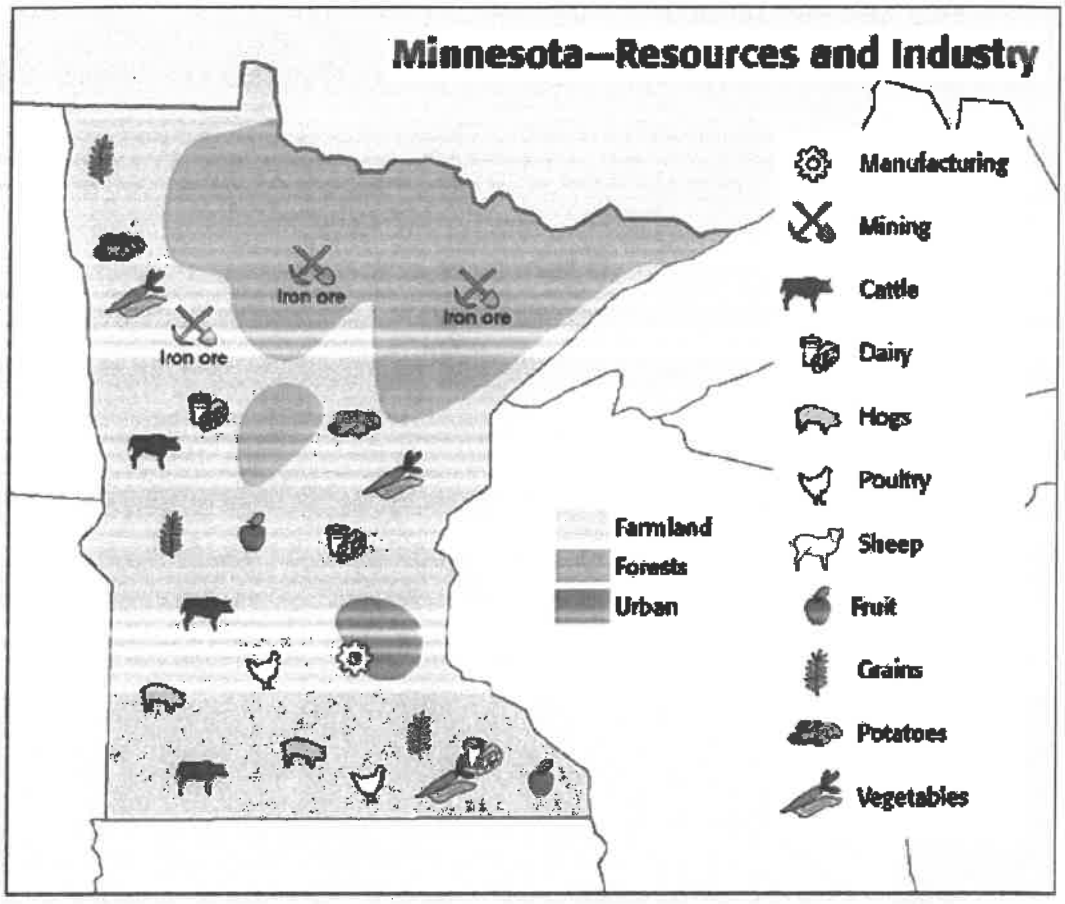
Children dance at a Swedish festival in Minneapolis. Scandanavian settlers arrived in Minnesota in the 1870s.

In the 1880s, iron ore was discovered, and Minnesota quickly became a mining center. The production of grain, lumber, and minerals for the U.S. military during both World War I (1914–18) and World War II (1939–45) supported the state's economy through the middle of the 20th century.

By the 1950s, Minnesota's best deposits of iron ore had been greatly depleted, and worldwide demand for the ore had dropped. Minnesota companies developed aerospace equipment, chemicals, computers, electronic equipment, and heavy machinery. The state became more urban as many residents moved from farms to cities, and Minnesota strengthened its role as a trade and finance center for the Midwest. In the 1980s, Minnesota residents began to explore ways to both protect its environment and mine its mineral resources.

Minnesota Today

Today, Minnesota's cities are important centers of trade, business, and manufacturing. Duluth, located on Lake Superior, is one of the busiest freshwater ports in the nation. Minnesota's Twin Cities, St. Paul and Minneapolis, are home to several large computer companies as well as some of the nation's largest banks and insurance firms.



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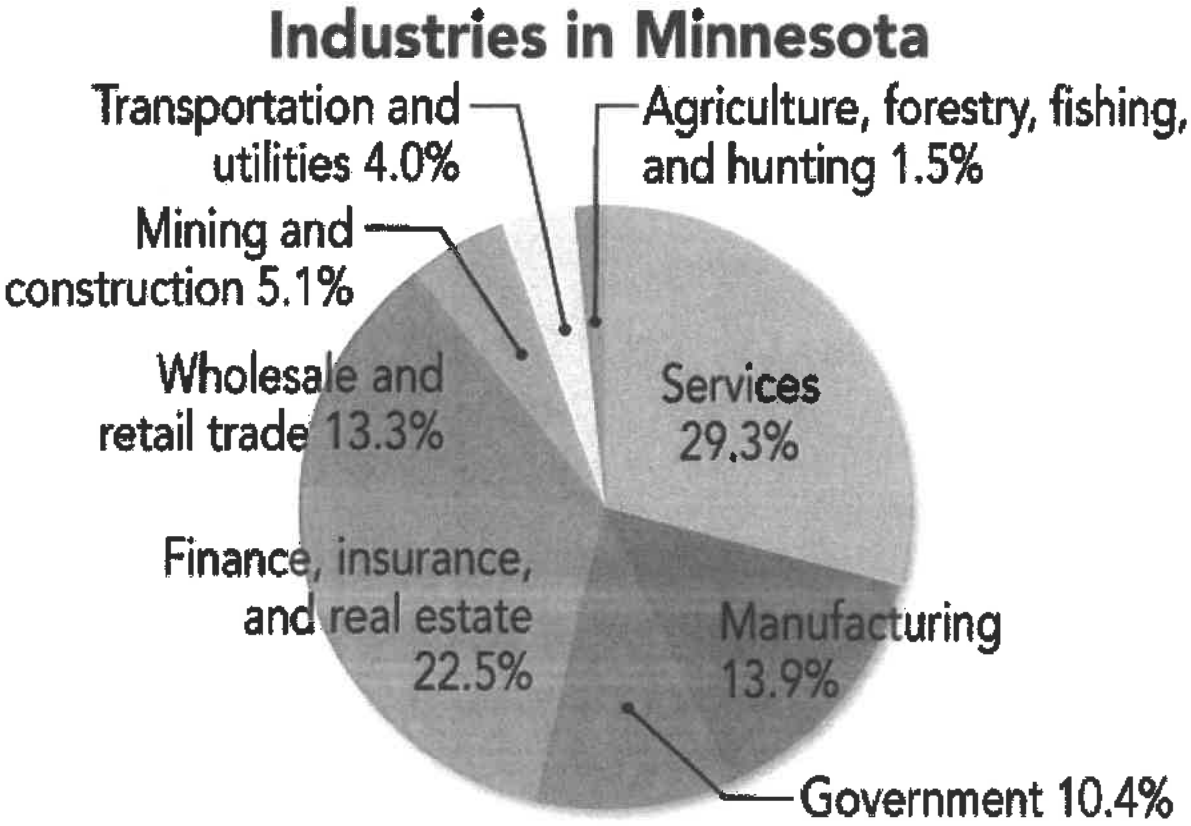
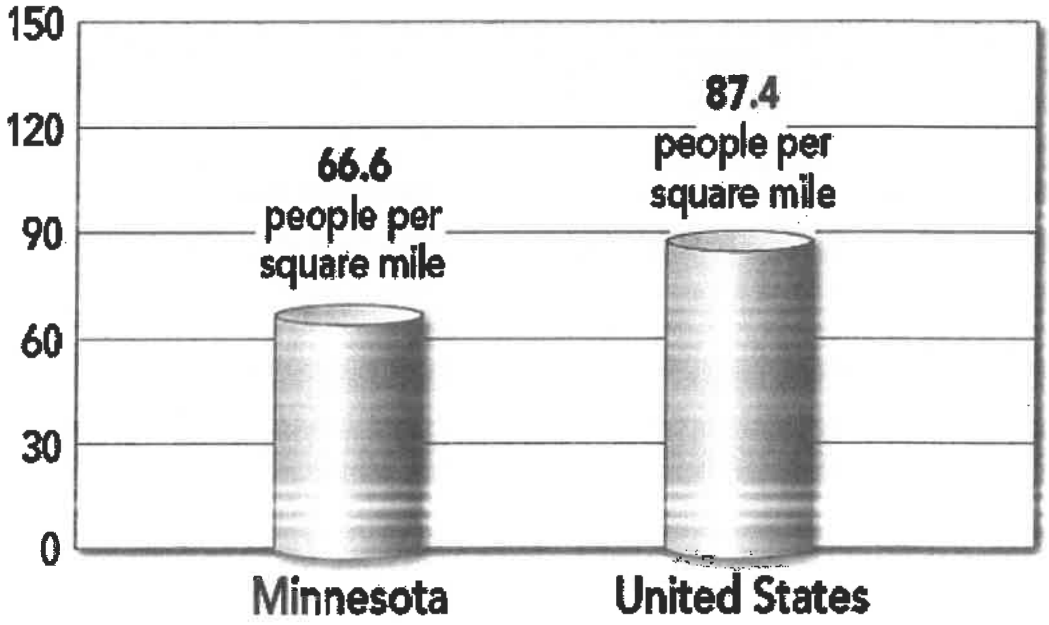


Source: *U.S. Bureau of Economic Analysis, 2006.*

A showboat glides on upper reaches of the Mississippi River near the Twin Cities, St. Paul and Minneapolis.
PhotoDisc.

Agriculture remains part of Minnesota's economy. More than half of the state is farmland, and Minnesota is one of the leading producers of dairy products. The state also produces corn, hogs, sugar beets, corn, peas, soybeans, and wheat. Manufacturing associated with agriculture is also an important source of Minnesota's income; throughout the state, many dairy-processing and meat-packing plants thrive, as well as flour mills and grain producers. Minnesota is one of the nation's producers of the bio-fuel ethanol. The mining of iron ore in the state's northern region continues to round out Minnesota's economy. Minnesota is responsible for about 75 percent of iron ore produced in the nation.

Population Density in Minnesota



Source: *U.S. Census Bureau, 2010 Census*

Minnesota State Smart

International Falls is the coldest city in the continental United States. The city has an average temperature of 37.8° F (3.2° C).

Minnesota Facts and Firsts

Because of its numerous lakes, Minnesota has 90,000 miles (144,000 km) of shoreline—more than California, Florida, and Hawaii combined.

Many popular consumer items originated in Minnesota, including the stapler, masking tape, Scotch tape, Wheaties cereal, and the Green Giant brand of vegetables.

Frank C. Mars introduced the Milky Way candy bar in Minneapolis in 1923.

The Hormel Company of Austin created SPAM, a meat product, in 1937. A SPAM museum in Austin features a towering wall of SPAM, built of 3,390 cans, in its lobby.

In 1980, Scott and Brennan Olson, two Minnesota students, designed the first set of Rollerblades, skates with inline wheels instead of a blade. They created Rollerblades so they could practice hockey all year round.

The world-famous Mayo Clinic, located in Rochester, is a leader in medical treatment.

The Mall of America, located in Bloomington, is the largest retail space in the country. It is larger than 78 football fields and has more visitors every year than Walt Disney World, Graceland, and the Grand Canyon combined.

Born in Minnesota

Jessica Biel, actress

Warren E. Burger, U.S. Supreme Court chief justice

William O. Douglas, U.S. Supreme Court justice

Bob Dylan, singer, composer

F. Scott Fitzgerald, author

Judy Garland, singer, actress

J. Paul Getty, oil executive

Cass Gilbert, architect

Hubert H. Humphrey, U.S. senator, U.S. vice president

Garrison Keillor, humorist, radio host, author

Jessica Lange, actress

Sinclair Lewis, author

Roger Maris, baseball player

Charles H. Mayo, surgeon

Eugene J. McCarthy, U.S. senator

Katherine Murray (Kate) Millett, feminist

Walter F. Mondale, U.S. vice president

Prince (Prince Rogers Nelson), musician, composer

Jane Russell, actress

Winona Ryder, actress

Charles M. Schulz, cartoonist

Maurice H. Stans, U.S. secretary of commerce

Lindsey Vonn, skier

Source Citation (MLA 8th Edition)
"Minnesota." *Blackbirch Kid's Visual Reference of the United States Online*, Gale, 2014. *Kids InfoBits*, https://link.gale.com/apps/doc/FJSTNO998440687/ITKE?u=mnsminitex&sid=ITKE&xid=b979ba04. Accessed 24 Mar. 2020.

Gale Document Number: GALE|FJSTNO998440687

Multiplying by 11 and 12 (A)

Name: _____ Date: _____ Score: ____ /100

Calculate each product.

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

Name _____ Date _____

SuperKids® Math Worksheet

Multiplication using numbers between 2 and 12

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

Name _____ Date _____

SuperKids® Math Worksheet

Multiplication using numbers between 2 and 12

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

Name _____ Date _____

SuperKids® Math Worksheet

Multiplication using numbers between 6 and 12

8 x 6 =	9 x 8 =	10 x 9 =	11 x 8 =	7 x 6 =
8 x 6 =	7 x 6 =	11 x 8 =	11 x 6 =	11 x 7 =
8 x 6 =	7 x 6 =	10 x 8 =	12 x 10 =	12 x 8 =
11 x 9 =	11 x 6 =	10 x 8 =	11 x 8 =	8 x 7 =
8 x 7 =	12 x 9 =	12 x 9 =	9 x 8 =	11 x 10 =
12 x 7 =	7 x 6 =	9 x 6 =	7 x 6 =	10 x 9 =
8 x 6 =	10 x 7 =	10 x 7 =	11 x 10 =	10 x 7 =

3-Digit by 1-Digit Multiplication (D)

Name: _____ Date: _____

Calculate each product.

394 × 5	599 × 3	820 × 9	180 × 7	844 × 3
246 × 9	538 × 7	499 × 7	423 × 4	616 × 2
385 × 7	394 × 4	745 × 4	772 × 2	177 × 3
196 × 6	771 × 5	901 × 9	639 × 2	412 × 9
708 × 9	372 × 4	869 × 3	519 × 8	645 × 8

Score: /25

Math Day 3 (May 27)

Watch the videos as needed then answer the following questions.

* Required

1. Email address *

2. y + 8y = * 1 point

Mark only one oval.

- 9y
- 9
- 7
- 7y

3. (9b - b) - 2b = * 1 point

Mark only one oval.

- 6b
- 6
- 8b
- 7

4. $(63 \div 7) \div 9 =$ * 1 point

Mark only one oval.

- 1
- 3
- 2
- 7

5. Replace the w with 7 then solve * 1 point

$w = 7$

$(72 \div 9) \cdot w$

Mark only one oval.

- 16
- 18
- 7
- 9

6. There were some people at the arts and crafts fair. Then 347 people went home. Now 498 people are left at the fair. How many people were at the fair to start? * 1 point

Mark only one oval.

- 498+347=p; p=845 people
- 498+347=p; p=855 people
- 489-347=p; p=151 people
- 489-347=p; p=171 people

7. Lucy bought some shrubs to plant in her garden. Each shrub cost $9. If Lucy spent $216 in all, how many shrubs did she buy? * 1 point

Mark only one oval.

- ◯ 216 ÷ 9=s; s=24 shrubs
- ◯ 216 ÷ 9=s; s=14 shrubs
- ◯ 216 x 9=s; s=1,944 shrubs
- ◯ 216 x 9=s; s=1,834

Math Day 4 (May 28)

Watch the videos as needed then answer the following questions.
* Required

1. Email address *

2. This year, a business had profits of $8,040. This is4 times as great as the profits that the business had last year. What were last year's profits? * 1 point

Mark only one oval.

- ◯ 8,040÷4=p; p= $2,010
- ◯ 8,040÷4=p; p=$2,210
- ◯ 8,040 x 4=p; p=$32,160
- ◯ 8,040 x 4=p; p=$42,160

3. In July, 74,371 people visited an art museum. In August 95,595 people visited the art museum. How many fewer people visited the art museum in July than in August? * 1 point

Mark only one oval.

- ◯ 95,595-74,371=p; p=21,224
- ◯ 95,595-74,371=p; p=23,224
- ◯ 95,595-74,371=p; p=22,224
- ◯ 95,595-74,371=p; p=25,783

2 Step Word Problems

4. A hardware store pays $3,500 for 42 lawnmowers. Then the store sells the lawnmowers for $99 each. How much profit does the store make from the lawnmower sales? * 1 point

Mark only one oval.

- (42 x 99) - 3,500=l; l=658
- (42 x 99) - 3,500=l; l=758
- (42 x 99) - 3,500=l; l=778
- (42 x 99) - 3,500=l; l=678

5. Shane and his family go to the movie theater and buy 6 tickets for $12 each. Then they spend a total of $31 for popcorn and drinks. How much did Shane and his family spend on tickets, popcorn, and drinks at the movie theater? * 1 point

Mark only one oval.

- (6 x 12) +31=m; m=103
- (6 x 12) +31=m; m=203
- (12+31) x 6=m; m=258
- (12+31) x 6=m; m=378

Review Week 9 (May 29)

* Required

1. Email address *

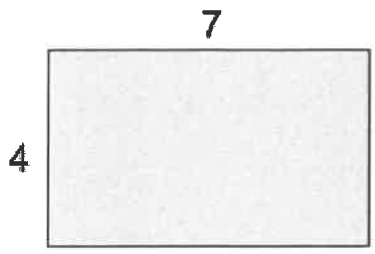
2. 1,349 x 5 * 1 point

3. 2,345 ÷ 5 = * 1 point

4. 12/15 = ?/15 + 4/15 * 1 point

5. 5.3 - 1.4= * 1 point

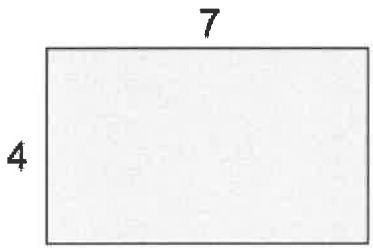
6. Find the Area 1 point



Mark only one oval.

- 28 sq. Units
- 22 sq. units
- 24 sq. units
- 20 sq. units

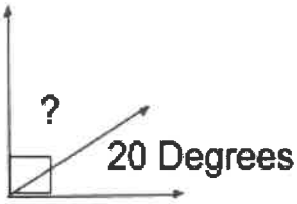
7. Find the Perimeter 1 point



Mark only one oval.

- 22 Units
- 28 units
- 24 units
- 20 units

8. Find the measure of the unknown angle * 1 point



Mark only one oval.

- ◯ 70 degrees
- ◯ 80 degrees
- ◯ 75 degrees
- ◯ 60 degrees

9. Miguel drove 197 miles on Monday. He drove345 miles on Tuesday. How many miles did Migueldrive in all? * 1 point

Mark only one oval.

- ◯ 197 + 345 = m; m=542
- ◯ 197 + 345 = m; m= 532
- ◯ 197 + 345 = m; m=567
- ◯ 197 + 345 = m; m=532