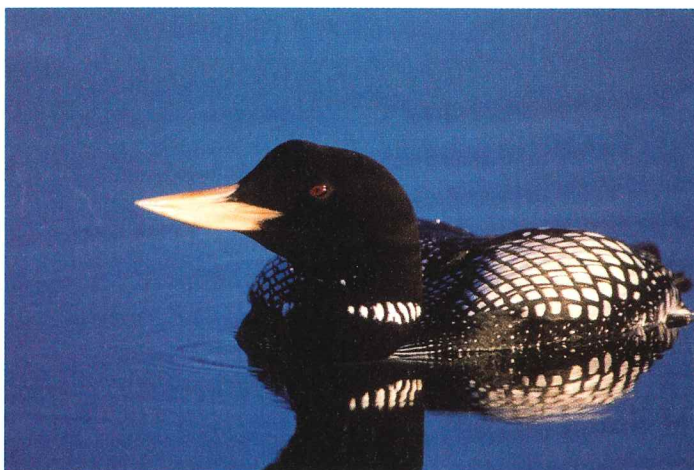# Skip Counting with Coins

A loonie is worth one dollar.
One dollar is also 100 cents.

The coin is named after the loon, a bird
that lives in many parts of Canada.

The yellow-billed loon is
a graceful swimmer.
It dives for fish in the
Arctic wetlands.

Explore

Choose a bag of coins.
Count how much money
you have.
Record your work.

How many ways can
you find to count the money?
Use pictures, numbers,
or words to show how
you counted.

Show and Share

Share your counting strategies with another pair of students.
Show them all the ways you used to count.

Connect ....

You can skip count to find the value of coin collections.

➤ Each quarter is worth 25 cents. Count by 25s.

25,   50,   75,   100,   125,   150,   175

The quarters are worth
one hundred seventy-five cents.
One hundred cents is one dollar.
So, we say one dollar and
seventy-five cents.

> When we have *more than*
> 100 cents, we can say the
> amount in dollars and cents.

➤ Each dime is worth 10 cents. Count by 10s.

10,   20,   30,   40,   50,   60,

70,   80,   90,   100,   110,   120

The dimes are worth one hundred twenty cents.
We say one dollar and twenty cents.

Ten dimes are one dollar. So, we could also arrange the dimes like this.

one dollar

one dollar and ten cents

one dollar and twenty cents

The dimes are worth one dollar and twenty cents.

Practice

1. Draw nickels to show one dollar and five cents.

2. Count the money. Write each amount in words.

   a)

   b)

   c)

   d)

3. How much money is in each picture?

a)

b)

c)

4. Krista counted the nickels from her bank. Is her count correct? If not, find her mistake and correct it.

5, 10, 15, 20, 25, 35, 40

5. David has one dollar in his pocket.
All his coins are the same.
What coins could he have?
How many solutions can you find?
How can you tell if you have found all the solutions?

Reflect

How much are twenty nickels worth?
Use pictures, words, or numbers to show your work.

Representing Numbers with Coins

Rajit has pennies, dimes, and loonies to count.

How much money does Rajit have?

Explore

You will need a tub of loonies, dimes, and pennies.
Find at least 3 ways to make two dollars.
Use pictures, numbers, or words to record the ways you find.

Show and Share

Share your work with another pair of students.
What other ways can you find to make two dollars?

There are many different ways to make four dollars and fifty-two cents.

I used 4 loonies, 5 dimes, and 2 pennies.

I used 3 loonies, 15 dimes, and 2 pennies.

I used 4 loonies, 4 dimes, and 12 pennies.

1. How much money is shown in each picture?

   a)

   b)

   c)

   d)

2. Justine has two dollars and fifty cents in her pocket.
   She only has dimes, pennies, and loonies.
   What coins could she have?
   Find at least 3 solutions.

3. Use loonies, dimes, and pennies.
   Show three dollars and forty-two cents.
   Show it in as many different ways as you can.
   Use numbers, words, or pictures to show each way.

4. a) How many pennies make three dollars?
   b) How many dimes make three dollars?
   c) How many loonies make three dollars?
   Use pictures, numbers, or words to explain your thinking.

Reflect

How is using coins to represent numbers the same as using
Base Ten Blocks? How is it different?

Counting by 3s and 4s

Some things come in threes or fours.

3 Balls for $1

4 Cars for $5
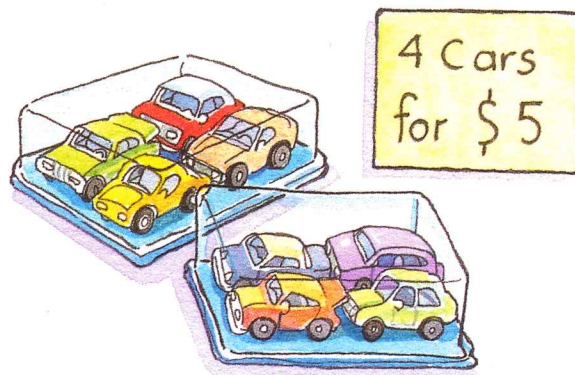
How many balls are there? How many cars?

Explore

You will need copies of these charts.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

Continue counting on by 3s. Colour the squares as you go.
What pattern can you find in the charts?
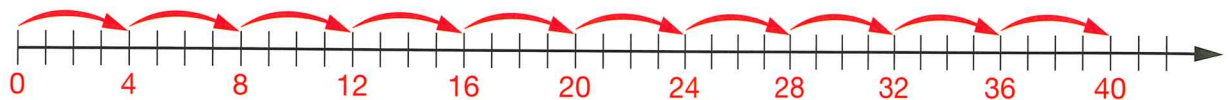Record the numbers for counting by 3s.

Show *and* Share

Show your charts to a classmate.
How are your patterns the same? How are they different?
Predict the pattern for 201 to 300.

Connect
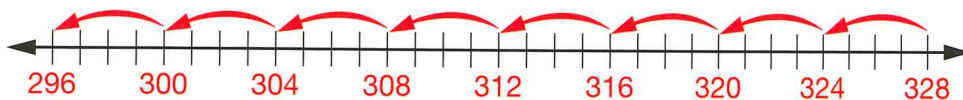
To count on by 4s, say every fourth number.

Start at 4. Count on by 4s:
    4, 8, 12, 16, 20, 24, 28, . . .
Note the pattern in the ones digits:
    4, 8, 2, 6, 0, 4, 8, . . .

Now start at 328.

Count back by 4s:
    328, 324, 320, 316, 312, 308, 304, 300, 296, . . .
Note the pattern in the ones digits:
    8, 4, 0, 6, 2, 8, 4, . . .

Practice

1. Copy each pattern and fill in the missing number.
   Describe the patterns.
   a) 9, 12, □, 18
   b) 44, 48, □, 56, □
   c) 108, 104, □, □, 92
   d) 387, □, 381, □, □

2. Use a blank number line.
   a) Start at 252. Count on by 3s to 270.
   b) Start at 69. Count back by 3s to 48.
   c) Start at 606. Count back by 3s to 582.

3. Use a blank number line.
   a) Start at 612. Count on by 4s to 640.
   b) Start at 172. Count back by 4s to 140.
   c) Start at 820. Count back by 4s to 792.

4. Find the mistakes in each pattern.
   Rewrite the patterns correctly.
   Describe each pattern.
   a) 186, 189, 192, 194
   b) 306, 303, 299, 297
   c) 532, 536, 540, 543
   d) 400, 396, 390, 386

5. Start at 300.
   Count on or back by 3s or 4s.
   Show your pattern on a number line
   or a hundred chart. Describe the pattern.
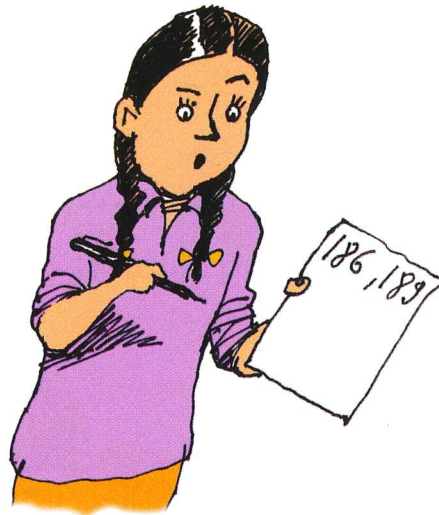
6. Four rows of a hundred chart are shown.
   Describe the pattern of the shaded squares.
   What numbers should be shaded in the fourth row?
   How do you know?

701	702	703	704	705	706	707	708	709	710
711	712	713	714	715	716	717	718	719	720
721	722	723	724	725	726	727	728	729	730
731	732	733	734	735	736	737	738	739	740

Reflect

How is counting by 3s and 4s the same as counting by 2s or 5s?
How is it different?

Estimating to 1000

Danielle is trying to figure out how many buttons are in the jar. How might she do this?

## Explore

Choose a bag of items.
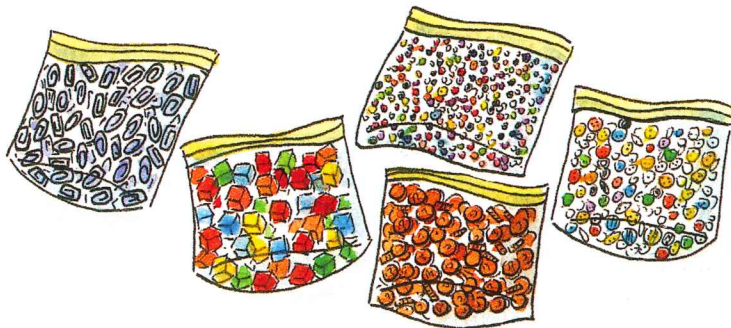
Think about a strategy you could use to **estimate** how many items are in the bag.
Work with your partner.
Make an estimate you can both agree on.
Record your estimate.

An estimate is a thoughtful guess that is close to the number you would have if you counted all the objects.
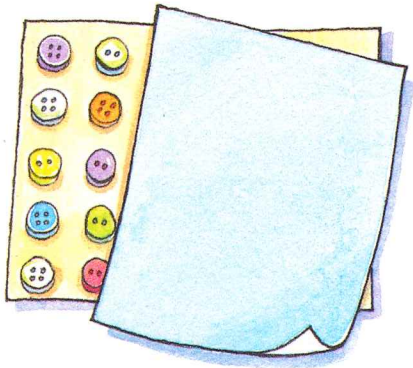
Show and Share

Share your strategy and estimate with another pair of students.
Count both collections.
Which estimate was closer?
Which strategy worked better?
Why do you think so?
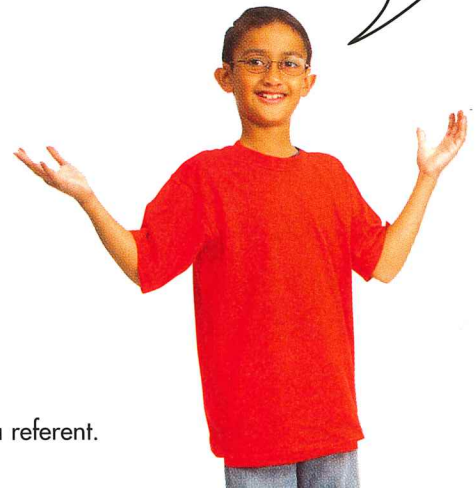
➤ We can only see part of the sheet of paper.
Estimate how many buttons are on the whole piece of paper.

There are 10 buttons on the part we can see.
Knowing this helps us to estimate how many
buttons are on the whole paper.
This is called using 10 as a **referent**.

It looks like there is room for 3 groups
of 10 on the whole paper.
10 + 10 + 10 = 30
A thoughtful estimate is 30 buttons.

➤ Look at the 100-seed pile.
Estimate how many seeds are in the big pile.

100

?
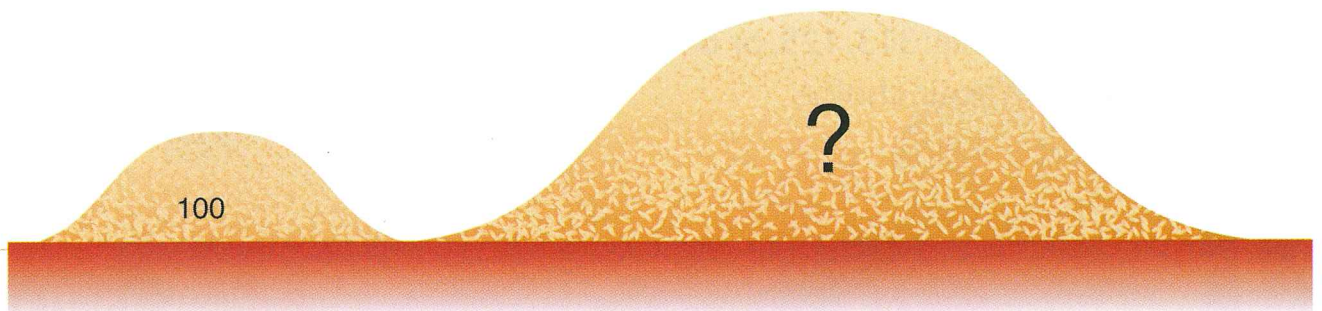
It looks like there is room for 4 groups of 100 seeds.
100 + 100 + 100 + 100 = 400
A thoughtful estimate is 400 seeds.
We used 100 as a referent to help make an estimate.

1. Estimate how many buttons are in the big pile.
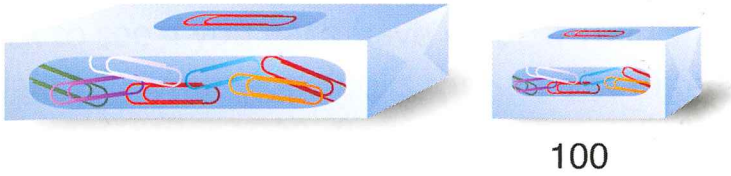   How did you make your estimate?

   10

2. Estimate how many beads are in the big bag.
   How did you make your estimate?

   100
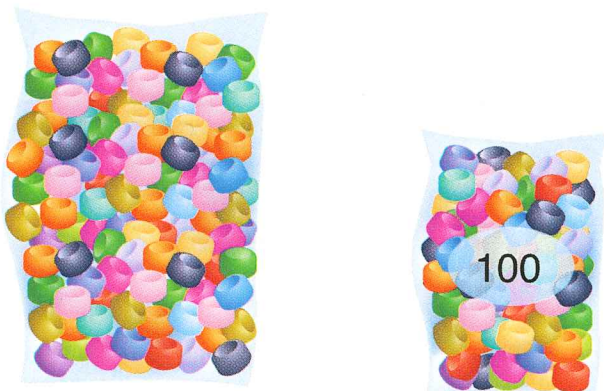
3. Choose the best estimate for the number of blocks in
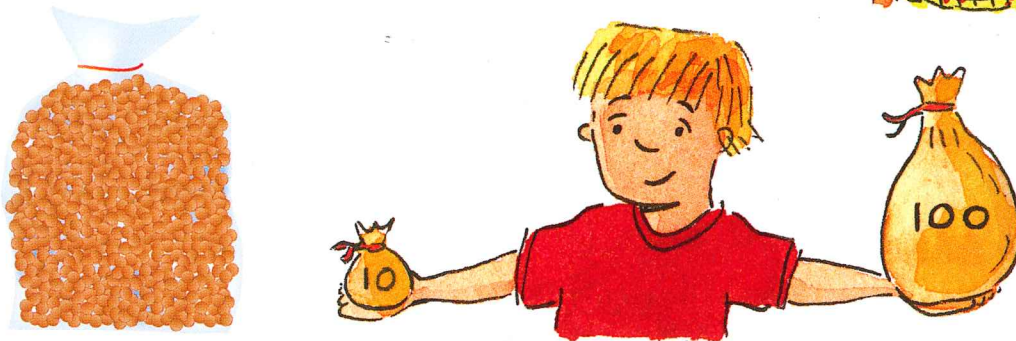   the big pile: 313, 125, or 648.
   Explain your choice.

   100
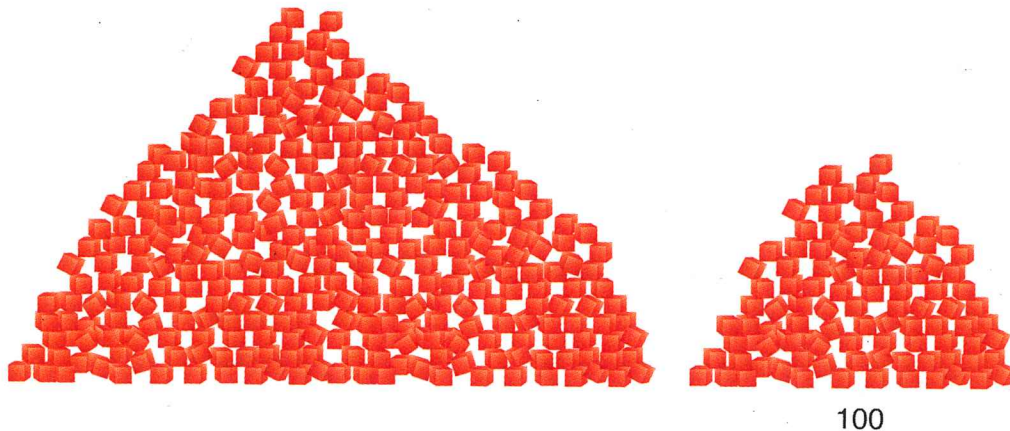
4. Do you agree or disagree with Sari's estimate? Explain your decision.

100

My estimate is 403 paper clips.

5. Which bag would be more helpful as a referent for estimating the number of pennies? Explain your choice.

6. René needs about 400 beads to complete his bookmark. How could he predict whether he has enough beads without counting all of them?

At Home

Reflect

Describe a strategy that you can use to help make a good estimate.

Look for a large collection of items. Count 10 and then make an estimate of the total number. Count 100 and make another estimate.

How Much Is 1000?

11

Scientists think that polar bears may be endangered because of thinning sea ice. Today, there are only about 1000 polar bears left in northeastern Manitoba.
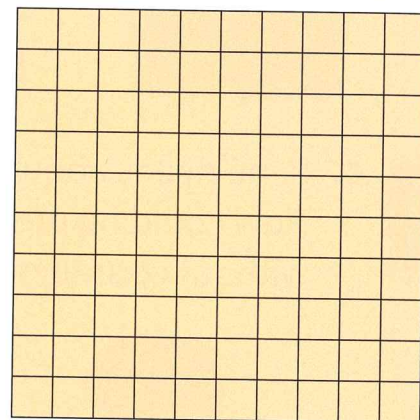
Explore

You will need 100-grid squares and a large sheet of paper.

Arrange the 100-grid squares so their sides are touching.

Count by 100s as you add squares to your design.

Stop when you have 1000.

Glue the squares down to make a 1000 shape.

LESSON FOCUS | Represent 1000 using base-ten materials.

Show and Share

Share your work with another pair of students.
Check to see if you each have made a 1000 shape.
Explain why your work looks the same or different.
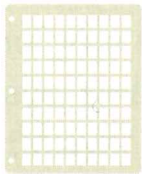How many other 1000 shapes can you make?

Connect

Janny's stamp album has 10 pages.
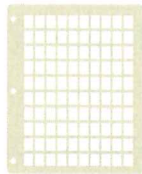Each page has 100 stamps.
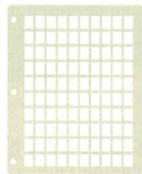
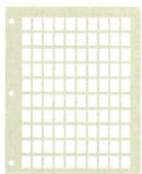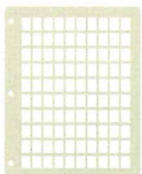How many stamps are in Janny's album?
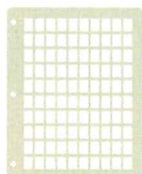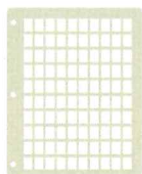
Count by 100s:
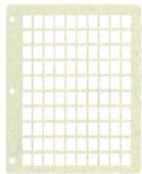
| 100 | 200 | 300 | 400 | 500 |

| 600 | 700 | 800 | 900 | 1000 |

10 groups of
1 hundred make
1 thousand.

1. Are there more than 1000 or fewer than 1000:
   a) stars in the sky on a clear night?
   b) students in your school?
   c) names in a telephone book?
   d) names on a page in a telephone book?
   e) footsteps to the principal's office?

2. Are there more than 1000 or fewer than 1000 blades of grass on a lawn? How could you find out?

3. When is 1000 a big number? Explain.

4. When is 1000 a small number? Explain.

5. How could you use Base Ten Blocks to show 1000? Explain.

Reflect

When would you like to have 1000 of something? Not like to have 1000 of something? Write about your ideas.

Race to 1000

Play with up to 4 players.
You will need Base Ten Blocks and a 0 to 9 spinner.

➤ Place the Base Ten Blocks in a pile where all players can reach them.

➤ Decide who will go first.

➤ Players take turns spinning.
On your turn, collect the number of tens shown on the spinner from the pile of Base Ten Blocks.

➤ When you can, make a trade for a hundred flat or a thousand block. Trades can only be made after you draw your tens from the pile and before the next player spins.

➤ The first player who can trade for a thousand block wins.

LESSON

1

1. Show the count to find out how many.
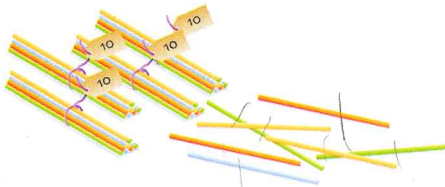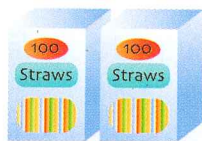
2. Three rows of a hundred chart are shown. Copy the rows. Fill in the missing numbers.

491	492	493				497	498	499	
	502	503	504	505	506	507			
	512			515	516		518		520

2

3. Write the base-ten name for each number.
   a) 142   **b)** 891   **c)** 306   **d)** 528   **e)** 290

4. Explain the value of each digit in the number 444. Use pictures, numbers, or words.

3

5. Use Base Ten Blocks to show each number 3 different ways. Draw a picture to show each way.
   a) 154   **b)** 316   **c)** 605

5

6. Use the digits 6, 3, and 9.
   a) Make as many 3-digit numbers as you can.
   b) Order the numbers you made.
   c) Which number is the greatest? The least?

6
9

7. Use a number line.
   a) Start at 27. Count on by 5s to 62.
   b) Start at 899. Count back by 10s to 819.
   c) Start at 325. Count on by 25s to 475.
   d) Start at 220. Count on by 4s to 248.
   e) Start at 180. Count back by 3s to 150.

8. Copy each pattern. Fill in the missing numbers.
   a) ☐, 75, 100, 125, ☐   **b)** ☐, 388, 378, 368, ☐
   c) ☐, 114, 119, 124, ☐   **d)** ☐, 609, 606, 603, ☐

9. How much money is in each picture?
Record your answers in words.

a)

b)

10. Tanya has three dollars and fifty-seven cents.
She has only dimes, pennies, and loonies.
What coins could she have?

11. Choose the best estimate for the number of buttons
in the big jar: 415, 200, or 728. Explain your choice.

12. Are there more or fewer than 1000:
a) people in a movie theatre?
b) hairs on a person's head?
c) pails of water in a lake?
Explain your thinking.

UNIT

2 Learning Goals

☑ model, compare, and order numbers to 1000

☑ explore the meaning of place value for numbers to 1000

☑ skip count by 3s, 4s, 5s, 10s, 25s, and 100s

☑ estimate a quantity using a referent