



DOUBLE IT DAILY

You can use Poster 5 with this storybook.

LITERACY ELEMENTS

homophones (homonyms):
e.g., ate/eight,
to/too/two

MATH CONNECTIONS

PATTERNING AND ALGEBRA
identifying, extending, and
creating number patterns

WORDS TO DISCOVER

ordinals: second to
seventh
opposites: e.g.,
after/before, night/day

ESL CONSIDERATIONS

Encourage children who are familiar with cotton candy to describe it, as it may be unfamiliar for many. Stuff small paper bags with newspaper and model the character's payment as you read.

Story Synopsis

The young girl in the story loves cotton candy. She gets her dream job working at the cotton candy booth at the fair. She is paid in cotton candy, 1 bag on her first day. Every day after that the amount is doubled. On day 4 she gets 8 bags and shares them with her brothers and sisters. By day 7, she takes home 64 bags of cotton candy. That's too much, even for her, so on day 8 she asks her boss if she can get paid in pennies instead.

Overall Learning Opportunities

- 123** Students will:
 - explore patterns and pattern rules
- A2B** Students will:
 - read a variety of simple written materials for different purposes
 - read aloud in a way that communicates the meaning
 - read independently, using reading strategies appropriate for Grade 2
 - express clear responses to written materials, relating the ideas in them to their own knowledge and experience

ACTIVITY MENU

Investigation: Patterns, page 96

Guided Reading, pages 97–98

As a Group, pages 99–100

- 123** • *Doubling Patterns*: using calculators to explore the doubling pattern
- *In-and-Out Machine*: using a graphic organizer to record calculations
- A2B** • *Cotton Candy Machine*: working together to conceptualize a machine
- *When I Grow Up*: discussing jobs of interest and drawing action pictures

Home Connections, page 101

- H** • *BLM 43*: exploring and recording patterns through observations and games

Independent Work, pages 102–106

- 123** • *BLM 44*: exploring number patterns using a hundreds chart
- *BLM 45*: practising exploring patterns
- *BLM 46*: demonstrating understanding by creating charts
- A2B** • *BLM 47*: practising putting narrative details in the correct order
- *BLM 48*: completing new sentences in order to tell a story differently

PATTERNS

LEARNING OPPORTUNITIES

Students will:

- explore multiples on a hundreds chart
- name and state the value of a nickel and a dime and demonstrate an understanding of these values
- recognize that patterns result from repeating an operation
- identify patterns

YOU WILL NEED

- calculators
- colouring materials in a variety of light colours
- several copies of BLM 3 for each child

OBSERVING FOR ASSESSMENT

Can the student:

- create a chart showing the pattern that results from a repeated operation?
- transfer information onto a hundreds chart?
- recognize and describe the pattern on a hundreds chart?

TEACHING tip

Keep the class chart posted for students to use as a model when they are asked to create their own charts.

Reading the Story

After reading the story, ask children to consider the payment the girl receives for operating the cotton candy machine. Ask:

- When you first read the contract on page 3, what did you think of the payment that the girl was given?
- What did you think of the payment at the end of the story?

Explain to the students that you are going to calculate how much the girl earned over a period of time. Create a chart with the first 3 days already calculated to help prompt the children's understanding.

Day	Number of Bags
1	1
2	2
3	4
4	

Tell the class that they will calculate how much she was paid by the end of her first week of work. First, ask them how many days are in one week. You will therefore be calculating the payment for Days 1 through 7 (inclusive). Then, reread the story and fill in the chart.

Starting the Investigation

Have children estimate how many bags of cotton candy they think the girl would have at the end of two weeks. Then, explain to children that they need to add seven more days to Day 7 in order to come to the end of the second week. Work with children to help them understand that you will now be calculating Days 8 through 14 (inclusive). Then, work together to record the results on the chart. Use a calculator, if necessary.

Next, present another payment plan for children to explore. Say:

➤ Suppose that, instead of the current payment plan, on the first day the girl received 2 bags, and each day after that she received two more bags.

With the class, set up another chart and work together to list the daily payment over a 2-week period. (Number of bags for Days 1 through 14 will read: 2, 4, 6, ..., 28.) Then, provide children with a hundreds chart (Blackline Master 3) and have them shade the numbers that correspond to the pay she received each day for 2 weeks. Ask:

➤ What pattern do you see?



Page 14

Working on the Problem

Brainstorm other payment plans and list them on the chalkboard. Possibilities are:

- 1 bag the first day and 3 bags every day after
- 4 bags the first day and 10 bags every day after

Have children choose a payment plan from the list, or one of their own. On a sheet of paper, children should write the payment at the top of the page and create a two-column chart to show the day and the payment. Once their chart is complete, have children transfer their information by circling the daily payments on a hundreds chart.

Sharing Solutions

Have children tell about their completed two-column charts and hundreds charts. Ask children to identify and describe any patterns they see.

Extension

Challenge children to follow the directions on Blackline Master 44. Afterwards, discuss why some of the numbers are coloured more than once.



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LEARNING OPPORTUNITIES

Students will:

- retell a story in proper sequence, and discuss some aspects of the story
- express their thoughts and feelings about ideas in a piece of writing
- use and interpret some conventions of formal texts

YOU WILL NEED

- scissors and glue

TEACHING tip

You might want to

divide *Reading the Text* into 2 sittings. At the end of page 11, ask the children to figure out how many bags of cotton candy she'd be paid the next day (32) and what ideas the children have for her to be able to get 32 bags home. You could then pick up the instruction on page 12.

Setting the Scene

Invite the children to talk about their experiences going to a fair and what they like to do there. Tell the children that this story is about a young girl who loves going to the fair. Say:

- She loves the rides, the balloons, the games, and the prizes. But most of all, she loves _____. What do you think she loves most of all?

Invite many guesses and record the children's ideas. Have the children look at the cover art and talk about what they see in the picture and what it tells them about the story. Say:

- The title of this book is *Double It Daily*. What do you think is meant by "double"? What is the meaning of "daily"? What might "it" be?

Encourage the children's responses and then say:

- Let's find out.

Reading the Text

- Say to the children:

- Turn to page 2. Read pages 2 and 3 to find out what it is she loves about the fair, and what it is she loves most of all. As soon as you know, raise your hand.

When everyone agrees that what she loves most of all is the cotton candy, invite the children to talk about what it looks like, what it feels like, and what it tastes like. Then read aloud the remainder of page 3, including the contract. Ask:

- What does it mean that every day her pay will be doubled? What will her pay be on the second day?

- Turn to page 4 and read to find out what she cleaned on the second day of work.

- Read page 5 to find out what her pay was on the second day and what she did with her pay.

- Turn to page 6. You can see from the picture that on her third day there were a lot more people and it was a busy day. Read this page to find out how much she was paid and when she ate her pay.

Have the children look at page 7. Say:

- On page 7 you can see her sitting on her bed, eating her cotton candy, and saying that there's no such thing as too much cotton candy. Do you think that's true? Why? Why not?

- Turn to page 8 and look at the picture. What's different from the other picture in which there were so many people? Why are there no people?

- Read this page to find out what her pay was for that rainy day.

Read page 9 aloud to the children and ask them to look at the picture. Ask:

- Why does everyone look so happy?

- Turn to page 10. Look at the picture. On this day, while she takes the money, what is her boss doing?

- On page 11 there are lots of people holding bags of cotton candy. Count to find out how many bags. If her pay that day was 16 bags and her pay doubles daily, what will her pay be the next day? Talk it over with the person sitting next to you.

- Turn to page 12 and read to find out if you were right.

- Thirty-two bags is a lot of cotton candy and it takes up a lot of space. Look at the picture on page 13 to see where she puts all of it.

- Turn to page 14. How does her boss look? How does the girl look? Why?

OBSERVING FOR ASSESSMENT

During *Reading the Text*, does the student:

- use the pictures to aid in understanding the storyline?
- use the vocabulary of the story to answer the guiding questions?

During independent reading, does the student:

- focus on the task?
- appeal for help—rarely, if ever? sometimes? frequently?

Have the children read pages 14 and 15 to find out what the girl realizes. Say:

- Now she knows you can have too much cotton candy. She knows because she is looking at it. What do you think she will do to solve the problem? Talk it over with the person beside you.

Invite the children's responses. Say:

- Turn to page 16. Read the page to find out her solution to the problem.

- Did any of you think that's what she'd do?

- Have the children go back and read the whole book independently.

After Reading

Ask:

- Would any of you like a job where you were paid in something other than money? Tell us about the job you'd like, and how you'd like to be paid.

Revisit the Story

Engage children in a conversation about the story by using open-ended prompts:

- A title tells about the main idea in a story or what the story is about. Do you think *Double It Daily* was a good title for this story? Do you have any ideas for a better title?

- Who was the main character? How do you know that? Did you enjoy her? Why? Why not?

- If you were to give the girl a name, what would it be? Why?

- Could this story really happen? Why? Why not?

Engage the children in recalling specific information from the selection. Ask:

- What are some of the things that the girl likes about fairs?

- Why do you think she loves cotton candy most?

Focus the children on the way the story is told through language. Ask:

- Were there any words that gave you a struggle? Which one(s)? What did you do to figure out the word(s)?

Take children back through the story and retell it by the day. (On the first day...

On the second day... On the third day..., and so on.)

Provide children with **Blackline Master 47** and encourage them to use the book as a reference.



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Reinforce the Story

Have the children use **Blackline Master 48** to retell some of the important happenings of the girl's first eight days of work.



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LEARNING OPPORTUNITIES

Students will:

- recognize that patterning results from repeating an operation
- identify patterns
- use a calculator to explore patterns
- explain a pattern rule

YOU WILL NEED

- calculators

OBSERVING FOR ASSESSMENT

Can the student:

- use the calculator to explore and create a pattern?

Activity: Doubling Patterns

Provide children or pairs of children with calculators. Together, follow the pattern that is presented in *Double It Daily*. Begin by asking:

- How much was the girl paid on the first day? (1 bag of cotton candy)

Have children enter 1 in the calculator and read the display aloud. Continue:

- What was the deal for pay? (double it each day)
- How do you double a number? (multiply by 2 or add the number to itself)

Ask some of the pairs to enter $+ 1$ and some of the pairs to enter $\times 2$. Then ask:

- How many bags was she paid the next day? (2)

Continue to have children use the calculator to explore the doubling pattern. Have them read the display aloud each time they enter an operation and a number. Talk about how the doubling pattern is either adding the number to itself, or multiplying by 2.

Extension

Blackline Master 45 engages children in exploring other patterns. To complete the charts, they can use the calculator, use paper and pencil, or make mental calculations.



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LEARNING OPPORTUNITIES

Students will:

- recognize that patterning results from repeating an operation
- identify patterns
- read charts that display patterns

Activity: In and Out Machine

Remind children that the young girl operated a cotton candy machine at the fair. Now tell them to imagine another kind of machine called an “In and Out Machine.” With this machine, you set the dial to perform a certain task (such as doubling the number, or adding 5 to the number). You then feed numbers into the machine and the machine repeats the same operation over and over again until it is turned off. The game is to figure out what the machine is doing to each number that is fed into it.

On the chalkboard or chart paper, set up a table like the one below.

"In" number	"Out" number
1	2
2	4
3	6
4	8
5	10

Begin to fill in the table. Ask:

- What is the machine doing to each number that is fed into it to get the number that comes out? (doubling the number)
- What do you think we would get if we fed the number 6 into the machine? (12) If we fed in the number 10? (20)

Present a different table, this time one that adds 5 to each number. Have children look at the pattern and identify the operation that is happening to each number that enters the machine.

Repeat the process using other patterns.

Extension

Challenge children to create their own In and Out Machines on **Blackline Master 46**. As children share their work, others in the class can be asked to predict what will come next on the chart.



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LEARNING OPPORTUNITIES

Students will:

- use speech appropriately for various purposes
- participate in group discussions

OBSERVING FOR ASSESSMENT

Does the student:

- work co-operatively and use and build on others' ideas?
- understand the meaning of "machine"?
- use rehearsal time well?

Activity: Cotton Candy Machine

Invite the children to work in groups to create a cotton candy machine, using themselves as the machine parts. Through conversation, the children decide who will take on what part of the machine. For example, one child can be the turn-on switch, the upstretched arms of another can be the container that holds the cotton candy, and so on. Encourage the children to add appropriate sound effects.

Be sure the children understand that each part of their machine must connect with at least one other part, and why.

When the machine is created, have the children "freeze-frame" so you can push the button that starts it up.

Extension

Have each group demonstrate their cotton candy machine to the rest of the class. Encourage discussion on the similarities and differences among the machines.

Challenge children to create other machines they may have seen at a fair, or at home, or at school.

LEARNING OPPORTUNITIES

Students will:

- create simple media works
- use linking words such as *because*, *if*, and *after* to organize ideas in speech

YOU WILL NEED

- drawing materials

OBSERVING FOR ASSESSMENT

Does the student:

- use linking words to connect ideas?
- present his/her ideas in a coherent sequence?

Activity: When I Grow Up

Have the children talk about what job they would like to have as an adult. If the children have difficulty thinking of what they would like to be when they grow up, suggest that they think about a part-time job they would like to have when they're in high school.

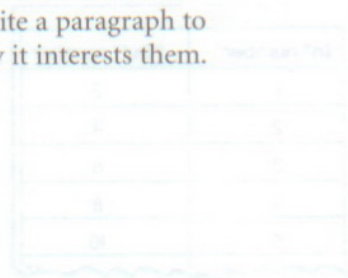
Encourage the children who are the audience to ask questions. (Why did you choose that job?)

Following the conversation, have the children make a picture of themselves as adults in the job and write a paragraph to identify the job and why it interests them.

When rehearsed, invite the children to share their paragraphs with the group.

Extension

Create a "When I Grow Up" bulletin board on which the children can put their pictures and paragraphs. Encourage children to read the contributions.





Double It Daily

Dear Family,

We've enjoyed reading the book *Double it Daily*. This storybook is part of a series called *Side By Side*. This series connects mathematics and language through reading. Spending time reading and doing math activities at home helps your child develop solid skills and concepts. Enjoy reading the story with your child.

Choose some or all of these activities to enjoy together:

- In the story, the little girl signed a contract indicating she will be paid in cotton candy. Her first day's pay is one bag. Each day after, the pay is doubled. How many bags of cotton candy do you think she will have after two weeks? Three weeks? Use a calculator and work it out with your child to find out.
- With your child, try an activity that looks for patterns in numbers. Make a two-column chart. Label one chart "People," the other "Legs." Calculate and record on the chart how many legs there are for 1 person, for 2 people, all the way up to 10 people. Talk about the pattern that is revealed. Repeat the process for other categories, such as: dogs and legs, people and fingers, trikes and wheels, feet and toes. Make up other categories, create charts to document your calculations, and talk about the revealed number patterns.
- Play a doubling game using a die and some objects that will function as counters, such as buttons, beans, or paperclips. This game consists of 5 rounds. In a round, each person rolls the die once. Whoever has the highest number wins the round and therefore takes double the amount rolled in counters. For example, if the die reads 4, she or he takes 8 counters. After five rounds, each person counts her or his counters; the person with the most wins. Continue to play as long as your child is interested.

Remember to send the storybook back to school with your child.

My name is _____ . Today is _____ .

Colour counting patterns.

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

Count by twos. Colour the numbers you say yellow.






Count by fives. Colour the numbers you say green.






Count by tens. Colour the numbers you say red.

What numbers did you colour more than once?

My name is _____ . Today is _____ .

Find the patterns.

How many eyes?	
Faces	Eyes
	
	
	
	
	

How many fingers?	
Hands	Fingers
	
	
	
	
	

How many eyes on 6 faces? _____

How many eyes on 10 faces? _____

How many fingers on 6 hands? _____

How many fingers on 10 hands? _____









Count by 10.


10, _____, _____, _____, _____,

_____, _____, _____, _____, _____.

My name is _____ . Today is _____ .

Make your own In and Out machines.

In	Out
	
	
	
	

In	Out
	
<p>How many fingers on _____ hands?</p>	<p>How many eyes on _____ faces?</p>
<p>How many fingers on _____ hands?</p>	<p>How many eyes on _____ faces?</p>
<p>Count by 10.</p>	<p>10.</p>

My name is _____ . Today is _____ .

**Cut out the sentences and glue them
in the correct order from first to last.**

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____



I took my little brother's wagon with me to work.

The woman who sells cotton candy gave me a job.

It rained all day.

I had to take 64 cotton candy bags with me.

I was paid two bags of cotton candy.

My boss let me go home early.

I asked about being paid in pennies.

My name is _____ . Today is _____ .

Glue the correct endings in place to retell the story.

1. On the first day, she _____
2. On the second day, she _____
3. On the third day, she _____
4. On the fourth day, _____
5. On the fifth day, she _____
6. On the sixth day, she _____
7. On the seventh day, she _____
8. On the eighth day, she _____



- asked to be paid in pennies.
- helped clean the machine.
- was very busy.
- took people's money.
- took her brother's wagon to work.
- got a job.
- got 64 bags of cotton candy.
- it rained all day.