

contents

Each STEM writing extension contains instructions, a prewriting organizer or flipbook, publishing template, and illustration template for a cover (printed photographs can also be used). All prewriting organizers may also be utilized without publishing. All writing prompts are Common Core Aligned for Grades 2-4 and can be used to supplement ANY STEM Challenge!

Pages 2-5: Step by Step (How To Expository Paragraph)

Pages 6-9: Imagine it! (Imaginative/Fiction Story)

Pages 10-13: Before and After (Making and Confirming Predictions)

Pages 14-17: Pages 15-18: Friendly Letter (Sharing personal connections/Narrative)

Pages 18-21: Describe it! (Observing/describing creations)

Pages 22-25: Fascinating Facts (Expository Research) - will also require access to informational nonfiction books about topic

Pages 26-29: My Opinions (Persuasive)

Pages 30-33: Passing the Test (Evaluating tests and making improvements)

Pages 34-37: Comparing Challenges (Comparing/Contrasting two different STEM challenges)

Pages 38-41: Wrapping it Up (Final self-reflection on challenge)

Page 42: Credits



step by step

1 Use the “Step by Step” flipbook to organize your ideas. List the needed materials and FIVE directions to explain how to build your creation. Illustrate your creation on the back of the flipbook.

2 Write a “How To” paragraph that explains how to build your creation. Remember to write your paragraph in sequence, use transition words, and include plenty of details.



Step by Step

Cut out the flipbook along the outside box and cut apart the flaps on the solid lines.

Fold the flipbook in half.

Write the materials and 5 directions for how to build your creation underneath the flaps.

On the back of the flipbook, illustrate your creation.

HOW TO BUILD



Name: _____

Materials

First

Next

Then

After That

Finally

HOW TO BUILD:

Step by Step: HOW TO BUILD

By: _____



Step by Step: HOW TO BUILD

By: _____





Imagine it!

1 Use the “Imagine it!” flipbook to organize your ideas for an imaginative (fiction) story. Your STEM creation must be included within an important element in the story, such as the setting, problem, or solution. Illustrate the beginning, middle, and end on the back of the flipbook.

2 Write an imaginative story that involves your STEM creation. Your story must include a beginning, middle, and end.



Imagine it!

Cut out the flipbook along the outside box and cut apart the flaps on the solid lines.

Fold the flipbook in half.

Write the story elements for an imaginative story underneath each flap.

Your STEM creation must be included within one or more of the story elements.

On the back of the flipbook, illustrate the beginning, middle, and end of your story.

Imagine it!

(Story Title)

BEGINNING



MIDDLE



END



Name: _____

Characters

Setting

Problem

Turning Point

Solution

Imagine it!

Imagine it!

By: _____



Imagine it!

By: _____





Before & After



1 Use the “Before & After” flipbook to organize your thoughts. Write your predictions for your STEM challenge BEFORE you begin construction. Then, write what actually happened AFTER construction. Illustrate the “before” and “after” on the back of your flipbook.

2 Write TWO paragraphs to summarize your predictions for your challenge and what actually happened.



Before & After

Cut out the flipbook along the outside box and cut apart the flaps on the solid lines.

Fold the flipbook in half.

BEFORE beginning your STEM challenge, write your predictions.

AFTER completing your STEM challenge, write what actually happened.

On the back of the flipbook, illustrate your predictions and what actually happened.

Before & After:

BEFORE



AFTER



Name: _____

Before & After:

BEFORE

What do you predict might happen?

What do you expect?

What do you think might be challenging?

AFTER

What actually happened?

Were your predictions correct or incorrect?

What surprised you?

Before & After

By: _____

BEFORE



#0117

AFTER



#0114

Before & After

By: _____





Friendly Letter



1 Use the “Friendly Letter” flipbook to organize your ideas. Tell your reader about the STEM project you created. Explain how you created it, how it works, and share your favorite part. Illustrate your project on the back.

2 Write a friendly letter to a friend or family member about your STEM project.



Friendly Letter

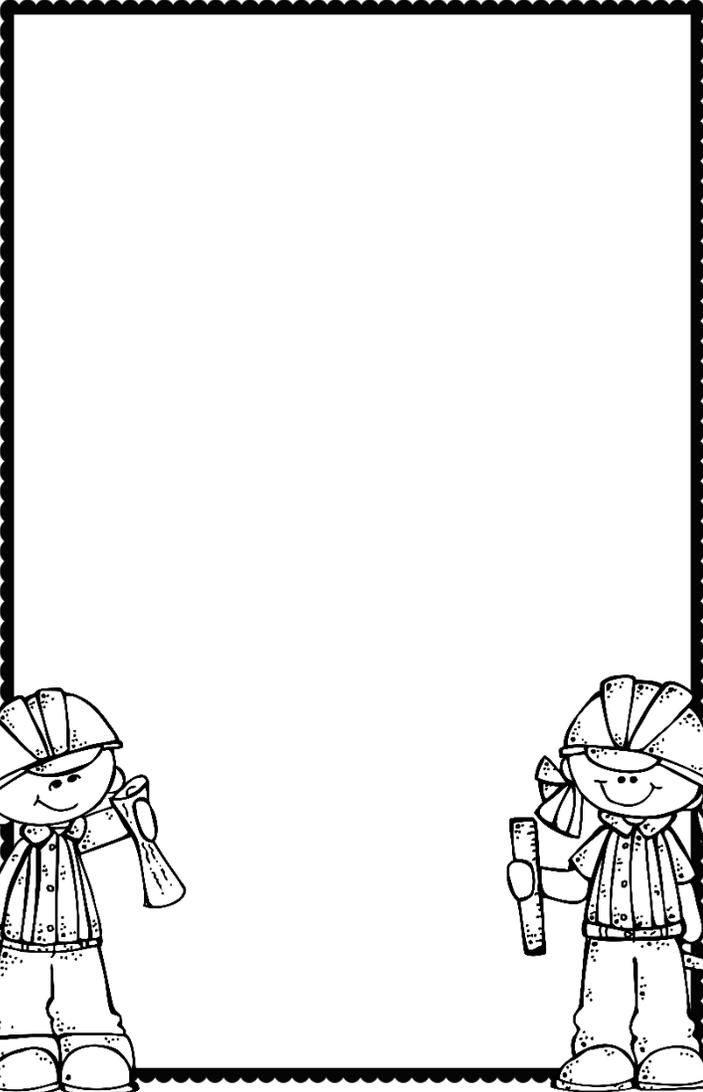
Cut out the flipbook along the outside box and cut apart the flaps on the solid lines.

Fold the flipbook in half.

Write ideas for your friendly letter underneath each flap.

On the back of the flipbook, illustrate your STEM project.

Friendly Letter



Name: _____

Friendly Letter:

Who I'm
Writing to

What I
Created

How I
Created it

How it
Works

My Favorite
Part

Friendly Letter

By: _____





Describe it!



1 Use the “Describe it!” flipbook to organize your ideas. Write as many details and descriptive words as possible about how your STEM project looks, feels, and sounds. Illustrate your project on the back of your flipbook.

2 Write a detailed paragraph that describes your STEM project. Try to “paint a picture” with your words.



Describe it!

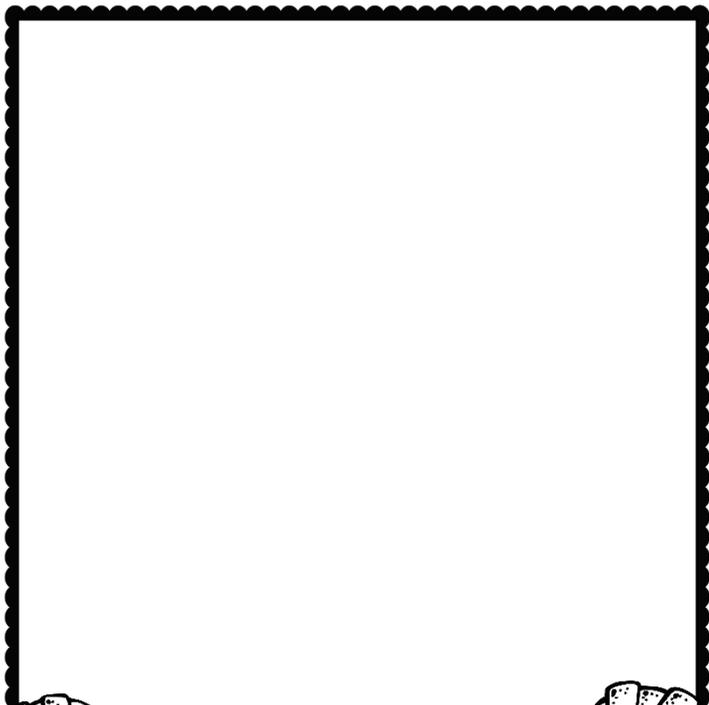
Cut out the flipbook along the outside box and cut apart the flaps on the solid lines.

Fold the flipbook in half.

Write as many details and descriptive words as possible about how your project looks, feels, and sounds.

On the back of the flipbook, illustrate your STEM project.

Describe it!



Name: _____

Describe it!

How it
Looks

How it
Feels

How it
Sounds

Describe it!

By: _____



Describe it!

By: _____





Fascinating Facts



1 Use the “Fascinating Facts” flipbook and informational nonfiction books to research interesting facts about your STEM structure in real life. Illustrate your structure on the back of your flipbook.

2 Write a report about your real life structure to share the facts that you learned.



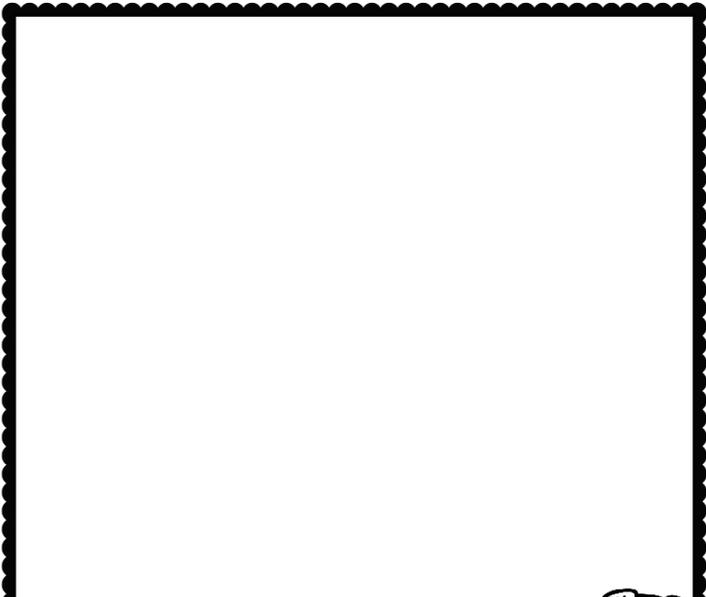
Fascinating Facts

Cut out the flipbook along the outside box and cut apart the flaps on the solid lines.

Fold the flipbook in half.

Research your STEM structure using informational nonfiction books, then write 6 facts underneath the flaps. On the back of the flipbook, illustrate the structure.

Fascinating Facts about



Name: _____

Fascinating Facts:

Fact 1

Fact 2

Fact 3

Fact 4

Fact 5

Fact 6

Fascinating Facts about

By: _____





My Opinions



1 Use the “My Opinions” flipbook to write your opinions about your STEM challenge. For each opinion, write TWO reasons or examples to explain why you feel that way.

2 Write a persuasive paragraph about your STEM challenge using opinions, reasons, and examples.



My opinions

Cut out the flipbook along the outside box and cut apart the flaps on the solid lines.

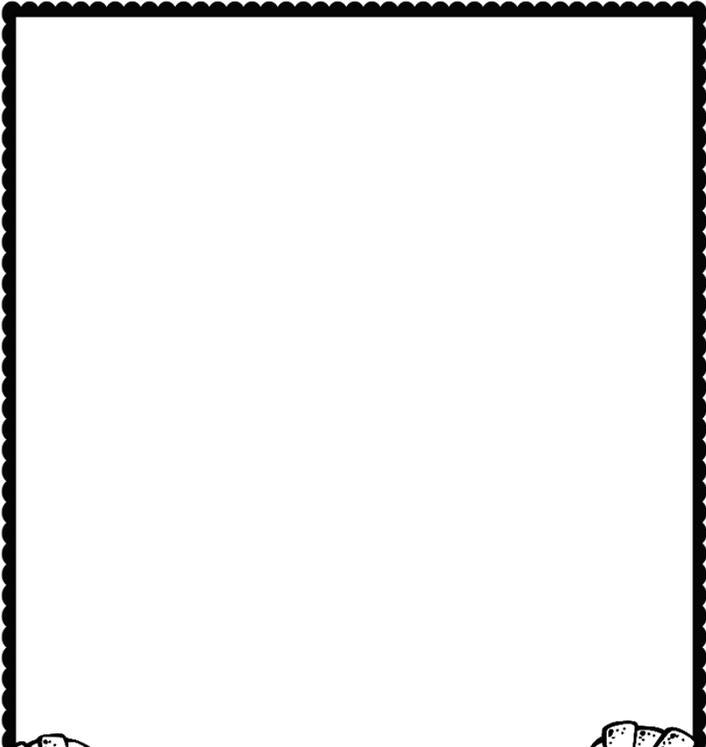
Fold the flipbook in half.

Write your opinions about your STEM challenge underneath each flap.

Don't forget to add two supporting reasons for each opinion.

On the back of the flipbook, illustrate your STEM project.

My opinions about



Name: _____

My opinions:

What was your favorite part about the challenge?
Give 2 reasons to explain why.

What was easiest about the challenge?
Give 2 reasons to explain why.

What was most challenging?
Give 2 reasons to explain why.

My opinions about

By: _____



My opinions about

By: _____





passing the Test



1 Use the “Passing the Test” flipbook to describe each test for your STEM challenge. Also, explain the improvements that you made to your project after each test.

2 Write a paragraph that explains each test in sequence. Don't forget to write about the improvements you made and if they worked well or did not work well.



passing the Test

Cut out the flipbook along the outside box and cut apart the flaps on the solid lines.

Fold the flipbook in half.

Underneath the flaps, explain the results of each test of your STEM challenge and the improvements that you made after each test.

On the back of the flipbook, illustrate each test from your challenge.

passing the Test

TEST 1



TEST 2



TEST 3



Name: _____

Test 1

Improvements

Test 2

Improvements

Test 3

Improvements

passing the Test:

passing the Test

By: _____



TEST 1

TEST 2

TEST 3

passing the Test

By: _____





comparing challenges



1 Use the “Comparing Challenges” flipbook to write at least 5 similarities and differences between two different STEM challenges.

2 Write two paragraphs about your STEM challenges, one to compare the similarities between the two challenges, and one to contrast the differences.



comparing challenges

Cut out the flipbook along the outside box and cut apart the flaps on the solid lines.

Fold the flipbook in half.

Underneath the flaps, write at least 5 similarities between two STEM challenges and at least 5 differences.

On the back of the flipbook, illustrate each challenge.

comparing challenges

CHALLENGE 1



CHALLENGE 2



Name: _____

comparing challenges

Challenge
1

BOTH

Challenge
2

comparing challenges

By: _____

COMPARE (same)



CONTRAST (different)



comparing challenges

_____ and _____

By: _____





wrapping it up



1 Use the “Wrapping it Up” flipbook to reflect on your STEM challenge. Write about what went well, what didn’t go well, and how you would improve the challenge if you did it again.

2 Write a paragraph to reflect on the successes and struggles with your STEM challenge.



Wrapping it Up

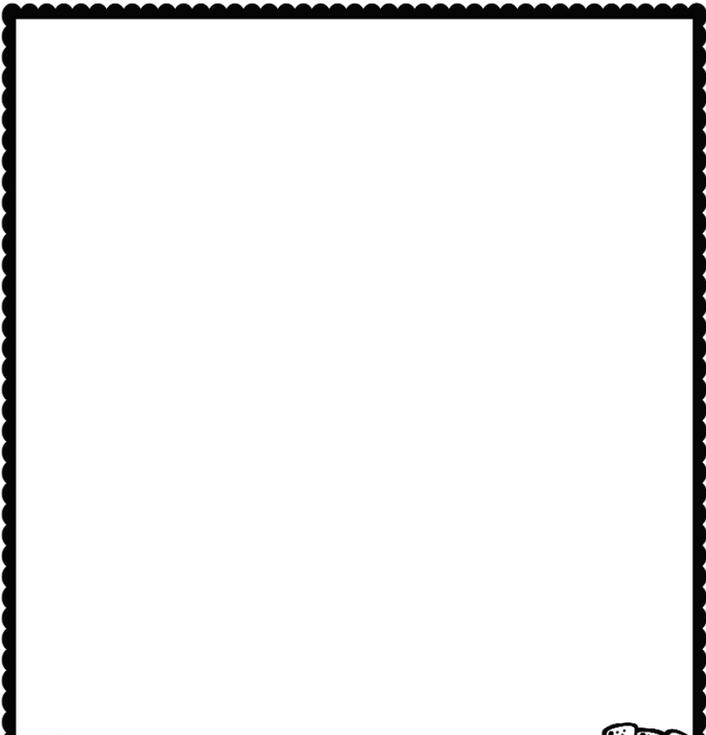
Cut out the flipbook along the outside box and cut apart the flaps on the solid lines.

Fold the flipbook in half.

Underneath the flaps, write about what went well during your STEM challenge, what didn't go well, and what you would do differently if you completed the challenge again.

On the back of the flipbook, illustrate your project.

Wrapping it Up:



Name: _____

Wrapping it Up:

What Went Well

What Didn't Go Well

What I Would Change

Wrapping it up

By: _____



Wrapping it Up

_____ and _____

By: _____



credits



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