At Home Learning Resources

Grade 3 - Week 10

Content	Time Suggestions
Literacy Instruction (Watch a mini lesson, and/or complete online learning)	10-20 minutes daily
Reading (Read books, watch books read aloud, listen to a book)	At least 20 minutes daily (Could be about science, social studies, etc)
Writing or **Word Work** or **Phonics/Vocabulary**	20-30 minutes daily
Math	30 minutes daily
Science	45 minutes per week
Social Studies	30 minutes per week
Arts, Physical Education, or **Social Emotional Learning**	30 minutes daily

These are some time recommendations for each subject.
We know everyone's schedule is different, so do what you can.
These times do not need to be in a row/in order,
but can be spread throughout the day.

Grade 3 ELA Week 10

All previous activities, as well as other resources can be found on the Lowell Public Schools website: https://www.lowell.k12.ma.us/site/Default.aspx?PageID=3799

This week begins a focus on fiction reading and narrative writing. Your child should be reading, writing, talking and writing about reading, and working on exploring new vocabulary each week.

Reading: Students need to read each day. They can read the text included in this packet and/or read any of the fiction books that they have at home, or can access online at Epic Books, Tumblebooks, Raz Kids, or other online books. All resources are on the LPS website. There is something for everyone.

Talking and Writing about Reading: As students are reading, they can think about their reading, then talk about their reading with a family member and/or write about their reading using the prompts/questions included.

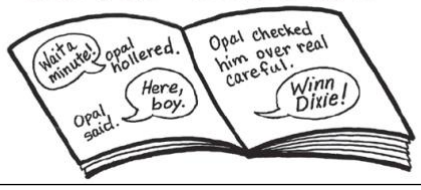
Writing: Students will be working on narrative stories for the next few weeks. The resources in this packet will be the same for next week for writing as well. These resources are charts with examples to help your child write. They are available online in an interactive form with video tutorials here: Grade 3 Narrative Writing Choice Board. Click on the images to watch the video tutorials. This writing should last throughout the weeks. Students will be planning their writing, then writing, then making it even better by revising, writing some more, and at the end, fixing it up by editing. Your child might write 1 narrative and work to refine it throughout, or might write multiple stories, getting better each time.

Word Work: Students can work on learning new vocabulary about a topic they are interested in. Choose 3 activities on the vocabulary tic-tac-toe board. Learn any words you want or find in your reading.

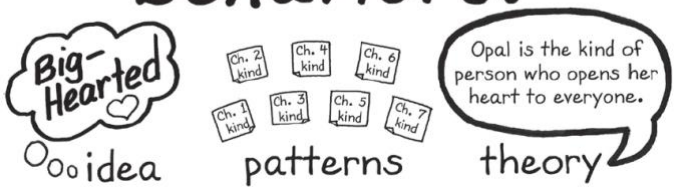
When reading fictional texts, think about the following. Stop and jot, and respond in writing as you are reading or when you are done.

Grow Ideas about a Character

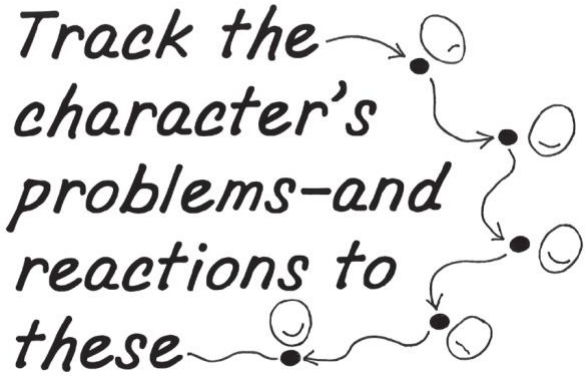
Notice how the character talks and acts.



Notice patterns in a character's behaviors.



Track the character's problems–and reactions to these



Why might the character act like this?

Notice patterns in behaviors & wants, using them to predict.

Notice how the character resolves his/her biggest problem(s)

Reading to Max

By Heather Klassen
2016

Heather Klassen has written for Highlights. *In this short story, a boy reads to a cat at an animal shelter. As you read, take notes on the relationship between the boy and the cat.*

[1] "This Saturday, we'll be visiting cats at the animal shelter. If you'd like to join us, here's a flyer,"[1] said Ms. Delgado, the school librarian.

Ben loved cats, and he had always wanted one. He hurried to grab a flyer. Then Ms. Delgado added, "We'll be reading to the cats." Ben stopped. Reading was hard. Still, he really wanted to visit the cats, so he took a flyer anyway.

After school, Ben showed the flyer to Dad.

"Ben started reading, and Max purred." by Renee Kurilla is used with permission.

"That sounds great," Dad said. On Saturday, Ben and Dad met some of Ben's classmates and their parents at the shelter.

[5] "This is Max," the shelter worker told Ben as she handed him a gray cat. Ben carried Max to a beanbag chair. When Ben sat down, Max settled onto his lap.

"Here's my book," Ben told Max. He had taken a book he'd been working on. He started reading, and Max purred. After a few minutes, Ben looked up. Some of the cats stayed on his classmates' laps, but other cats roamed[2] the room while the kids read.

Ben stroked Max's back. *I'm glad Max is staying and listening to me read*, he thought.

On the way home, Ben told Dad, "Max is the best cat ever."

"I'm glad you two are buddies," Dad said. All week, Ben waited for Saturday. When it arrived, Ben got to read to Max again. Ben read and read while Max purred and purred.

[10] "What if someone adopts Max?" Ben asked Dad later.

"I guess you'd read to a different cat," Dad said.

But I don't want a different cat, Ben thought.

Ben even told his next-door neighbor, Mrs. Patel, about Max.

"Max sounds like a special cat," said Mrs. Patel.

[15] Ben agreed.

Every Saturday, Ben read to Max. "I wish we could adopt Max," Ben said to Dad. He knew they couldn't. Mom had allergies.

Dad nodded. "But it's nice you can see Max at the shelter, right?"

"Yeah," said Ben.

One day at school, Ben realized that reading seemed easier. Still, he was surprised when Ms. Delgado gave him the Most Improved Reader award. "I want to show my award to Max," Ben told Dad.

[20] But on Saturday, Ben couldn't find Max at the shelter. "Someone must have adopted Max. What if I never see him again?" Ben said, frowning. Just then, Mrs. Patel walked into the visitors' room, carrying Max.

"Max *is* a special cat," Mrs. Patel said.

"So I'm adopting him. You can come over every day to visit him."

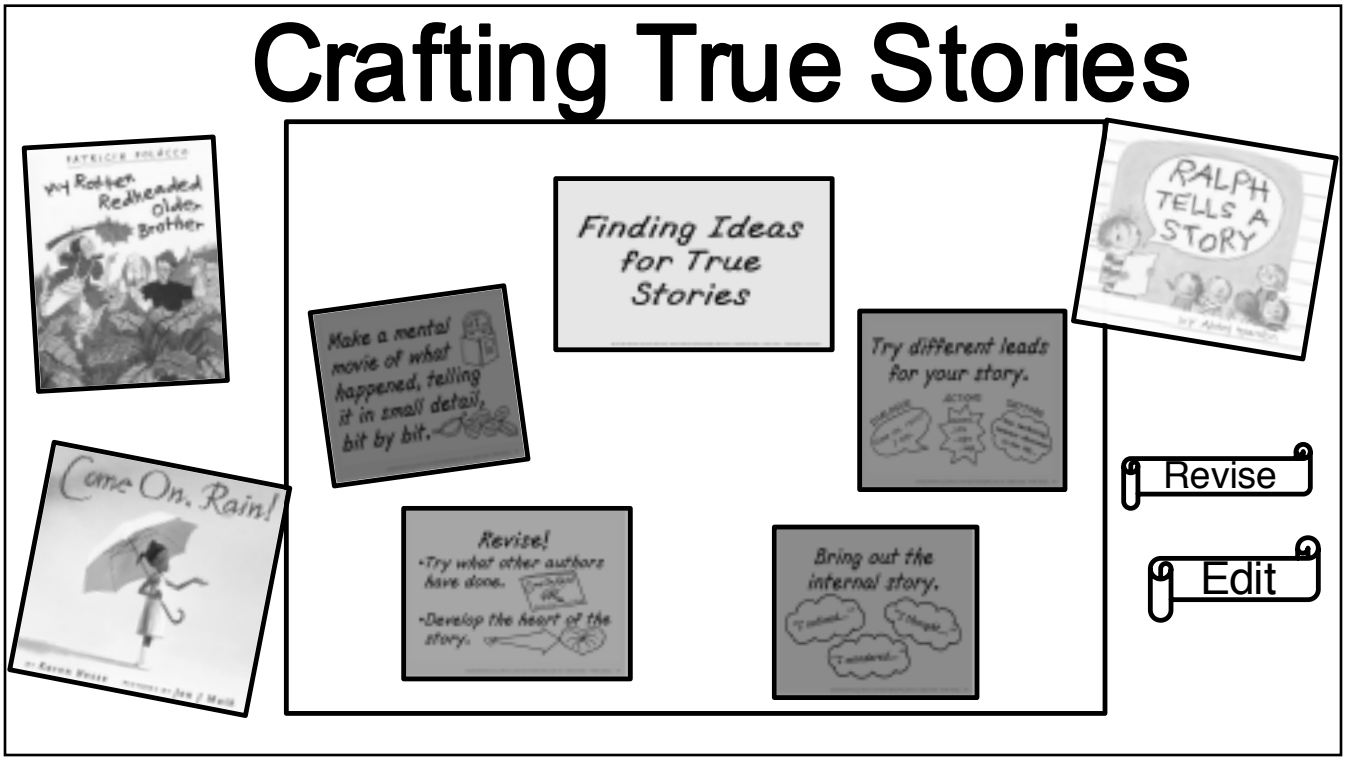
Having Max next door will be almost like having him as my own cat, Ben thought. He smiled at Mrs. Patel.

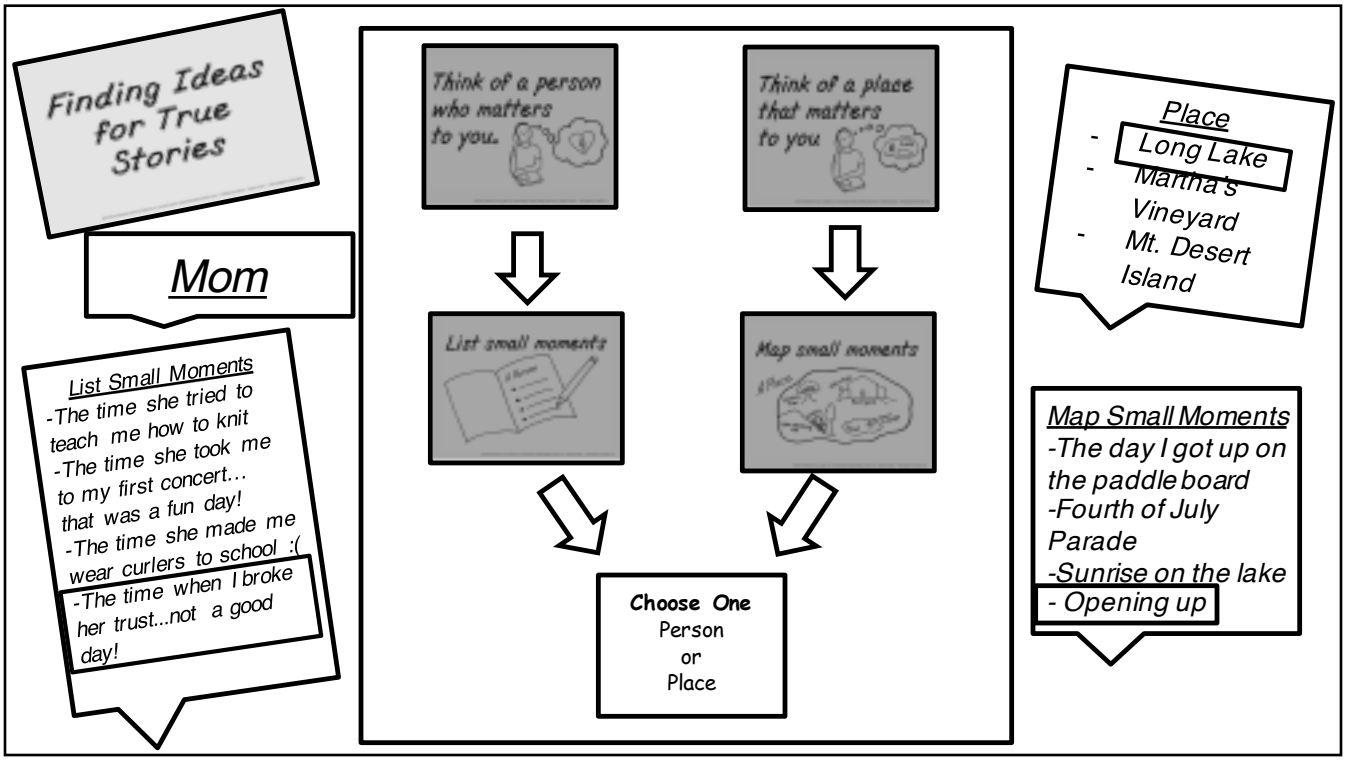
"Now we can read every day," Ben told Max as he stroked the cat's back.

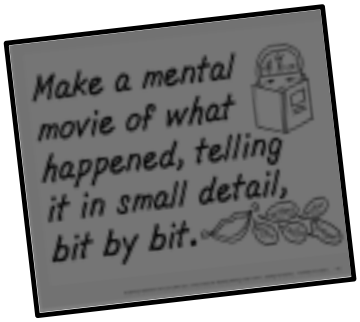
[25] Max purred.

After reading the story, describe the characters in the text and explain how their actions relate to the events in the story.

Grade 3 Narrative Writing Choice Board - Visit the online option for an interactive board with tutorials. Use the anchor charts to help you write your own true, narrative story.





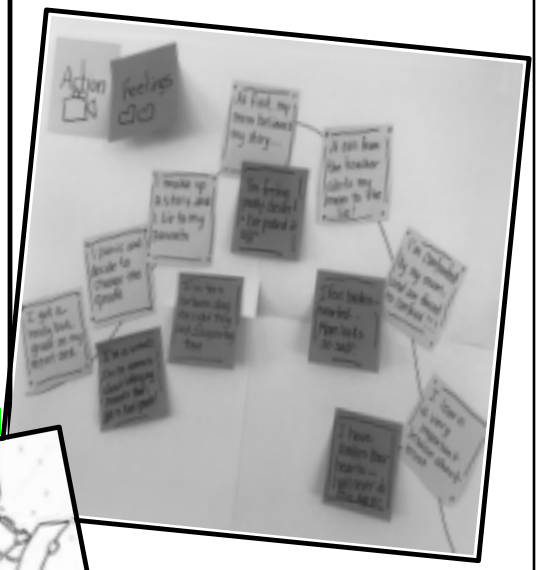


Writers remember to use your storytelling voice!

Help the reader feel like they're in the story by including actions thoughts and feelings.

The Big Fourth Grade Lie

There I was in Mrs. Quinlan's fourth grade classroom. Anxiously waiting for the teacher to call my name. My stomach flipped and flopped dozens of butterflies making their way through my belly. Beatriz Cuesta "she called". I got up from my chair, and slowly reached for the yellow envelope resting on her old wooden desk stacked neatly in alphabetical order. I had returned to my seat, and with great hesitation methodically lifting the corners of the envelope. I yanked the report card out from the envelope. My eyes were immediately drawn to the grades on the left hand corner of the page...there it was a big fat D. Never before had I gotten such a horrible grade on anything. What would I do?



Dialogue

My teacher always said,

"Stories are everywhere!"

Dialogue

"Come on, rain!" I say.
squinting into the endless heat.

Mamma lifts a listless vine and sighs.
"Three weeks and not a drop,"
she says, sagging over her parched plants.

Setting

My brother and our mother and I all lived with my grandparents on their farm in Union City, Michigan.

Now my babushka, my grandmother, knew lots of things. She knew just how to tell a good story. She knew how to make ordinary things magical. And she knew how to make the best chocolate cake in Michigan.

After she told my brother and me a grand tale from her homeland, we'd always ask, "Bubbie, is that true?"

She'd answer, "Of course is true, but it may not have happened!" Then she'd laugh.

Notice how I used what I learned from looking at our mentor text to lead my story by introducing the setting.

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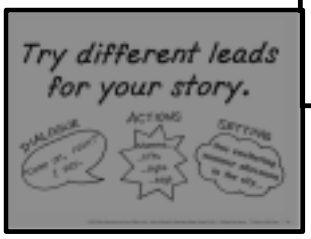
How would I face my parents? Feeling terrified, I got the brilliant idea to change the grade on my report card.

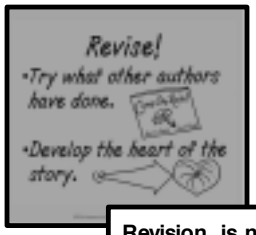
I was torn by my decision. On the one hand I was distraught at the thought of lying to my parents who trusted me, and who had always put their faith in my doing the right thing. On the other hand there was this horrible grade. They would be so disappointed in me, and life as I knew it would be over…I probably be grounded for life.

That afternoon, as was typical, I strolled in through the back door. I handed mom the envelope, and in my calmest voice the lie just rolled off my tongue. Mom Mrs. Quinlan asked me to mention that she had made a last minute mistake on my report card, and that it might look a little messy. I felt horrible, but amazed that I had pulled this off.

No questions just this sort of genuine acceptance from my mother.

The next morning I prepared to go to school. Mom and dad wished me a good day "keep up the good work kiddo". As I walked





Revision is not about fixing errors, it's about adding more to the heart of your story just like Karen Hesse!

Write how people talk
BREATHE,
MURMUR, SHOUT!

"It's going to rain," I whisper.

"Put on your suit and come straight over."

Use Descriptive Details

Sweat trickles down her neck
and wets the front of her dress
and under her arms.
Mamma presses the ice-chilled glass against her skin.

"Is there thunder?" Mamma asks.
"No thunder," I say.
"Is there lightning?" Mamma asks.
"No lightning," Jackie-Joyce says.
"You stay where I can find you," Mamma says.
"We will," I say.

Put In Exact Words People Say:

Write the story bit by bit!

Mamma sinks onto a kitchen chair and sweeps off her hat.

to school, I thought about their reaction. They trusted my word. They never doubted that I was telling anything but the truth. As awful as I felt I carried on.

My stomach was turning flipping and flopping, My heart thumping kind of it feels when you have the bass turned up really loud on the radio. I was panicking. I told myself to calm down. I had already done the hard part.

I arrived at school. I put my things away, and nonchalantly placed the signed envelope on the teacher's desk. She thanked us all for our prompt returns, and it was business as usual. With each passing hour I was convinced that all had gone well. I had managed to fool everyone.

That afternoon when I arrived home, I was as happy as a pig in mud. I greeted my mom, who was sitting on the couch with a huge hug. At the time it didn't dawn on me that it was unusual for her to be sitting on the couch. She was always flitting around getting ready for supper. "Betty" she said "How was your day"? Oh fine! Is there anyth... want to talk about? Anything new...

Include dialogue!

"Not really mom". At that very moment my mother released her arm that had been tucked behind her back. I hadn't noticed because I had been so preoccupied. In her hand was the yellow envelope.

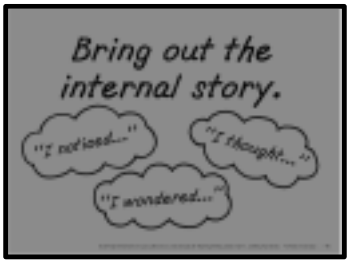
Suddenly, the walls began to close in on me. My mind was spinning so fast. What had I done? I could see the overwhelming sadness in my mother's eyes. She was so disappointed. When I told her about Mrs. Quinlan's mistake she hadn't questioned me. " "I trusted you, " she said. "You have never given us a reason to doubt your word, but know you have.

It takes years to build the kind of relationship where you feel trusted by others when your word means something. With one lie I destroyed the trust that my parents had in me. It was going to take a long time before I would be worthy of their trust again.

I had lost my parents trust. From that day forward, and for what seemed like a very long time after that, my word wasn't going to be good enough.

Tell your story bit by bit. Use descriptive details

Remember to include the heart of your story. Ask yourself...why is this story important to tell



Authors do not just add what characters say out loud, but what they say in their head as well!

Now, I knew that she loved me all right, but I couldn't quite understand how she could even like my older brother, Richard. He had

I stare out over rooftops,
past chimneys, into the way off distance.
And that's when I see it coming,
clouds rolling in,
gray clouds, bunched and bulging under a purple sky.

A creeper of hope circles 'round my bones.
"Come on, rain!" I whisper.

Writers, let me share with you a couple of ways that I showed how I was feeling as I wrote my story. Notice I I used words like *I thought* or *I realized* to show the reader what I was thinking in my head.

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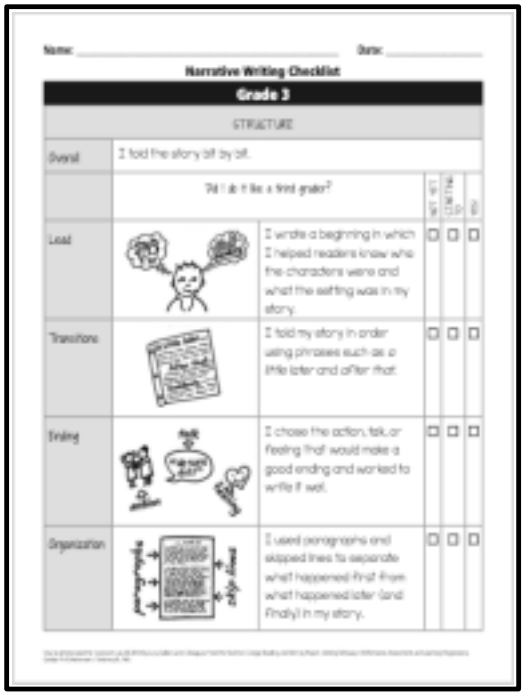

Name: _____ Date: _____

Narrative Writing Checklist

Grade 3

STRUCTURE

Overall: I told the story bit by bit.

Did I do it like a third grader?

Lead: I wrote a beginning in which I helped readers know who the characters were and what the setting was in my story.

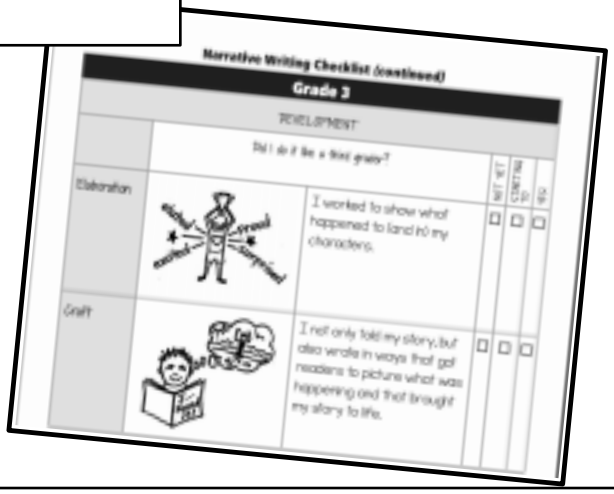
Transitions: I told my story in order using phrases such as a little later and after that.

Ending: I chose the action, talk, or feeling that would make a good ending and worked to write it well.

Organization: I used paragraphs and skipped lines to separate what happened First from what happened later (and Finally) in my story.

Revise

Use this checklist as you revise. Look over your writing with the lens of a reader. Add, change, or make your draft even better!


Narrative Writing Checklist (continued)

Grade 3

DEVELOPMENT

Did I do it like a third grader?

Elaboration: I worked to show what happened to (and in) my characters.

Craft: I not only told my story, but also wrote in ways that got readers to picture what was happening and that brought my story to life.

Narrative Writing Checklist (continued)

Grade 3

LANGUAGE CONVENTIONS

	Did I do it like a third grader?		YES	NOT YET	N/A
Spelling	could should wouldn't could've	I used what I knew about spelling patterns to help me spell and edit before I wrote my final draft.	☐	☐	☐
		I got help from others to check my spelling and punctuation before I wrote my final draft.	☐	☐	☐
Punctuation	"Let's go," she said.	I punctuated dialogue correctly, with commas and quotation marks.	☐	☐	☐
	. ! ?	While writing, I put punctuation at the end of every sentence.	☐	☐	☐
	BIG fast s-l-o-w ! ... quietly bold ?	I wrote in a way that helped readers read with expression, reading some parts quickly, some slowly, some parts in one sort of voice, and others in another voice.	☐	☐	☐

Edit

Use this checklist as you edit. Make sure your writing is clear- you used your best spelling, capital letters, and punctuation where you need it.

Vocabulary Word Tic Tac Toe

Choose three activities to complete using your vocabulary words.

Definition Drawing Draw a picture or scene of the definition of at least 5 of your vocabulary words. Label each drawing with the word.	**Crossword Puzzle** Create a crossword puzzle using grid paper. Have a classmate solve it.	**Synonyms and Antonyms** Use a thesaurus to find a synonym and antonym for 10 of your words. Use the recording sheet to write your answers.
Sentences Use each one of your words in a sentence. It must be used correctly, and the sentence should help someone understand the meaning of the word.	**Flash Cards** Make one flash card for each of your words. Write the word on one side and the definition on the other side. Use the cards to quiz yourself.	**Comic Strip** Create a comic strip using at least 5 of your words in the conversations between your characters.
Prefix - Root - Suffix Find as many words as you can with the same prefix, root, or suffix as your vocabulary words. Use the recording sheet to write your answers.	**Quiz** Make a 10 question quiz using 10 different vocabulary words. Questions can be multiple choice, fill-in-the-blank, or matching.	**Story Words** Write a story using at least 5 of your words. Include lots of detail and descriptive words.

Application Problem Set #1

A) Carlos bought four toy cars. Each car cost $3. He also bought a toy truck for $5. **How much did Carlos spend?**

Carlos paid with a $20 bill. **How much change did Carlos get back?**

B) Mason ordered 8 large pizzas and 5 medium pizzas for the party. Large pizzas have 9 slices. Medium pizzas have 6 slices. **How many pieces of pizza did Mason order altogether?**

Application Problem Set #1(continued)

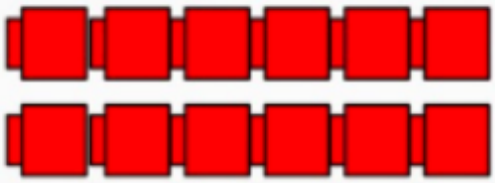
C) Abby has 48 stickers. She gives her friends 12 stickers. She divides the rest of her stickers equally on 4 pages in her journal. How many stickers does she put on each page?

Hint: First find out how many stickers she has left after she gave some away.

Distributive Property

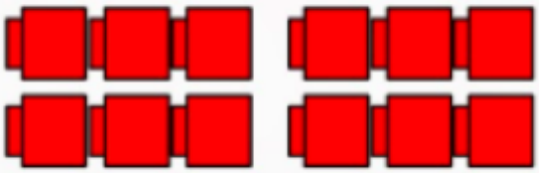
with connecting cubes

2 x 6



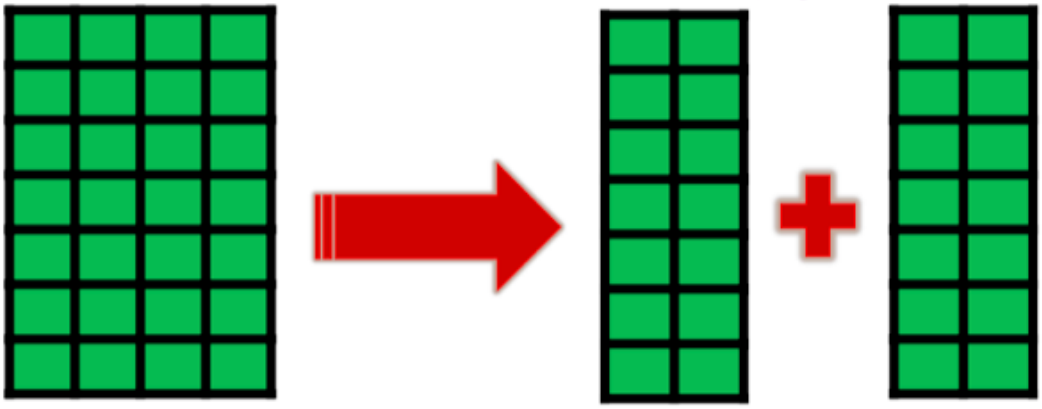
yields the same product

2 x 3 + 2 x 3



Distributive Property

We use the distributive property to BREAK APART larger numbers into smaller numbers so its easier to multiply.



(7 x 4)

28

(7 x 2) = 14 (7 x 2) = 14

28

Application Problem Set #2

Problem A

Five people visited a local restaurant to get some lunch. A burger costs 6 dollars and a bottle of apple juice costs 2 dollars. If all five people ordered a burger and a bottle of apple juice, write an equation to show the amount of money lunch costs.

_____ X (_____ + _____) = _____			
Number of people	Cost of burger	Cost of juice	Total cost

Problem B

Aaron walks 4 blocks to school each day, and 4 blocks home.

How many blocks does Aaron walk in 9 days?

Application Problem Set #2 continued.

Problem C

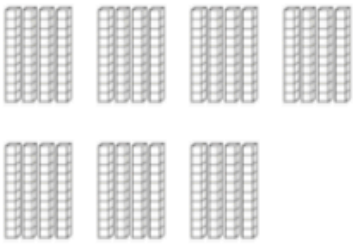
Each row in a classroom has 3 girls and 2 boys. There are 4 rows in that class. Write an equation to show the number of students in that class.
Use a drawing to represent this story problem.

Bonus Brain Teaser!

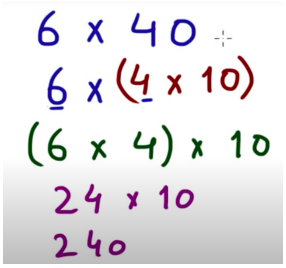
I multiplied two odd numbers and got a product that was less than 30. What might the two odd numbers have been?

Computation Problem #1

Model each problem with base 10 blocks. Write the product in the box.

7 x 40 = ? 	6 x 30 = ?
20 x 3 = ?	60 x 4 = ?
50 x 3 = ?	3 x 70 = ?
9 x 40 = ?	20 x 8 = ?

Computation Problem #1 (continued)



← How the associative property can help us multiply by multiples of 10.

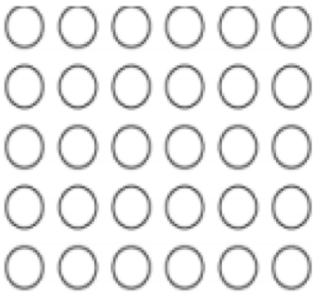
1. If 9 x 8 = _____, then 90 x 8 = _____.
2. If 4 x 6 = _____, then 40 x 6 = _____.
3. If 6 x 9 = _____, then 60 x 9 = _____.
4. If 8 x 9 = _____, then 80 x 9 = _____.
5. If 5 x 7 = _____, then 50 x 6 = _____.
6. If 7 x 3 = _____, then 70 x 3 = _____.

Look at problems 1 and 4. What do you notice? Why does that happen?

Computation Problem #2

The **Distributive Property of *Multiplication*** states that multiplying a sum by a number is the same as multiplying each addend by the number and then adding the products.

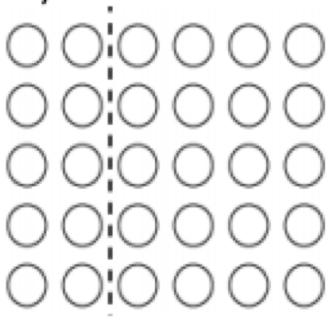
This array shows 5 x 6.



What is 5 x 6?

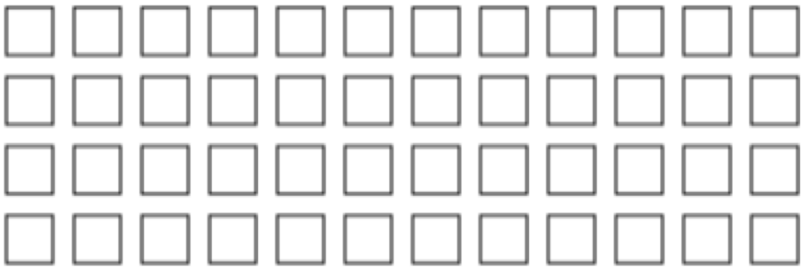
5 x 6 = _____

Now the array is broken into two smaller parts. They show 5 x 2 and 5 x 4.

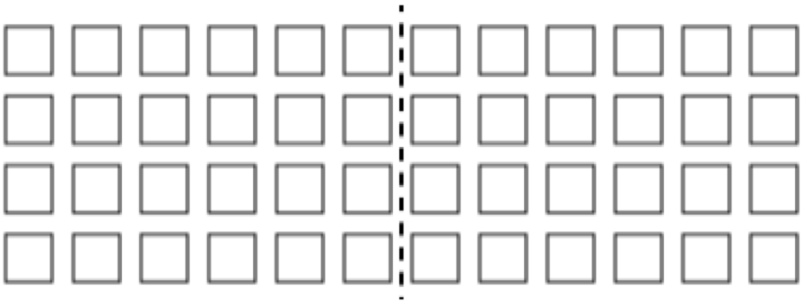


(5 x 2) + (5 x 4) = _____

5 x (2 + 4) = _____



The array above shows the multiplication fact _____ x _____ = _____ .



Now the array shows two facts.

The facts are _____ x _____ = _____ and _____ x _____ = _____ .

Computation Problem #2 (continued)

Write a multiplication fact related to each number sentence shown. Then write the product.

example: **4 x (1 + 2)** **=** 4 x 3 = 12

k. 7 x (4 + 3) = _____ **l.** (6 x 2) + (6 x 1) = _____

m. 2 x (2 + 2) = _____ **n.** (3 x 7) + (3 x 3) = _____

o. 10 x (1 + 1) = _____ **p.** (8 x 3) + (8 x 6) = _____

Cross out the number sentence in each row that is NOT equal to the others.

u. 4 x 8 = 4 x (4 + 4) = (4 x 4) + (4 x 4) = (4 x 3) + (4 x 6)

v. 1 x 12 = 1 x (3 + 4) = 1 x (6 + 6) = 1 x (3 + 9)

w. 9 x 7 = (9 x 4) + (9 x 3) = (9 x 3) + (9 x 6) = (9 x 7) + (9 x 0)

x. 6 x 3 = 6 x (1 + 2) = 6 x (2 + 1) = (6 x 2) + (6 x 2)

Fluency Problem #1

Fill in each row to show the equal groups relationship.

Total Amount	Number Of Groups	Amount in Each Group
56	8	7
16	2	
	7	5
54		6
100	10	
	8	3
20		2
42	7	

Number Of Groups	Amount in Each Group	Total Amount
9	6	
	4	36
7		63
7	10	
	4	32
5		10
4	8	

Fluency Problem #2

1) ___ ÷ 2 = 4
2) ___ ÷ 10 = 5
3) ___ ÷ 3 = 6
4) ___ ÷ 2 = 9
5) ___ ÷ 4 = 7
6) ___ ÷ 5 = 9
7) ___ ÷ 10 = 8
8) ___ ÷ 6 = 0
9) ___ ÷ 7 = 3
10) ___ ÷ 8 = 4
11) 40 ÷ ___ = 5
12) 60 ÷ ___ = 10
13) 12 ÷ ___ = 2
14) 18 ÷ ___ = 9
15) 32 ÷ ___ = 8
16) 90 ÷ ___ = 9
17) 42 ÷ ___ = 6
18) 24 ÷ ___ = 4
19) 36 ÷ ___ = 4
20) 63 ÷ ___ = 7
21) 54 ÷ ___ = 6
22) ___ ÷ 4 = 8
23) 80 ÷ ___ = 10
24) 14 ÷ ___ = 2
25) ___ ÷ 6 = 4
26) ___ ÷ 9 = 7
27) 49 ÷ ___ = 7
28) 48 ÷ ___ = 8
29) 28 ÷ ___ = 4
30) ___ ÷ 9 = 9
31) ___ ÷ 8 = 6
32) 56 ÷ ___ = 7
33) 72 ÷ ___ = 8
34) ___ ÷ 5 = 9
35) ___ ÷ 8 = 5
36) 63 ÷ ___ = 9
37) ___ ÷ 10 = 4
38) ___ ÷ 8 = 9
39) 36 ÷ ___ = 9
40) 64 ÷ ___ = 8

CHALLENGE 1

KICKING MACHINE

YOUR CHALLENGE

Build a machine that kicks a Ping-Pong ball into a cup lying on its side 12 inches away. Use either (1) a pendulum, (2) a rubber band, or (3) a combination of the two to do this.

MATERIALS*

- Balls (Ping-Pong and golf)
- Corrugated cardboard
- Paper clips
- Paper cups
- Popsicle sticks
- Rubber bands
- Ruler
- Scissors
- String
- Tape (masking or duct)
- Thin metal wire (optional)
- Wooden skewers

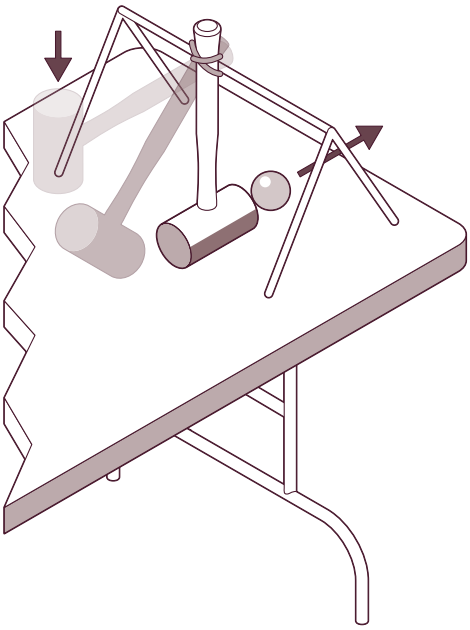
* For information on where to get these materials, see page 6 or visit pbskidsgo.org/designsquad/engineers.

BRAINSTORM AND DESIGN

Before you begin designing your machine, brainstorm answers to the following questions. Record and sketch your ideas in your design notebook.

- Will my machine use a pendulum or rubber band (or a combination) to send a ball into the cup?
- How will I stop the machine from launching the ball before I'm ready to release it?
- How will the machine be triggered when I'm ready to launch the ball?
- How will I make sure the pendulum or rubber band launches the ball straight enough and with the right amount of force so it goes into the cup?

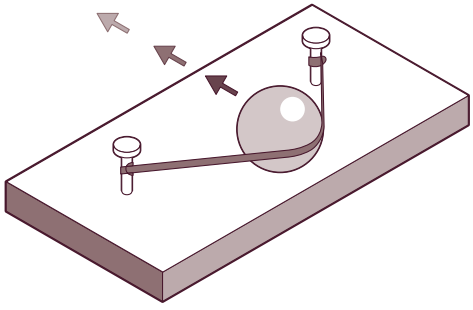
Think about how to create different release points for the pendulum or rubber band so you have more control over a launched ball. Also consider how to determine the right amount of energy to store up before making your shot.



BUILD, TEST, AND REDESIGN

When you lift a pendulum or stretch a rubber band, you increase its potential energy. ***Potential energy*** is energy that is stored. When you release the pendulum or rubber band, its potential energy is turned into ***kinetic energy***, the energy of motion. Many machines have this in common—they turn potential energy (e.g., fuel, electricity, muscle power, springs, or weights) into kinetic energy that can be used to do a task (in this case, launch a ball).

Once you've built your machine, test it. Lay a cup on its side 12 inches away and see if you can get the ball in. When we made our machine, we had to debug some problems. For example, the ball bumped into parts of our machine and went in unexpected directions, and the stretched rubber band bent our frame. It was also hard to get the pendulum and rubber band to stay pulled back. If things like this happen to you, figure out a way to fix the problem so that your machine works every time.



When you lift a pendulum or stretch a rubber band, you increase its potential energy.

TAKE IT TO THE NEXT LEVEL

- Move the cup so it's 24 inches from your kicking machine.
- Build a ramp and see if you can shoot the ball up and over the ramp.
- Build a machine that can launch two balls at once or that can launch balls at different speeds.

INSIDE THE ENGINEERING

SWEET DELIVERY

Building machines that make tasty—and sometimes far-out—ice cream flavors is just the kind of challenge Pete Gosselin loves. He's head engineer for Ben and Jerry's® ice cream. Pete's the guy who designs the machines that make different flavors and mix the right amounts of candy, filling, or swirl into each container. And you thought getting a ball into a cup was a challenge! Some days, it's, "We want every container to have half a pint of cherry ice cream with cherries and fudge flakes and half a pint of chocolate ice cream with fudge brownies. Now on the brownie side, make sure there are at least three but no more than four brownie bites. Oh and by the way, these babies need to roll off the production line at 200 pints a minute." To make some flavors, Pete tinkers with the factory's existing machines. For others, he has to design special machines. His biggest challenge: to design a machine that makes a flavor with a core of fudge and caramel wedged between chocolate and caramel ice cream. The way Pete sees it, "The world is full of problems and possibilities. And technology has a huge influence on making our lives better, whether the challenge is addressing global warming or making delicious food."

Ben and Jerry's is a registered trademark of Ben & Jerry's Homemade Holdings, Inc.

TAKE IT ONLINE

Want to make life easier? See how simple machines bring mechanical advantage to the rescue! Download *Not So Simple Machines* from Intel's *Design and Discovery* hands-on engineering program.

intel.com/education/designanddiscovery

Photo: Mika Tomczak

The *Design Squad* cast made a kicking machine for a professional soccer player. This soccer-ball launcher uses electric drills to spin wheelbarrow wheels to send soccer balls flying.

DESIGN SQUAD

Watch *Design Squad* on PBS (check local listings). Download more challenges at **pbskidsgo.org/designsquad.**

PBS

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READING MATERIAL

Read About Variations of Traits

To see the video, click here: https://www.generationgenius.com/?share=2A195

INHERITED TRAITS DEFINITION

Traits are your physical characteristics, like your hair or eye color. Every living thing has traits that make it unique. Most traits are passed down from parents, however, they can also come from your grandparents or even your great-grandparents. Some traits are also influenced by the environment.

To better understand how inherited traits work...

LET'S BREAK IT DOWN!

Genetics for Kids: Most traits are passed down from parents.

Parents pass their physical characteristics, or *traits*, to their offspring. *Offspring* are the children of animal parents (and that includes humans, too).

When baby animals are formed, some of the traits from the mom and some of the traits from the dad are combined to create a unique baby.

Sometimes traits can skip a generation. That's why you might be the only one in the family with a nose that looks like your grandfather's nose.

Inherited Traits: Different individuals can have different traits.

If you have siblings, you might have some of the same traits. However, other traits may be different, like your eye color or height.

You cannot have all of your mom's traits AND all of your dad's traits! It's always a mixture. When babies are formed, they get some traits from each parent. It's kind of like shuffling a deck of playing cards. Each time you shuffle the deck and pass out the cards, the players will have a different set of cards to play with.

Animals of the same kind share a common set of physical traits. For example, all giraffes have long necks and all birds lay eggs. Animals also have common behavioral traits. We can expect that all bumblebees will gather nectar and pollen and take it back to their beehive.

Passing Down Traits: Variation of traits among individuals may provide advantages in surviving.

Some traits are very helpful for animals in the wild. If a newborn deer blends into the grass where it was born, it will have a better chance of staying hidden from predators.

Camouflage is a trait that helps animals survive. Other traits, such as fur color, speed, and how well an animal can hear also help it survive. Having the prettiest feathers is a helpful trait for findings mates.

Environmental Factors: Some traits are influenced by environment.

We are all born with the information that will determine our traits. However, different factors in a living thing's environment can influence the trait. If a person is born with the potential to grow very tall, but they don't get proper nutrition, it is unlikely that they will be tall.

Poison dart frogs are the most brightly colored, and the most poisonous, frogs in the world. They are another good example of how traits can be influenced by the environment. Scientists think that poison dart frogs get their poison from the insects they eat. It is not simply something they are born with.

EXAMPLES OF INHERITED TRAITS

An alligator's scales can help it survive. If the color of the alligator's scales can help it stay camouflaged, it will have a better chance of sneaking up on its prey. Also, darker scales will help the alligator warm up faster in the sunlight.

Puppies of the same litter do not all look the same. Since offspring receive different traits from their parents, animals born in the same litter can have very different appearances. These puppies have different fur color and snout shapes.

A tiger's stripes are an inherited trait from its parents. Tigers may either have wide stripes or narrow stripes. The type of stripes a tiger has depends on the traits that were passed down from the tiger's mom and dad.

INHERITED TRAITS VOCABULARY

Traits	Characteristics of an individual that can be inherited from parents.
Offspring	The children of animal parents (that includes humans too!)
Inherit	The process of traits being passed down from parents to offspring.
Predator	An animal that eats other animals.
Prey	An animal that is eaten by other animals.

Name: _____ Date: _____

GENIUSCHALLENGE

VARIATION OF TRAITS

1. Most traits that animal have are passed down to them from what?

_____

2. True or false: the environment can also influence traits of living things. _____

3. List two traits that are similar between the puppies.

   1. _____

   2. _____

4. List two traits that are different between the puppies.

   1. _____

   2. _____

5. If a mom and dad are both large, what size do you predict their offspring will be?

_____

6. Which of these environmental factors might positively impact a plant's traits?

   a. fertilizer b. dry soil c. flooding d. too much sunlight

7. Why is a tiger's pattern of stripes important?

_____

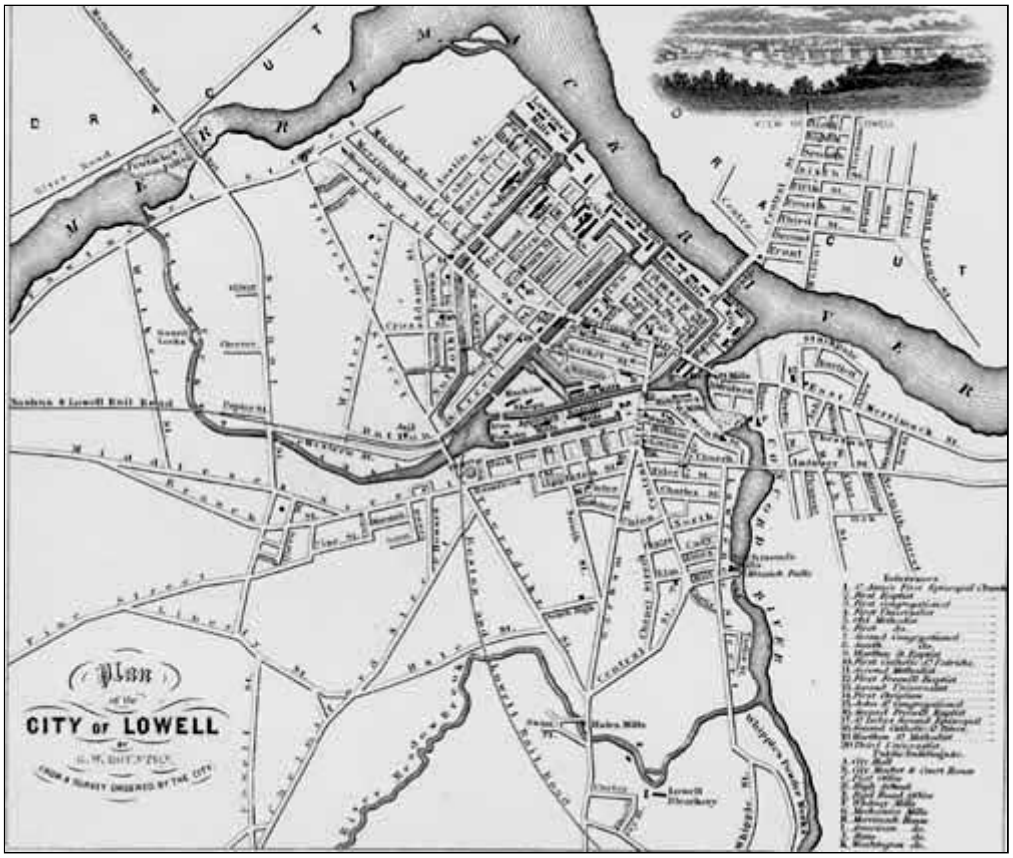
8. True or false: a white tiger and an orange tiger can be brother and sister. _____

9. What are some differences between baby alligators?

_____

10. What is one trait that you likely inherited from your parents?

_____



Lowell Map - 1845

By 1845 the City of Lowell had grown to a population of almost 30,000. This map shows the canal system, boardinghouses, and mills that had been built by the textile corporations in only ten years time.

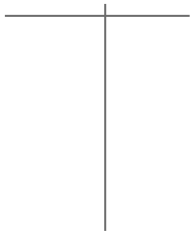
Tens of thousands of women and men left farms and small towns to find work in Lowell. In 1845, Boston was the only city in Massachusetts with a larger population. The men who built Lowell thought it would make them rich, and it did. They also thought it would be a model industrial city, free from the problems found in English factory towns. They built schools and churches, planted flowers and trees, and arranged for lectures, concerts, and other forms of cultural enrichment. (Lowell Historical Society)

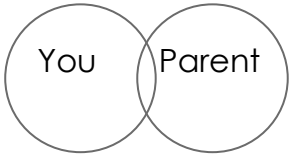
To learn more about what it might have been like for a young woman working in the Lowell Mills, click on the link below. You will play an interactive game as the character Eliza Paige. This character moved from a New Hampshire farm to Lowell in the 1830s for a better life. In this game you will have to make decisions about where to live, what to do with the money you earn, how to spend your free time, and whether to protest working conditions.

https://www.uml.edu/tsongas/bringing-history-home/page_00/

ESL at Home 3-5 Weeks 9-10

Use notebook paper to complete these activities. Do one each day!

Monday	Tuesday	Wednesday	Thursday	Friday
Pick a character from a book. Write a message that character would post on social media! Can include pictures! 	Use things in your home to create a kind of store (clothing, furniture, etc.). Write what you will sell and what it will cost! **Example:** Red t-shirt: $10 Jeans: $17.99 Gold necklace: $4.50	Create a cooking show! Choose something to make with your family! Explain the steps of how to make the dish while you are cooking together!	Make a t-chart of your toys that are heavy and toys that are light. 	Imagine you were an animal (**Example**: horse, cow, pig, chicken) that lived on a farm where all the animals could talk. Write and draw about your adventure with your animal friends.

Monday	Tuesday	Wednesday	Thursday	Friday
Find items around your house and create an instrument. Come up with a song and write lyrics to it! 	Pick a character from a TV show, movie, or book. Write and describe the character. **Example:** Batman is wearing black. He is kind because he saves others.	Read a story or chapter aloud to your family, but don't read the end (or what happens next). Have them predict what will happen. Then read it to them and see if they were correct!	Interview your parents or grandparents about what games they played when they were little. Create a venn diagram about how games are similar and different. 	List four things in your home that produce **light energy**. List four things in your home that produce **heat energy**. List four things in your home that **reflect** light.