



LIGHTS OUT

*A Movement to Help
Migrating Birds*

written by
JESSICA STREMER

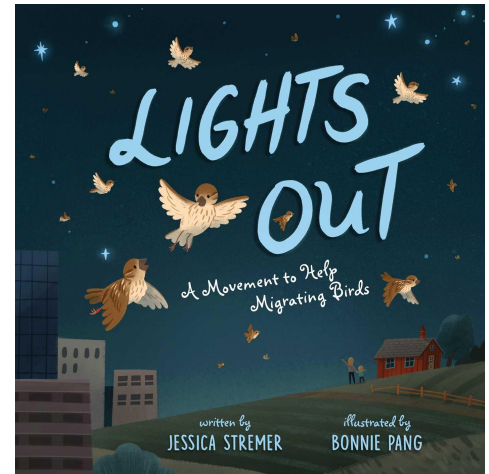
illustrated by
BONNIE PANG

educational TEACHING GUIDE

RESOURCES DESIGNED BY: the subway side

LIGHTS OUT

teaching guide



ABOUT THE BOOK

When the seasons change and it's time for a flock of sparrows to move on, a map made of stars guides their way. But when they reach the city, light pollution masks the map and confuses the birds. One sparrow becomes separated from the flock. A girl rescues the lost sparrow and decides to take action so this doesn't happen again. She rallies a group of friends, and together they encourage people all over the city to help the sparrows by turning off their lights at night. But will the city be ready by the time the flock return?

PRE-READING ACTIVITIES

Before reading LIGHTS OUT consider the following activities to engage your readers.

1. Take a picture walk of the story, flipping each page and pointing out the illustrations. Encourage students to predict what will happen in the story.
2. Host a class-wide discussion about the title. Why did the author choose that title? What might we be reading about?
3. Create a mind map to brainstorm what students already know about the word MIGRATION.

ABOUT THE AUTHOR

JESSICA STREMER

Jessica Stremmer is an award-winning children's author who combines her love of science and writing to create books that inspire kids to explore and think critically about the world around them. Her books have received multiple starred reviews and have been designated as School Library Journal Gold Standard Selections, Cook Prize Silver Medal recipient, NYPL Best Book of the Year, and NSTA Outstanding Science Trade Book. Jessica obtained a B.S. in Biology from the University of Wisconsin Oshkosh. When not writing you can find her cheering from the sideline of her kids' soccer games and planning her next family adventure.



RESOURCES DESIGNED BY: *the subway side*

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EDUCATIONAL ACTIVITIES

Based on the real-life Lights Out movement, this inspirational picture book shows how even the smallest of actions, like flipping a switch, can make a big difference in helping migrating birds. The inquiry-driven activities in this guide apply to a variety of content areas and educational standards. They may be used for a range of learners and are aligned to the CCSS and NGSS.

SOCIAL-EMOTIONAL

Be a star!

Target Grade Range: K – 5th Grade

In the back matter section of LIGHTS OUT, we learn how to support migratory birds and get involved with the Lights Out Movement. Take this a step further with this fun, interactive activity! Students will write and/or draw about how they can be a STAR in their community and support the Lights Out movement. This activity encourages speaking and listening skills and provides interesting talking points for students to share with each other.



WRITING

light pollution research

Target Grade Range: 1st– 5th Grade

Jessica Stremmer teaches readers about the negative effects of light pollution. Encourage students to research and learn more about light pollution. Using books, devices, and/or the backmatter section of the book, students will record facts about light pollution and write an informational paragraph about what they learned.

ENGLISH-LANGUAGE ARTS

3, 2, 1 comprehension

Target Grade Range: 1st – 5th Grade

Non-fiction stories offer readers an opportunity to learn new facts. Encourage students to think about what they learned while reading LIGHTS OUT. Using a pencil and the differentiated graphic organizer of their choice, ask students to write about 3 new things they learned, 2 new facts acquired, and 1 question they still have after reading. This activity provides a great conversation starting tool and is a wonderful way to reflect on new learning.

RESOURCES DESIGNED BY: *the subway side*

EDUCATIONAL ACTIVITIES

Based on the real-life Lights Out movement, this inspirational picture book shows how even the smallest of actions, like flipping a switch, can make a big difference in helping migrating birds. The inquiry-driven activities in this guide apply to a variety of content areas and educational standards. They may be used for a range of learners and are aligned to the CCSS and NGSS.

ENGLISH-LANGUAGE ARTS

problem + solution

Target Grade Range: K – 5th Grade

In *LIGHTS OUT*, the girl experiences a clear problem. As with any story, every problem has a solution. Explore the girl's big problem and how she works to solve it. Students may use another character or idea other than the girl to consider a totally different problem in the story. Students can draw a picture to go along with their thoughts, using their favorite art supply. The graphic organizers have differentiated lined paper, appropriate for students in a range of grade levels.

SCIENCE

migrate or hibernate sort

Target Grade Range: K – 5th Grade

Compare and contrast animals that migrate and hibernate in cold weather with this fun and interactive sort! Students will decide which animals migrate and which animals hibernate by cutting, sorting, and gluing animals into the correct column.

STEAM

Build a nest challenge

Target Grade Range: K– 5th Grade

In the story, readers learn more about birds and their natural habitats. Use this context to engage learners in a STEAM activity, where they must engineer and design a bird's nest with the given supplies. Students can work independently or in small groups to follow the steps of the engineering design process.



RESOURCES DESIGNED BY: *the subway side*

EDUCATIONAL ACTIVITIES

Based on the real-life Lights Out movement, this inspirational picture book shows how even the smallest of actions, like flipping a switch, can make a big difference in helping migrating birds. The inquiry-driven activities in this guide apply to a variety of content areas and educational standards. They may be used for a range of learners and are aligned to the CCSS and NGSS.

SOCIAL-STUDIES

Being a good citizen

Target Grade Range: 1st – 5th Grade

Good citizenship shines in LIGHTS OUT. Students will explore what it means to be a good citizen, with this social-studies activity. Encourage children to think and write about how they can practice good citizenship in their communities. Then, they can color the illustration from the story. The graphic organizers have differentiated lined paper, appropriate for students in a range of grade and ability levels.

ART

bird craft

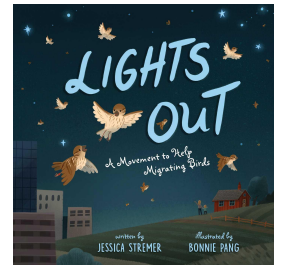
Target Grade Range: K – 5th Grade

What better way to celebrate this amazing new story than with an art project? Have students create a bird craft, like the birds pictured in the illustrations. Gather the needed supplies (colored construction paper, scissors, and glue sticks) and allow students to create an adorable craft that captures the message in this story.

RESOURCES DESIGNED BY: *the subway side*



SOCIAL / EMOTIONAL ACTIVITY



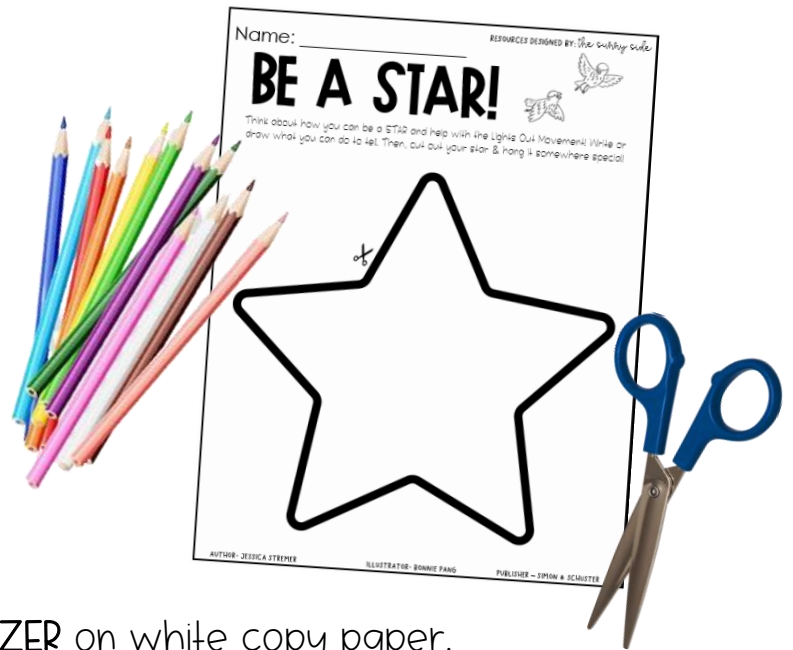
BE A STAR!

Standards:

CCSS.ELA-LITERACY.SL.K.1-6
CCSS.ELA-LITERACY.SL.1.1-6
CCSS.ELA-LITERACY.SL.2.1-6
CCSS.ELA-LITERACY.SL.3.1-6
CCSS.ELA-LITERACY.SL.4.1-6
CCSS.ELA-LITERACY.SL.5.1-6

You will need:

- White or colored copy paper
- Pencils



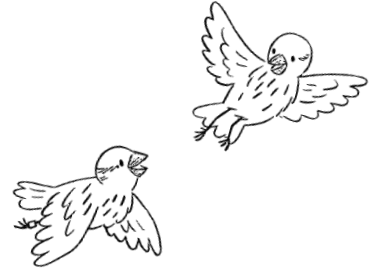
Step-by-step to-do list:

1. Copy the **BE A STAR GRAPHIC ORGANIZER** on white copy paper.
2. First, brainstorm with students how they can positively contribute to the Lights Out Movement.
 - See the HOW TO HELP heading in the backmatter section of LIGHTS OUT for ideas.
3. Explain that students will write or draw a way that they can be a star and help migratory birds.
4. Students can use their favorite art supply to decorate the star or color what they drew.
5. When students finish writing and/or drawing, they will cut the star out with scissors.
6. Then, collect the stars and hang them in a special place in your classroom.
7. For younger students (K and younger) students can simply draw rather than write inside the outline of the star.

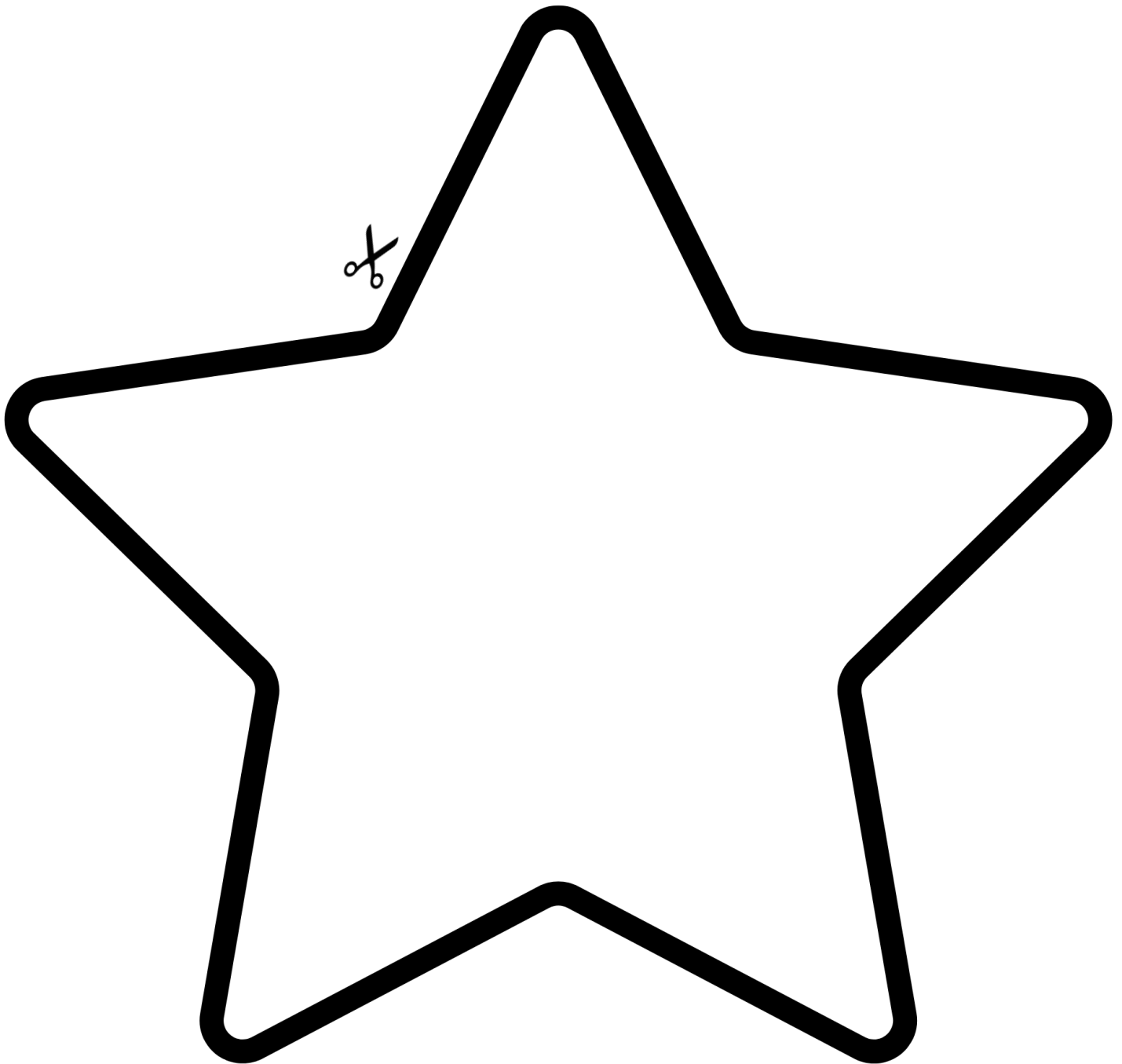
RESOURCES DESIGNED BY: the subway side

Name: _____

BE A STAR!

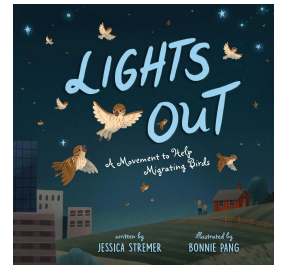


Think about how you can be a STAR and help with the Lights Out Movement! Write or draw what you can do to tell. Then, cut out your star & hang it somewhere special!



WRITING ACTIVITY

LIGHT POLLUTION RESEARCH



Standards:

CCSS.ELA-LITERACY.W.1.2
CCSS.ELA-LITERACY.W.2.2
CCSS.ELA-LITERACY.W.3.2
CCSS.ELA-LITERACY.W.4.2
CCSS.ELA-LITERACY.W.5.2

You will need:

- White copy paper
- Pencils
- Research tools (like Chromebooks, I-pads, or non-fiction books about light pollution)



Step-by-step to-do list:

1. Decide which **LIGHT POLLUTION RESEARCH GRAPHIC ORGANIZER + WRITING PAPER** works best for your students and copy on white paper.
2. Distribute the fact graphic organizers and writing paper to students.
3. Encourage students to research light pollution (having access to technology like Chromebooks or I-pads works best).
4. Students should record the facts they learn about light pollution (you can also direct them to the backmatter section of the book).
5. Finally, have students write an informational paragraph on the writing paper by copying the facts and adding an introduction and conclusion sentence.
6. For younger students (1st grade and younger) you may want to complete this as a shared research project, where students copy your research.

RESOURCES DESIGNED BY: the subway side

Name: _____

RESOURCES DESIGNED BY: *the sunny side*

LIGHT POLLUTION RESEARCH

TOPIC:

FACT 1

FACT 2

FACT 3

FACT 4

SOURCE :

Name: _____

RESOURCES DESIGNED BY: *the sunny side*

LIGHT POLLUTION RESEARCH

TOPIC: _____

FACT 1

FACT 2

FACT 3

FACT 4

SOURCE : _____

Name: _____

RESOURCES DESIGNED BY: *the sunny side*

LIGHT POLLUTION RESEARCH

TOPIC:

FACT 1

FACT 2

FACT 3

FACT 4

SOURCE :

Name: _____

LIGHT POLLUTION RESEARCH



ELA ACTIVITY

3, 2, 1 COMPREHENSION



Standards:

- CCSS.ELA-LITERACY.RI.1.1
- CCSS.ELA-LITERACY.RI.2.1
- CCSS.ELA-LITERACY.RI.3.1
- CCSS.ELA-LITERACY.RI.4.1
- CCSS.ELA-LITERACY.RI.5.1

You will need:

- White copy paper
- Pencils

Step by step to do list:

1. Decide which differentiated lined paper works best for your students.
2. Copy the 3, 2, 1 COMPREHENSION GRAPHIC ORGANIZERS on white copy paper.
3. Explain that students will reflect on and write about 3 new things they learned, 2 new facts they gained, and 1 question they still have after reading.
4. Allow independent work time and then an opportunity for students to share with classmates in partnerships or in a small group.
5. For younger students (1st grade and younger) you may want to complete this activity as a whole group or encourage students to draw rather than write.

RESOURCES DESIGNED BY: the subby side

Name: _____

3, 2, 1 COMPREHENSION

Write about 3 things you learned, 2 new facts, and 1 question you still have after reading LIGHTS OUT.

3

THINGS I LEARNED

2

NEW FACTS

1

QUESTION

Name: _____

3, 2, 1 COMPREHENSION

Write about 3 things you learned, 2 new facts, and 1 question you still have after reading LIGHTS OUT.

3

THINGS I LEARNED

Handwriting practice lines for the '3 Things I Learned' section, consisting of four sets of three horizontal lines (top solid, middle dashed, bottom solid).

2

NEW FACTS

Handwriting practice lines for the '2 New Facts' section, consisting of four sets of three horizontal lines (top solid, middle dashed, bottom solid).

1

QUESTION

Handwriting practice lines for the '1 Question' section, consisting of four sets of three horizontal lines (top solid, middle dashed, bottom solid).

Name: _____

3, 2, 1 COMPREHENSION

Write about 3 things you learned, 2 new facts, and 1 question you still have after reading LIGHTS OUT.

3

THINGS I LEARNED

2

NEW FACTS

1

QUESTION

ELA ACTIVITY

PROBLEM AND SOLUTION



Standards:

CCSS.ELA-LITERACY.RL.K.1
CCSS.ELA-LITERACY.RL.1.1
CCSS.ELA-LITERACY.RL.2.1
CCSS.ELA-LITERACY.RL.3.1
CCSS.ELA-LITERACY.RL.4.1
CCSS.ELA-LITERACY.RL.5.1

You will need:

- White copy paper
- Pencils
- Art Supplies (crayons or colored pencils)

Name: _____

PROBLEM & SOLUTION

Write about a problem and solution in the story. Then, draw a picture to go along with your sentences.

PROBLEM

SOLUTION

DRAW A PICTURE!

RESOURCES DESIGNED BY: THE OUTSTAY SIDE

AUTHOR - JESSICA STREMER

ILLUSTRATOR - BONNIE PANG

PUBLISHER - SIMON & SCHUSTER

Step-by-step to-do list:

1. Decide which **PROBLEM + SOLUTION GRAPHIC ORGANIZER** works best for your students and copy on white paper.
2. Distribute the graphic organizers to students.
3. Brainstorm with students a problem that was encountered by the girl in the story and how that problem was solved.
4. Students should write about a problem, a solution to the problem, and then draw a picture to go along with their thoughts.
5. Allow students an opportunity to share with other students in class.
6. For younger students (1st grade and younger) you may want to complete this activity as a whole group or use the graphic organizer with blank boxes for students to draw rather than write.

RESOURCES DESIGNED BY: the outstay side

Name: _____

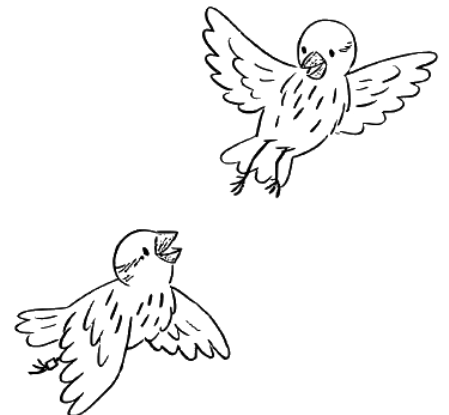
PROBLEM & SOLUTION

Write about a problem and solution in the story. Then, draw a picture to go along with your sentences.

PROBLEM

SOLUTION

DRAW A PICTURE!



Name: _____

PROBLEM & SOLUTION

Write about a problem and solution in the story. Then, draw a picture to go along with your sentences.

PROBLEM

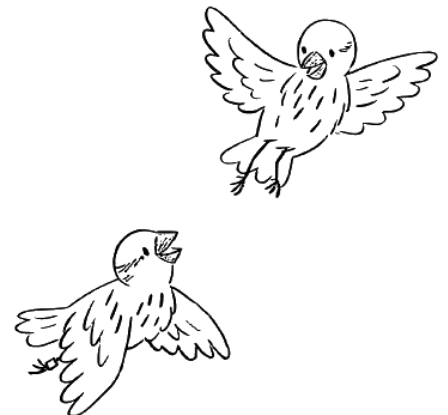
Four horizontal lines for writing: a solid top line, a dashed middle line, and a solid bottom line.

SOLUTION

Four horizontal lines for writing: a solid top line, a dashed middle line, and a solid bottom line.

DRAW A PICTURE!

A large rounded rectangular box for drawing a picture.



Name: _____

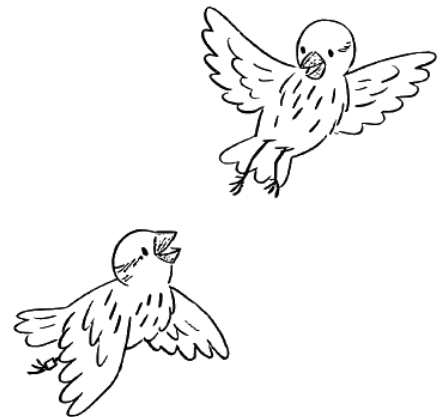
PROBLEM & SOLUTION

Write about a problem and solution in the story. Then, draw a picture to go along with your sentences.

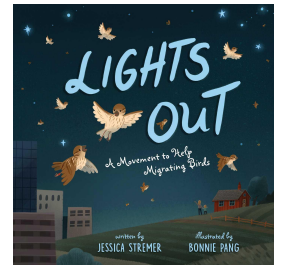
PROBLEM

SOLUTION

DRAW A PICTURE!



SCIENCE ACTIVITY



MIGRATE OR HIBERNATE?

Standards:

- CCSS.ELA-LITERACY.SL.K.1-6
- CCSS.ELA-LITERACY.SL.1.1-6
- CCSS.ELA-LITERACY.SL.2.1-6
- CCSS.ELA-LITERACY.SL.3.1-6
- CCSS.ELA-LITERACY.SL.4.1-6
- CCSS.ELA-LITERACY.SL.5.1-6

You will need:

- White or colored copy paper
- Pencils
- Scissors
- Glue sticks



Name: _____

RESOURCES DESIGNED BY: *the subway side*

MIGRATE OR HIBERNATE?

Cut apart each animal word below. Read them and decide whether the animal would migrate or hibernate in cold weather. Then, glue the sentence in the box below.

MIGRATE	HIBERNATE

Geese	Deer	Bats
Bears	Fish	Birds
Butterflies	Skunks	Mice

AUTHOR: JESSICA STREMER ILLUSTRATOR: BONNIE PANG PUBLISHER: SIMON & SCHUSTER

Step-by-step to-do list:

1. Copy the **MIGRATE OR HIBERNATE SORT** on white copy paper.
2. First, flip to the backmatter section of **LIGHTS OUT** and read the information about bird migration.
3. Explain that depending on the circumstances, some animals migrate like the birds in the story while others hibernate.
 - Hibernation is when some animals have long periods of deep sleep during cold weather.
4. Students will use scissors to cut apart the sentences on the bottom of the sort.
5. They will decide whether the animal is one that would migrate or hibernate and glue each animal on the correct side of the sort.
 - Migrate – Fish, butterflies, birds, geese
 - Hibernate – Bears, deer, bats, mice, skunks
6. For younger students (1st grade and younger) you may want to complete this activity as a whole group together.

Name: _____

MIGRATE OR HIBERNATE?

Cut apart each animal word below. Read them and decide whether the animal would migrate or hibernate in cold weather. Then, glue the sentences in the box below.

MIGRATE	HIBERNATE



Geese

Deer

Bats

Bears

Fish

Birds

Butterflies

Skunks

Mice

STEAM ACTIVITY

BUILD A BIRD'S NEST

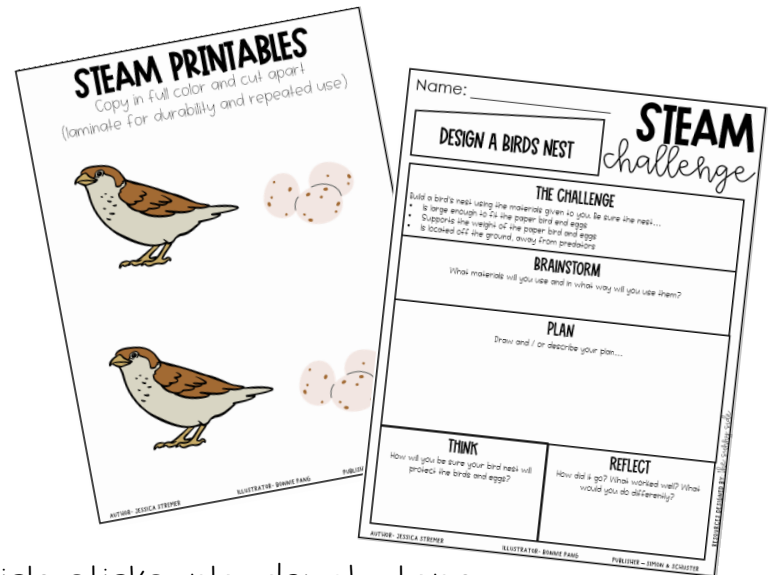


Standards:

- 3-5-ETS1-1.
- 3-5-ETS1-2.
- 3-5-ETS1-3.

You will need:

- White copy paper
- Pencils
- Crayons / colored pencils / markers
- Access to colored printer
- For each group: Pipe cleaners, popsicle sticks, playdough, tape, construction paper & colored copies of the bird and eggs



Step-by-step to-do list:

1. Decide student groups prior to this activity (groups of no more than 4 students generally work best).
2. Copy the **DESIGN A BIRD'S NEST GRAPHIC ORGANIZER** on white copy paper.
3. Print the bird and eggs in color and gather the rest of the supplies (listed above).
4. Explain that the goal today is to design and build a birds nest you might find a bird living in out in the wild.
5. Distribute the STEAM page to students and allow them to work through the questions in their small group.
6. Give each group the materials they need and allow time to create.
7. Reflect on the STEAM experiment and allow students an opportunity to share with other groups.
8. For younger students (1st grade and younger) you may want to complete this activity as a whole group together.

Name: _____

STEAM

challenge

DESIGN A BIRDS NEST

THE CHALLENGE

Build a bird's nest using the materials given to you. Be sure the nest...

- Is large enough to fit the paper bird and eggs
- Supports the weight of the paper bird and eggs
- Is located off the ground, away from predators

BRAINSTORM

What materials will you use and in what way will you use them?

PLAN

Draw and / or describe your plan...

THINK

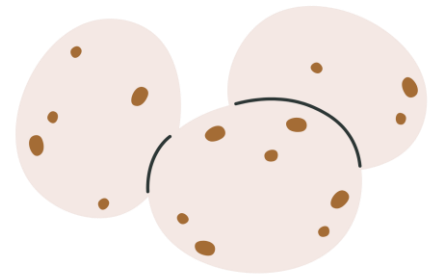
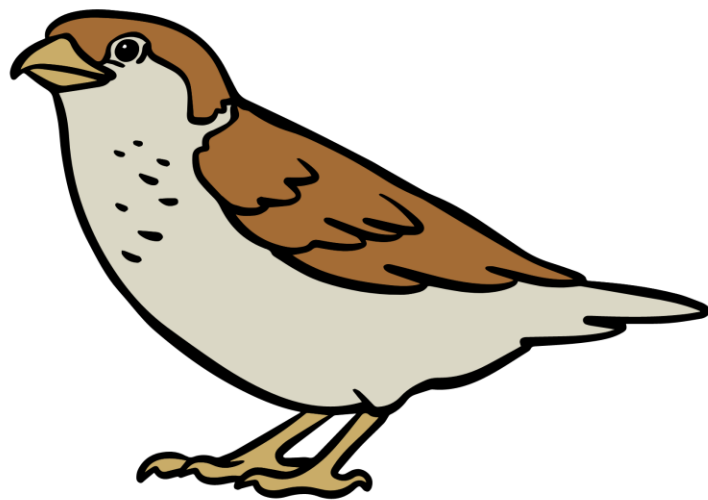
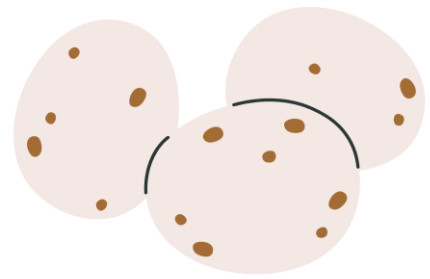
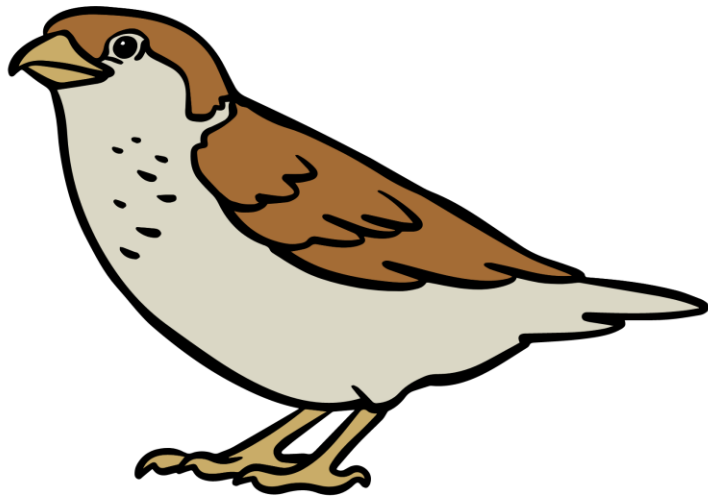
How will you be sure your bird nest will protect the birds and eggs?

REFLECT

How did it go? What worked well? What would you do differently?

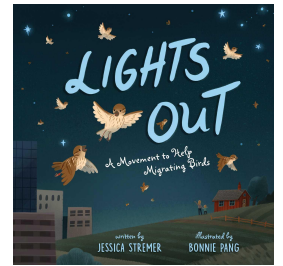
STEAM PRINTABLES

Copy in full color and cut apart
(laminates for durability and repeated use)



RESOURCES DESIGNED BY: *the subway side*

SOCIAL STUDIES ACTIVITY



BEING A GOOD CITIZEN

Standards:

CCSS.ELA-LITERACY.W.1.8
CCSS.ELA-LITERACY.W.2.8
CCSS.ELA-LITERACY.W.3.8
CCSS.ELA-LITERACY.W.4.8
CCSS.ELA-LITERACY.W.5.8

You will need:

- White copy paper
- Pencils
- Crayons / colored pencils / markers



Step-by-step to do list:

1. Decide which differentiated lined paper works best for your students.
2. Copy the **BEING A GOOD CITIZEN WRITING PAPER** on white copy paper.
3. Distribute organizers to students.
4. Discuss what it means to be a good citizen and record thoughts from the discussion on the board.
5. Explain that students will write or draw how they can contribute to their community and be a good citizen (this can be related to The Lights Out Movement but doesn't have to be).
6. Allow independent work time.
7. Then, students can share and compare their thinking in partnerships or in small groups.
8. For younger students (1st grade and younger) you may want to complete this activity as a whole group together or have students simply draw instead of write.

RESOURCES DESIGNED BY: the subway side

Name: _____

BEING A GOOD CITIZEN...

A good citizen is someone who helps their community. In the story LIGHTS OUT, the girl learns how she can do her part to help the local birds. Think about how you can be a good citizen in YOUR community and write about it on the line below.



Handwriting practice lines consisting of solid top and bottom lines with a dashed middle line. There are ten sets of these lines for writing.

Name: _____

BEING A GOOD CITIZEN...

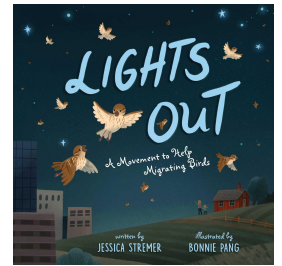
A good citizen is someone who helps their community. In the story LIGHTS OUT, the girl learns how she can do her part to help the local birds. Think about how you can be a good citizen in YOUR community and write about it on the line below.



A large, empty rectangular box with a thick black border, intended for the student to write their response.

ART ACTIVITY

BIRD CRAFT



Standards:

CCSS.ELA-LITERACY.SL.K.1-6
CCSS.ELA-LITERACY.SL.1.1-6
CCSS.ELA-LITERACY.SL.2.1-6
CCSS.ELA-LITERACY.SL.3.1-6
CCSS.ELA-LITERACY.SL.4.1-6
CCSS.ELA-LITERACY.SL.5.1-6

You will need:

- Colored construction paper or cardstock
- Pencils
- Scissors
- Glue sticks



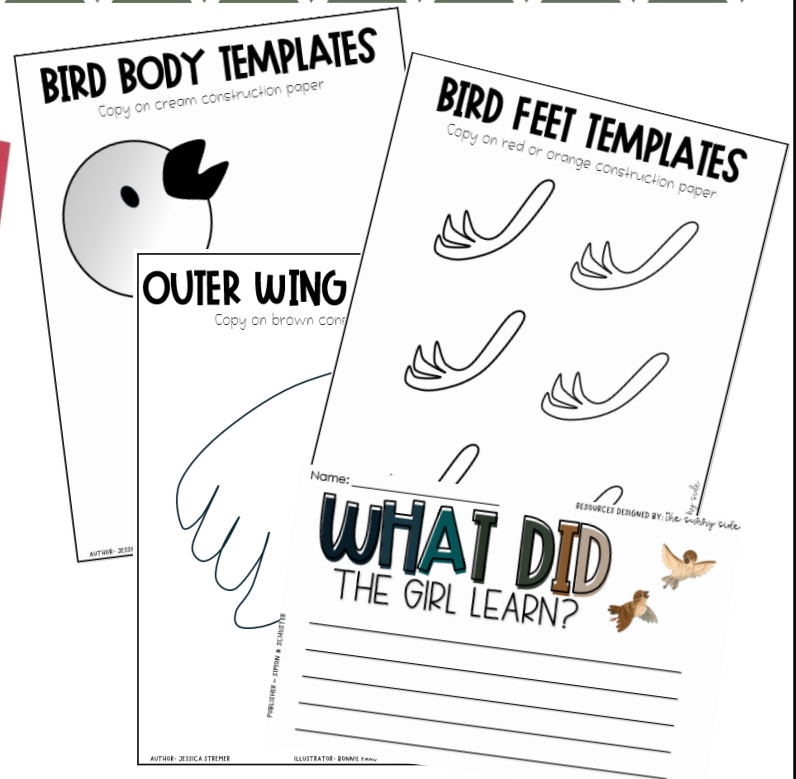
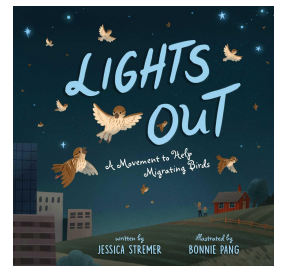
Step-by-step to-do list:

1. Copy the **BIRD CRAFT TEMPLATES** on colored construction paper or white copy paper for students to color.
2. Students should cut the templates apart and glue them according to the final craft.
3. Distribute write paper half pages and encourage students to write about what the girl from the story learned.
4. Then, they should adhere all the craft pieces to a colored piece of scrapbook paper or cardstock.
5. Hang the completed bird project in a special place for all to see.

RESOURCES DESIGNED BY: the subway side

ART ACTIVITY

BIRD CRAFT

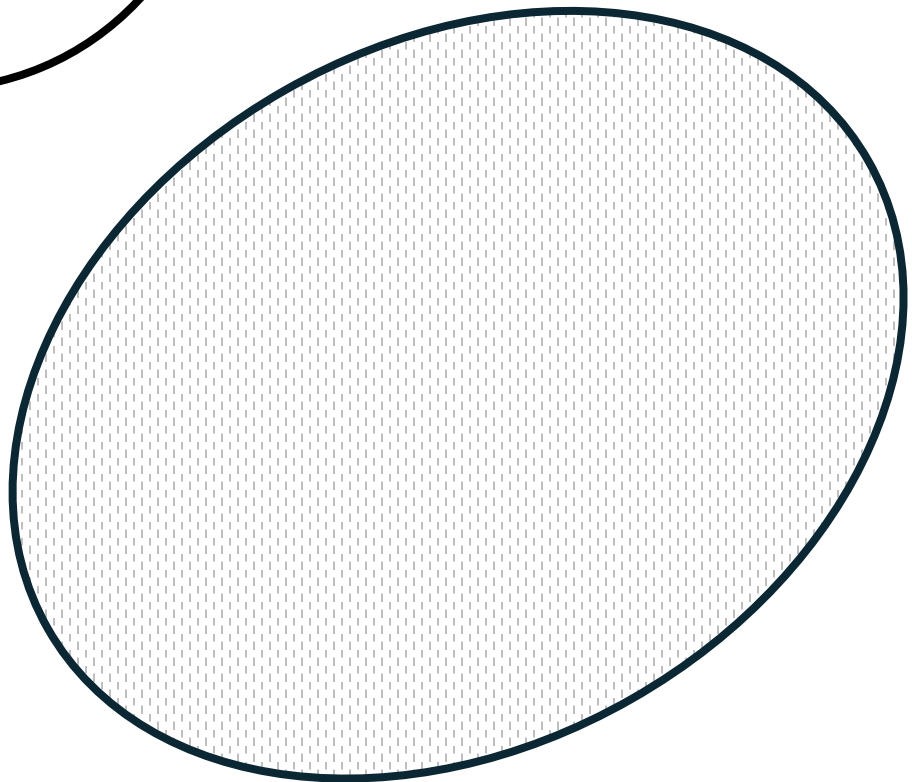
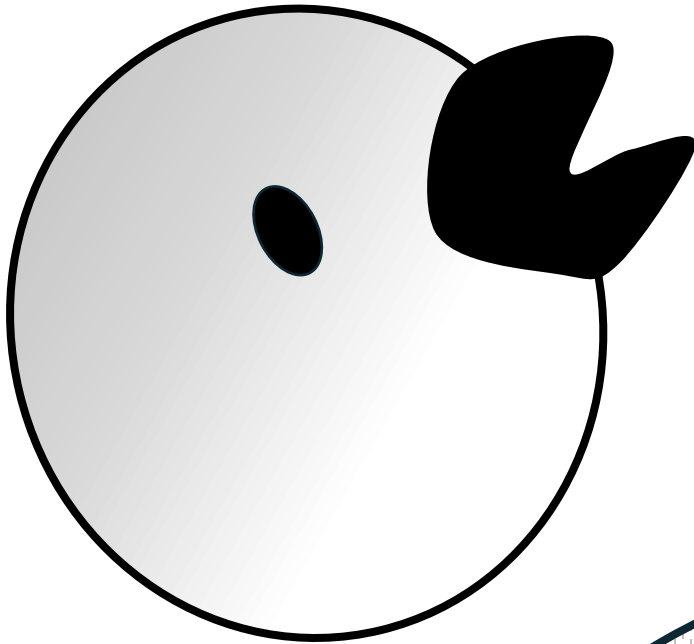


Copy bird templates on coordinated colored construction paper. Use scissors and glue to cut and paste the templates into place.

RESOURCES DESIGNED BY: the subway side

BIRD BODY TEMPLATES

Copy on cream construction paper



OUTER WING TEMPLATES

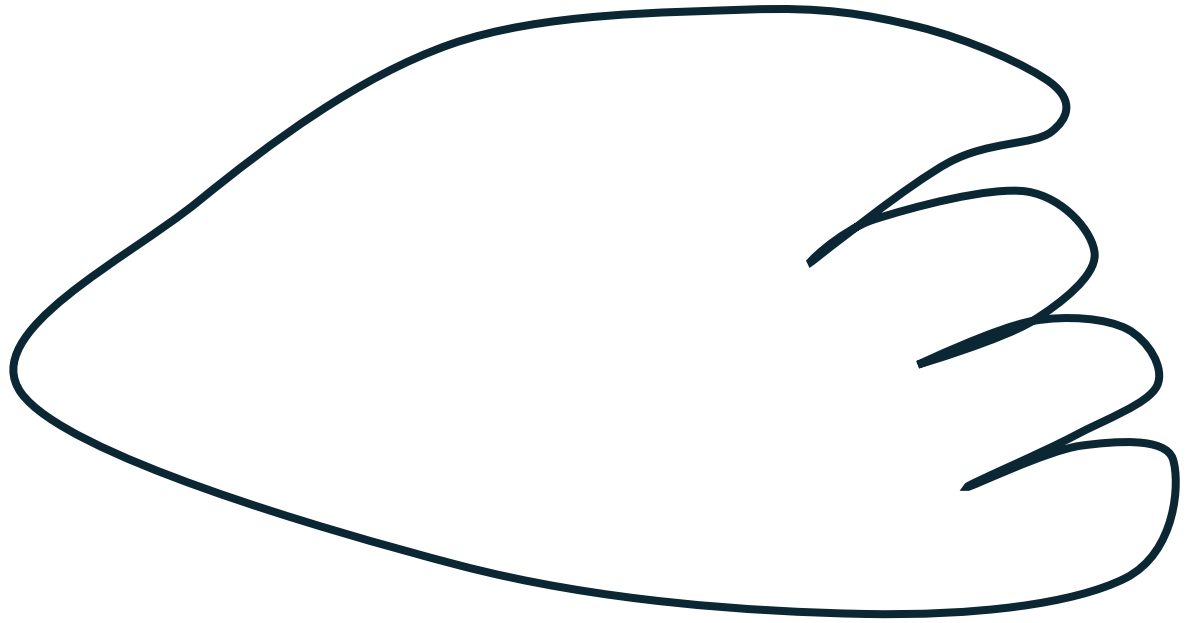
Copy on brown construction paper



RESOURCES DESIGNED BY: *the subway side*

INNER WING TEMPLATE

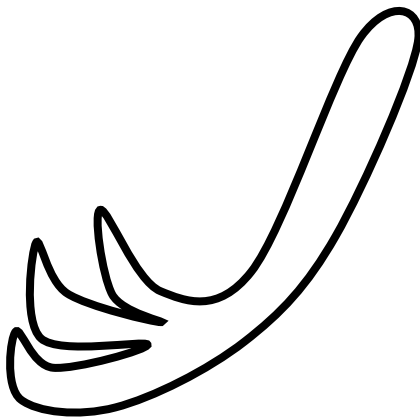
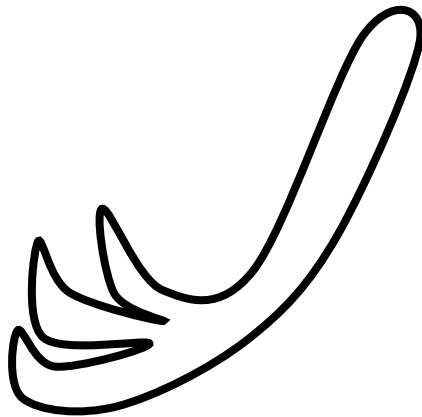
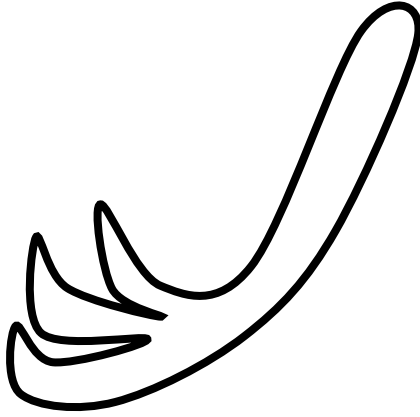
Copy on dark brown or gray construction paper



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BIRD FEET TEMPLATES

Copy on red or orange construction paper



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Name: _____

WHAT DID

THE GIRL LEARN?



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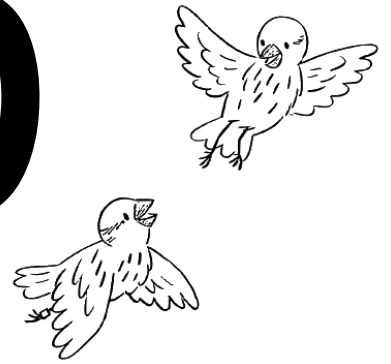


AUTHOR - JESSICA STREMER

Name: _____

WHAT DID

THE GIRL LEARN?

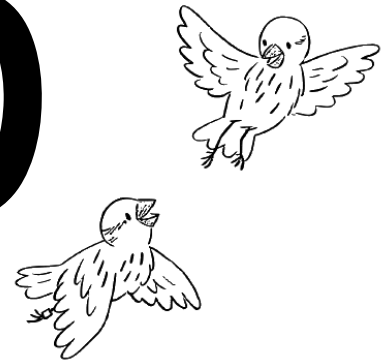


PUBLISHER — SIMON & SCHUSTER

Name: _____

WHAT DID

THE GIRL LEARN?



ILLUSTRATOR- BONNIE PANG

AUTHOR- JESSICA STREMER

Name: _____

WHAT DID

THE GIRL LEARN?



Handwriting practice lines consisting of a solid top line, a dashed middle line, and a solid bottom line. There are four sets of these lines available for writing.

PUBLISHER — SIMON & SCHUSTER

Name: _____

WHAT DID

THE GIRL LEARN?



Handwriting practice lines consisting of a solid top line, a dashed middle line, and a solid bottom line. There are four sets of these lines available for writing.

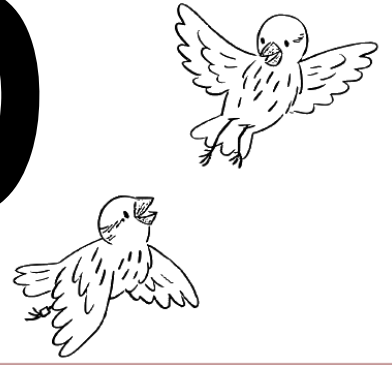
ILLUSTRATOR- BONNIE PANG

AUTHOR- JESSICA STREMER

Name: _____

WHAT DID

THE GIRL LEARN?

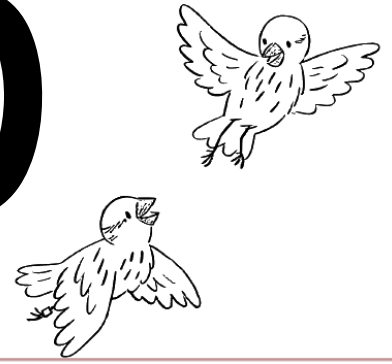


Handwriting practice lines consisting of a solid top line, a dashed middle line, and a solid bottom line, repeated three times.

Name: _____

WHAT DID

THE GIRL LEARN?



Handwriting practice lines consisting of a solid top line, a dashed middle line, and a solid bottom line, repeated three times.

CREDITS PAGE

The author – Jessica Stremmer

Jessica Stremmer is an award-winning children's author who combines her love of science and writing to create books that inspire kids to explore and think critically about the world around them. Her books have received multiple starred reviews and have been designated as School Library Journal Gold Standard Selections, Cook Prize Silver Medal recipient, NYPL Best Book of the Year, and NSTA Outstanding Science Trade Book. Jessica obtained a B.S. in Biology from the University of Wisconsin Oshkosh. When not writing you can find her cheering from the sideline of her kids' soccer games and planning her next family adventure.



CONNECT WITH JESSICA



The illustrator – Bonnie Pang

Bonnie Pang is an illustrator and comics artist from Hong Kong. She studied geography at the Chinese University of Hong Kong and obtained a master's degree in fine arts from the Academy of Art University in San Francisco. She is the creator of the webcomics Roar Street Journal and IT Guy & Art Girl. When not drawing, Bonnie enjoys reading, gaming, and spending time with her cat.







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