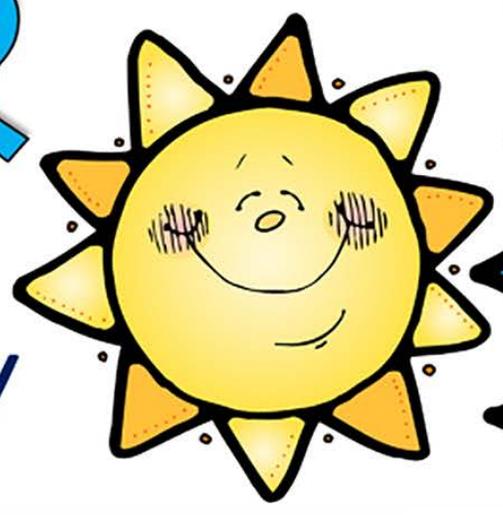




# SUMMER Packet



## ABOUT ME

Name: \_\_\_\_\_

I am \_\_\_\_\_ years old.

This summer I \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

Summer Packet Due: August 23, 2021



ACADEMIR CHARTER SCHOOL EAST  
"Expect Excellence"



**To:** Parent/Guardian(s)

**From:** Ms. Bernal, Principal

**Re:** Mandatory Summer Packet 2021

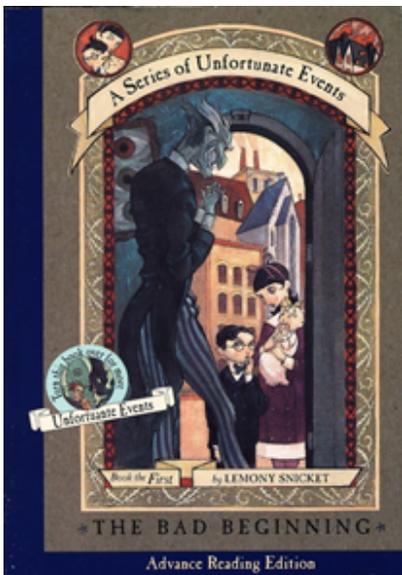
Between the end of one school year and the start of the next, every student risks summer learning loss. That is why AcadeMir Charter School East at Doral is committed to promote learning over the summer break. We believe in the importance of reading to strengthen fluency, vocabulary, phonics, and comprehension throughout the summer, as well as reinforcing concepts learned in math and science. Therefore, Summer Assignments are once again upon us.

For the 2021-2022 school year, it is *mandatory* that all students:

- Read the *Required Summer Reading book* for his/her entering grade level
- Complete the book report for book assigned with parent/guardian assistance as needed
- Complete the entire Summer Booklet as they will be collected the first week of school. Failure to complete these assignments will result in the student receiving zeros.

Have a great summer!

*Ms. Olinia Bernal*



## Required Summer Reading 2021-2022

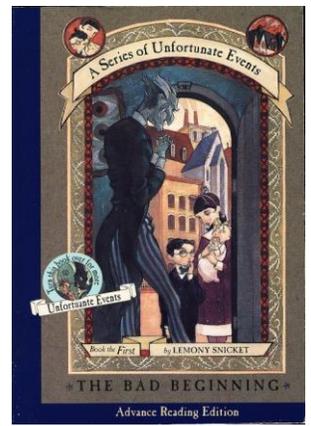
### A Series of Unfortunate Events Book 1: The Bad Beginning

By: Lemony Snicket

The Bad Beginning, the first book in Lemony Snicket's A Series of Unfortunate Events, introduces readers to Violet, Klaus, and Sunny Baudelaire. When their parents die, they are sent to live with Count Olaf, a distant relative, but it soon becomes clear that he is after the family fortune. The children outwit him—and get some help from family friend Mr. Poe.

# A Series of Unfortunate Events: Bad Beginnings, Book 1

by Lemony Snicket



1. Who are the Baudelaire children? Describe them. Use evidence from the text to support your answer.

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2. Even though the Baudelaire children were intelligent and resourceful, there was something rather unusual about them. What was it?

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3. How did Mr. Poe change the children's lives forever?

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4. Why did the Baudelaire children leave Mr. Poe's household? How did they feel about leaving?

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5. Describe Count Olaf's house. Use evidence from the text to support your answer.

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6. What were the living conditions like at Count Olaf's house?

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7. Why did Mr. Poe refuse to help Baudelaire children? Use evidence to support your answer.

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8. Who is Justice Strauss? What room does Justice Strauss have that the children were excited about?

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9. What were the children researching in the library? How were they planning to use this research to help them escape?

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10. Why were Violet, Klaus and Sunny locked up in the tower room?

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11. Violet, Klaus and Sunny kept trying to plan their escape from the tower room. Explain why every plan seemed hopeless to the children.

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12. What was the purpose of the play according to Count Olaf? How did Violet ruin this for him?

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13. How did Count Olaf avoid getting arrested?

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14. Even though the Baudelaire children desire to live with Justice Strauss, they are unable to. Explain why.

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15. Using the text structure of sequence, write a summary including the major events in the novel. Use evidence from the text to support your answer.

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# Building a Bridge

by R. Howard



Summer vacation had just begun, and Alex and Maria were ready to spend all day outside. They decided to walk to the neighborhood park, where there was a river that they liked to swim in when it was particularly hot. Alex and Maria began to sweat as they walked, even though their house was only ten minutes away from the park's entrance.

When they got to the river, they saw that it was too shallow to swim in. The rocks that made up the bed of the river were even poking out of the water in some places, glistening in the sun. Alex and Maria were frustrated. On the other side of the river, about fifty yards away, and in a welcoming courtyard, there was a fountain spewing water in beautiful arcs.

"We should go play in the fountain," Maria said.

"How will we get there?" asked Alex.

They thought for a moment. They knew if they walked upriver, they would eventually come to a walkway that crossed the river, but it was so hot, and they were eager to get to the fountain.

Maria looked around the grassy riverbank and noticed a few logs and branches lying close to

the water. "We could build a bridge!" she said. She ran over to a thick tree branch that looked long enough to be placed across the river. Together, she and Alex hefted the branch onto their shoulders and walked it to the water. Here, they stopped. How would they get the branch across?

Maria suggested throwing it down into the water and seeing if it reached the other side. That seemed imprecise to Alex - what if the branch did not reach the other side of the river, and got stuck or swept away by the water? Then they would be unable to walk all the way across the river.

Maria wondered if they could measure the distance from the riverbank they stood on to the other shore. They put the log carefully down and decided to test the distance with lighter, thinner branches. They found a few wispy branches by the spot where they had first found the log, and they tied the branches together using their hair bands.

On their first attempt, they tied two branches together and went back to the river to test the length. The branches barely reached the center of the swirling water. After tying two more branches together to the initial branches, Alex and Maria were able to get the thin makeshift model bridge to touch the far bank.

"Hooray!" Maria said. "Now we know how long the log needs to be."

They set the tied branches on the ground next to the log. The log was luckily the exact length of the tied branches. Now Alex and Maria had to figure out how to make sure the log was secure on both sides of the bank before they walked across it to reach the other side of the river.

"I know!" Alex said. She began to gather thinner branches, like the ones they had tied together, which were pliable and easy to bend. She twisted them together into a tight bundle, then laid them horizontally across the edges of the log. Then she and Maria hauled some of the stones out of the river and placed them on the branches on either side of the log. In this way, they were able to stabilize the log-at least on one side-in order to run across.

When Alex and Maria got to the other side of the river, they secured the other side of the log with more branches and rocks, and looked back at their handiwork. It had been a good day's work, but now they were free to enjoy the cool water in the fountain.

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# Who Needs a Better Mousetrap?

by ReadWorks



Have you ever heard this quote: "Build a better mousetrap, and the world will beat a path to your door."

In the United States, these words are commonly credited to Ralph Waldo Emerson, one of the great American thinkers of the 19<sup>th</sup> century. The quote is often used to describe how one should become a successful inventor. The idea is that brand new solutions to unsolved problems aren't necessary for success. Most inventors can simply come up with slightly better solutions and find success by staying ahead of the game.

However, the quote is inaccurate. Emerson never actually said these words, and when people recite this quote, they're continuing one of the greatest misinterpretations of our time. Originally, Emerson described people's desire to have the best product—for example, corn, pigs, chairs or knives. Over the years, the words "better mousetrap" found their way into the quote, and the effect has been so strong that the mousetrap is now the most reinvented device in United States history.

What exactly makes for a "better mousetrap"? A quick look at the market for mousetraps

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reveals a great variety of solutions. T-Rex traps, glue traps, catch traps, and bait-less traps are just a few examples. But what makes any of these mousetraps better than the others? Is there such a thing as a best mousetrap?

The trick to answering these questions is to understand a basic truth about solving problems in the real world: There is never one best solution to a problem. Whenever people are faced with a problem to overcome, there are a number of ways to arrive at a solution. And when deciding what solution is best, you are choosing the right balance between two things: *criteria* and *constraints*.

*Criteria* are the ways that you know your solution is working. People don't always agree on the same criteria, so if you're setting out to build (or buy) a better mousetrap, it's important to decide what you want the mousetrap to do for you.

## Possible Criteria for a Better Mousetrap

- The trap should kill the mouse.
- The trap should catch the mouse, but not harm it. Don't hurt the mouse!
- The trap has to be very, very light.
- The trap can be as big as a shoebox, but it must fit under your kitchen sink.
- The trap shouldn't hurt any human who accidentally touches it.

Let's say that your goal is to catch the mouse, but you don't want to kill the mouse or hurt it in anyway. Instead, you want to put the mouse in a cage and bring it to school to show your classmates. It's easier to spot your ideal mousetrap, but you can't start building until you've considered all of your *constraints*.

*Constraints* are the things that stop you from doing whatever you want to meet your criteria. The most common constraint is cost. For example, some people would love to have a mousetrap that instantly puts the mouse to sleep, so they can safely move the mouse to another location without harming it. Unfortunately, this kind of technology is too expensive for the typical person to afford.

## Possible Constraints on Building a Better Mousetrap

- It's very expensive to capture a mouse without harming it.
-

- The only materials that are available to build the trap are not as light as you would like.
- The only traps that can fit under your kitchen sink also kill the mouse.
- Traps that only harm mice and never harm humans cost at least \$10 to build.

Another possible constraint is building materials. Maybe one of your criteria is that the mousetrap should be very light. However, if light materials like plastic are not available, then it might be very difficult to meet that criterion. The next best solution might be a mousetrap made of wood or metal.

When you're deciding which mousetrap is the best, you will always have to keep track of your constraints. You'll often find several different solutions, and each solution will fit a different combination of constraints and criteria. As a problem solver, your job is to decide which one is the best fit.

According to the United States Patent Office, over 4,000 people have tried to invent a better mousetrap. The misquoted words of Ralph Waldo Emerson are also used to describe the efforts of thousands of businesses, all of which are trying to write a smarter computer program, build a faster airplane, or make a better ice cream flavor to bring more customers to their doors. The promise of a better solution is something that many people try to fulfill every single day.

Think, though, about the last time you saw a mousetrap. Even if a hundred new mousetraps are invented every year, they're not always better than the ones that came before. At the end of the day, the criteria for a better mousetrap might be so simple there is no better solution out there. And the constraints of building a new mousetrap might outweigh any of the criteria you can think of for a better solution.

Build a better mousetrap, and the world might never notice.

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Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Use the article "Building a Bridge" to answer questions 1 to 2.**

1. What do Alex and Maria want to achieve by building a bridge?

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2. What is one problem Alex and Maria face while they are trying to build their bridge?

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**Use the article "Who Needs a Better Mousetrap?" to answer questions 3 to 4.**

3. There are a number of ways to solve most problems. When deciding which solution is best, what two things do you need to balance?

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4. What is the difference between a piece of criteria and a constraint? Use information from the text to support your answer.

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**Use the articles "Who Needs a Better Mousetrap?" and "Building a Bridge" to answer questions 5 to 6.**

5. What was one piece of criteria that Alex and Maria required for their bridge? Use information from both texts to support your answer.

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6. What was one constraint that Alex and Maria had to consider while building their bridge? Use information from both texts to support your answer.

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## Editing Task I

Choose the correct word or phrase to fill in each blank in the passage. For each blank, fill in the circle before the word or phrase that is correct.

### Childhood Obesity, Prevalence and Prevention

by Mahshid Dehghan, Noori Akhtar-Danesh and Anwar T Merchant

1. Childhood obesity has reached epidemic levels in developed [  a) countrys  b) countres  c) countries  d) country ]. Twenty-five percent of children in the US are overweight and 11% are obese. Overweight and obesity in childhood are known to have a significant impact on both physical and psychological health.

2. The mechanism of obesity development is not fully understood and it is [  a) believe  b) believed  c) believable  d) believing ] to be a disorder with multiple causes.

Environmental factors, lifestyle preferences, and cultural environment play pivotal roles in the rising prevalence of obesity worldwide. In general, overweight and obesity are assumed to be the results of an increase in caloric and fat intake.

3. On the other hand, there are supporting evidence that excessive sugar intake by soft drinks, increased portion size, and steady decline in physical activity have been playing major roles in the rising rates of obesity all around the world. [  a) Consequently,  b) Consequently  c) Alternatively,  d) Alternatively ] both over-consumption of calories and reduced physical activity are involved in childhood obesity.

4. Almost all researchers agree that prevention [  a) will be  b) should be  c) would be  d) could be ] the key strategy for controlling the current epidemic of obesity.

## Editing Task I Continued

Choose the correct word or phrase to fill in each blank in the passage. For each blank, fill in the circle before the word or phrase that is correct.

5. Until now, most approaches have focused on changing the behavior of individuals in diet and exercise [  a .  b ?  c !  d , ]

6. It [  a seems however that  b seems however, that  c seems, however, that  d seems, however that ] these strategies have had little impact on the growing increase in the obesity epidemic. While about 50% of the adults are overweight and obese in many countries, it is difficult to reduce excessive weight once it becomes established.

7. Children should, therefore, be considered the priority population for intervention strategies. Prevention may be achieved through a variety of interventions targeting built environment, physical activity, and diet. Some of these potential strategies for intervention in children can be implemented by targeting preschool institutions, schools [  a or  b yet  c but  d so ] after-school care services as a natural setting for influencing the diet and physical activity.

8. All in all, there is an urgent need to [  a initiate  b initiate  c initiate  d initiate ] prevention and treatment of obesity in children.

Write the correct answer.

1. An office supply store sold 310,409 pencils last year. What is the expanded form of 310,409?

\_\_\_\_\_

2. The population of Yuba City, California is 60,360 people. What is 60,360 rounded to the nearest thousand?

\_\_\_\_\_

3. Last year, the local animal shelter found homes for 12,308 dogs and 7,953 cats. What is the total number of dogs and cats the animal shelter found homes for last year?

\_\_\_\_\_

4. The area of South Dakota is 77,353 square miles. The area of North Dakota is 70,700 square miles. How many square miles greater is the area of South Dakota than the area of North Dakota?

\_\_\_\_\_

5. Juan wrote this pattern on his paper.

$$3 \times 6 = 18$$

$$3 \times 60 = 180$$

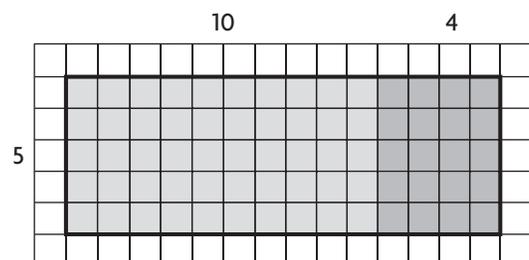
$$3 \times 600 = 1,800$$

$$3 \times 6,000 = \blacksquare$$

What is the unknown number in Juan's pattern?

\_\_\_\_\_

6. James uses the Distributive Property to find how many cans of paint are in the art supply closet. There are 5 boxes in the closet. Each box holds 14 cans.



How many cans of paint are in the closet?

\_\_\_\_\_

7. Ling’s parents buy 4 tickets for the nature museum. Each ticket costs \$13. What is the total cost of the 4 tickets?

\_\_\_\_\_

8. The theater has 1,678 seats. A magician performed 3 sold out shows at the theater. How many people were able to see the magician’s show?

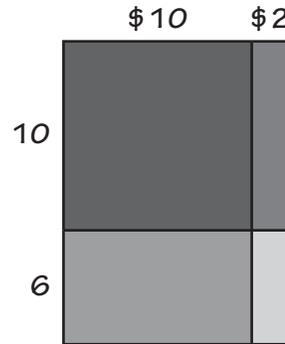
\_\_\_\_\_

9. Erin has 4 bags with 19 marbles in each bag. She also has 7 bags with 14 marbles in each bag. She gives 23 marbles to her brother. She wrote this expression to find how many marbles she has left. How many marbles does Erin have left?

$$4 \times 19 + 7 \times 14 - 23$$

\_\_\_\_\_

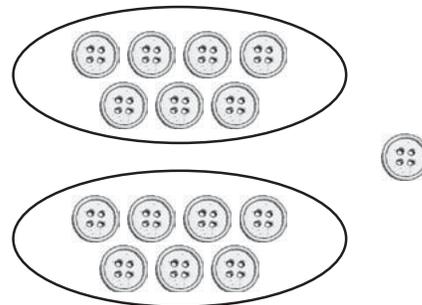
10. Risley’s Restaurant charges \$12 for a spaghetti dinner special. During one hour 16 people ordered the spaghetti dinner special.



What is the total amount Risley’s Restaurant charged during that hour for the spaghetti dinner specials?

\_\_\_\_\_

11. Anya used buttons to model a division problem.



The division problem this model represents is \_\_\_\_\_.

The quotient is \_\_\_\_\_ and the remainder is \_\_\_\_\_.

12. The Distributive Property can help you divide. Show how you can break apart the dividend to find the quotient for  $224 \div 7$ .

\_\_\_\_\_

- 13.** On Saturday, a total of 1,292 people went to see a new movie. There were 4 different showings for the new movie and the same number of people attended each showing. How many people attended each showing?
- \_\_\_\_\_
- 14.** A dentist bought 9 bags of prizes for his patients. Each bag had 12 prizes. The prizes were divided equally among 3 boxes. How many prizes were in each box?
- \_\_\_\_\_
- 15.** Rylee is learning about prime numbers in math class. Her friend asked her to name all the prime numbers between 10 and 20. What numbers should Rylee name?
- \_\_\_\_\_
- 16.** Cassie wrote some numbers in a number pattern.
- 14, 17, 12, 15, 10, 13, 8, 11
- What should be the next number in her pattern?
- \_\_\_\_\_
- 17.** Mrs. Dalton needs  $\frac{1}{2}$  cup mixed nuts for her granola recipe. She only has a  $\frac{1}{4}$  cup measuring cup. Write the equivalent fraction that shows the amount of mixed nuts she will use for the recipe.
- \_\_\_\_\_
- 18.** Michael is practicing the piano. He spends  $\frac{1}{2}$  hour practicing scales and  $\frac{1}{4}$  hour practicing the piece for his recital. What is a common denominator for  $\frac{1}{2}$  and  $\frac{1}{4}$ ?
- \_\_\_\_\_
- 19.** Julia and Sam rode their bikes on the bike path. Julia rode her bike  $\frac{3}{10}$  of the path's distance. Sam rode his bike  $\frac{4}{8}$  of the path's distance. Compare the distances using  $<$ ,  $>$ , or  $=$ .
- \_\_\_\_\_

Name \_\_\_\_\_

**20.** Ali needs  $\frac{4}{10}$  yard of red ribbon and  $\frac{5}{10}$  yard of blue ribbon to make a tail for her kite. How much ribbon does Ali need in all?

\_\_\_\_\_

**21.** Bryan brought  $\frac{8}{10}$  gallon of water on a hiking trip. He drank  $\frac{4}{10}$  gallon of water. How much water is left?

\_\_\_\_\_

**22.** Lily has two kittens. One kitten weighs  $\frac{15}{16}$  pound. The other kitten weighs  $\frac{12}{16}$  pound. What is the difference in the weights of the two kittens?

\_\_\_\_\_

**23.** Jamie put  $2\frac{3}{12}$  pounds of green apples into a bag. He then added  $3\frac{5}{12}$  pounds of red apples into the same bag. What is the total weight of the apples in the bag?

\_\_\_\_\_

**24.** Mrs. Laska buys  $4\frac{5}{8}$  yards of blue fabric and  $2\frac{1}{8}$  yards of green fabric. How many more yards of blue fabric than green fabric does Mrs. Laska buy?

\_\_\_\_\_

**25.** In Crosby's model collection,  $\frac{5}{16}$  of the models are trains and  $\frac{7}{16}$  of the models are cars. What part of Crosby's model collection is trains and cars?

\_\_\_\_\_

**26.** Leo walks his dog  $\frac{7}{8}$  mile. He walks his dog 3 times a day. How far does Leo walk his dog every day? Show how you can use repeated addition to solve.

\_\_\_\_\_



Name \_\_\_\_\_

**27.** On Tuesday, Lilly spent  $\frac{1}{4}$  hour working on her science fair project. Ben worked 3 times as long on his science fair project as Lilly did. How much time did Ben spend on his science fair project?

\_\_\_\_\_

**28.** It takes Akio's family  $2\frac{1}{2}$  hours to drive from their home to the beach. It takes his family 3 times as long to drive to the mountains as it takes to drive to the beach. How long does it take Akio's family to drive from their home to the mountains?

\_\_\_\_\_

**29.** The stout infantfish is one of the world's smallest fish. It is only about  $8\frac{4}{10}$  millimeters long. What is this length written as a decimal?

\_\_\_\_\_

**30.** The distance from Davina's house to her school is  $2\frac{75}{100}$  miles. What is this distance written as a decimal?

\_\_\_\_\_

**31.** Jill buys a tomato that weighs 0.9 pound. Write the weight of the tomato as a fraction with a denominator of 100.

\_\_\_\_\_

**32.** Use  $<$ ,  $>$ , or  $=$  to compare 0.36 and 0.4.

\_\_\_\_\_

**33.** Henry draws an obtuse triangle. How many obtuse angles does Henry's triangle have?

\_\_\_\_\_

**34.** What term **best** describes the lines shown?



Write *perpendicular*, *parallel*, or *intersecting*.

\_\_\_\_\_

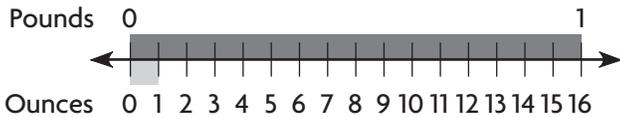
35. Tyler uses craft sticks to make a quadrilateral like the one shown.



Tell whether she made a *trapezoid*, *parallelogram*, *rhombus*, *rectangle*, or *square*.

\_\_\_\_\_

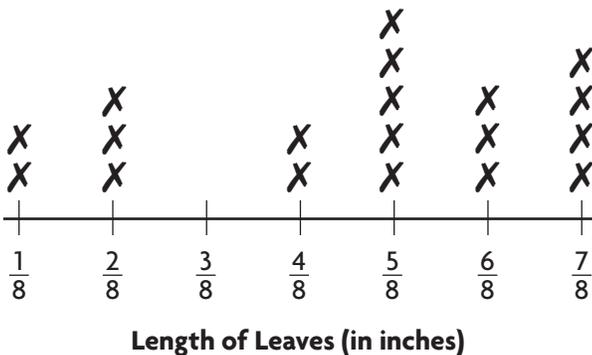
36. A puppy weighs 3 pounds.



What is the puppy's weight in ounces?

\_\_\_\_\_

37. The line plot shows the lengths of some leaves Madison collected on a hike.



How many leaves were longer than  $\frac{5}{8}$  inch?

\_\_\_\_\_

38. A piece of ribbon is 86 centimeters long.

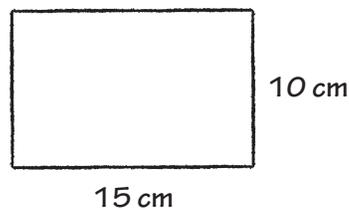
Metric Units of Length
1 centimeter (cm) = 10 millimeters (mm)
1 decimeter (dm) = 10 centimeters
1 meter (m) = 10 decimeters
1 meter (m) = 100 centimeters
1 meter (m) = 1,000 millimeters

Using the information in the chart, find the length of the ribbon in meters.

\_\_\_\_\_

39. Mr. Rourke is 5 feet 8 inches tall. How tall is Mr. Rourke in inches?
- \_\_\_\_\_

40. Greta wants to put ribbon around the perimeter of her art project. How many centimeters of ribbon will she need?



\_\_\_\_\_





**SC.5.N.1.1** Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.

## The Practice of Science

All scientists try to explain how and why things in the natural world happen. Scientists answer questions that arise from observations of the natural world. A good scientific question is one that can be answered by investigation.

An **investigation** is a procedure carried out to carefully observe, study, or test something in order to find out more about it. A scientific investigation always begins with a question.

Once a scientist has a testable question, it is time to plan an investigation. **Scientific methods** are ways that scientists perform investigations. The type of investigation can vary, depending on the question. All scientific methods use logic and reasoning.

Some investigations are experiments. An **experiment** is an investigation in which all of the conditions are controlled. Scientists study what happens to a group of samples that are all the same except for one difference. Not all questions can be investigated by experimentation. Scientists also use repeated observations to study processes in nature that they can observe but cannot control. Scientists use models when they cannot experiment on the real thing. Models can be used to represent real objects or processes. Scientists use models to study things that are too big, too expensive, or too uncontrollable to study in any other way.

Scientists use the results from their investigation to draw conclusions. The conclusion may answer the question or indicate that further investigation is needed.

### Models

Some scientific questions involve objects that are too far away, too expensive, too big, or too complex to study by experimentation. Scientists can use models to address these questions. Scientists use models to draw conclusions and make predictions. **Predictions** are statements about future events based on information.

A variety of models can be used for different purposes. The best model is the one that most closely represents the real thing. The simplest model is a diagram or flow chart that shows relationships between objects or ideas. A physical model is a three-dimensional representation of the object or process. A computer simulation model is very useful for complex processes because it can change factors that cannot be controlled in the real world.



## Experiments

Many scientific questions can be answered using experiments. An experiment is a procedure used to test a hypothesis. A hypothesis is a statement that can be tested and will explain what can happen in an investigation. An experiment should be designed with two or more situations that are compared. A variable is any condition in an experiment that can be changed. The idea is to keep all variables the same except one. This variable is the one you test. Among the setups should be one called the control. The **control** is the setup to which all the others are compared.

A **procedure** is the steps followed in an experiment. It is common for the procedure to be repeated multiple times. Repeated experiments increase the amount of data that can be considered. When the results are similar, you will have more evidence to support your conclusions.

All conclusions should be supported by evidence. The more evidence there is supporting it, the stronger the conclusion. Results are also used to evaluate the hypothesis. If the evidence does not support the hypothesis, the hypothesis may need to be revised. Further experiments can be designed to test the revised hypothesis.

## Data Displays

Data displays summarize the results of an investigation. The type of display used depends on the type of data. The results of experiments are usually organized in a table. This makes it easier to compare setups. Sometimes additional calculations are required to make the results more useful.

Results are often displayed and communicated in graphs or diagrams. These types of displays summarize key points in the results. Data that show a change in time, or in another continuous variable, are often displayed as a line graph. Bar graphs are used to compare data from different categories. Circle graphs are useful when comparing parts to a whole. Non-numerical data can be represented in diagrams.

## Science Tools

Some scientists investigate the natural world on location. Their investigations are often in the form of repeated observations. They use tools to increase the power of their senses. The tools they use depend on the question.

A field scientist might use a collecting net to catch small animals without harming them. The scientist can then take various types of measurements of various kinds. A hand lens can be used to magnify small objects to make observation easier. Cameras allow scientists to record events for later analysis. Photographs also help track and identify organisms. Scientists use computers to record and analyze data, construct models, and communicate with other scientists.

Some tools are too big or too delicate to be taken into most field locations. These tools are used in the laboratory. A light microscope magnifies things, or makes them look bigger. The object to be viewed is placed on a clear slide. The scanning electron microscope (SEM) can magnify an object up to one million times. The SEM shoots a beam of electrons at the object. An image of the surface of the object appears on a computer screen.

## Measurements

Taking measurements is making observations involving numbers and units. Scientists around the world use the International System (SI), or metric system. The metric system is based on multiples of 10. In the metric system, base units are divided into smaller units using prefixes such as *milli-* and *centi-*. Base units are changed to bigger units using prefixes such as *kilo-*.

Length is the distance between two points. The base metric unit of length is the meter. Rulers, metersticks, and tape measures are tools used to measure length.

Time describes how long events take. The base unit of time is the second. Time is measured with clocks, stopwatches, timers, and calendars.

Temperature describes how hot or cold something is. Thermometers are used to measure temperature. Scientists measure temperature in degrees Celsius.

Mass is the amount of matter in an object. The base unit of mass is the gram. A balance is a tool used to measure mass. There are different types of balances; pan balance, triple-beam balance, and digital balance.

A spring scale is a tool used to measure force. Force is a push or pull. The base unit is called a newton.

Volume is the amount of space a solid, liquid, or gas takes up. There are two base metric units for measuring volume the cubic meter and the liter. A cubic meter is one meter long, one meter high, and one meter wide. A liter is the base unit often used for measuring liquids.

When a measurement is close to the true size, it is **accurate**. Accurate measurements are important when doing science investigations. Make sure a tool is not broken and that you know how to use it properly. Use the tool the same way every time. Measure to the smallest place value the tool allows. Be sure to use the correct units.

## Student-Response Activity

1 Which type of investigation—repeated observations, using models, or controlled experiments—would work best to answer each question?

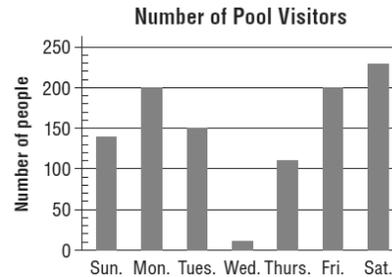
- What type of shark visits a reef at different times of the year? \_\_\_\_\_  
\_\_\_\_\_
- Does hot water or cold water dissolve sugar faster? \_\_\_\_\_  
\_\_\_\_\_
- How does a rocket work? \_\_\_\_\_  
\_\_\_\_\_
- How does the color of light affect plant growth? \_\_\_\_\_  
\_\_\_\_\_

# Benchmark Assessment SC.5.N.1.1

## Fill in the letter of the best choice.

- 1 Scientists want to determine if how loud music is played affects a person’s blood pressure. Which variable should change in the experiment?
  - (A) the type of music played
  - (B) the amount of time the person hears the music
  - (C) the volume of music played
  - (D) the tools used to test the blood pressure
  
- 2 Shayla observes the change from caterpillar to butterfly. She draws and labels each phase and shares her drawings with the class. Which statement **best** describes Shayla’s investigation?
  - (F) It involves modeling.
  - (G) It involves experimentation.
  - (H) It involves repeated observations.
  - (I) It involves both experimentation and repeated observation.
  
- 3 Jermaine uses cell phone Internet service from provider A. Ricardo uses Internet service from provider B. How can Jermaine and Ricardo determine in a scientific way which Internet company has faster download speeds?
  - (A) Read information from each Internet service provider.
  - (B) Use a timer to find out how long it takes to download the same game.
  - (C) Have each student download a different game and compare the time it took.
  - (D) Ask ten friends who use each Internet service which one is faster.

- 4 Chen counts the number of people who visit the community pool each day for 1 week. He displays his data using a bar graph.



How many more people did Chen observe at the pool on Friday than on Thursday?

- (F) 19
  - (G) 200
  - (H) 100
  - (I) 90
- 5 Teresa has been growing plants without fertilizer. Now, she wants to see what happens to the plants when the amount of fertilizer is increased, as shown in the chart.

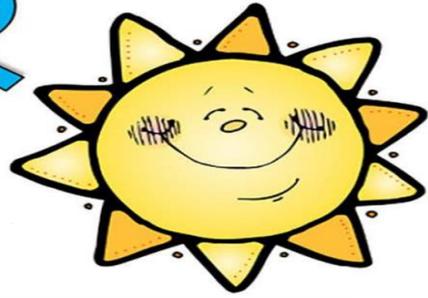
Plant	Amount of Fertilizer
1	No fertilizer
2	1 teaspoon every week
3	1 teaspoon twice per week
4	1 teaspoon once every two weeks

Which plant is the control?

- (A) 1
- (B) 2
- (C) 3
- (D) 4

# SUMMER

## S.T.E.M CHALLENGE



### Invent It, Build It

Using e-waste and recyclable materials invent an ordinary useful item that solves a problem.

#### Project Guidelines:

- 🐾 Identify a need. You can find a need in your home, school, or community.
- 🐾 Design a machine/object using e-waste and other recyclables
- 🐾 Use your invention to solve a problem
- 🐾 Give your invention a name
- 🐾 Be able to explain why reusing recyclables and e-waste are important. Explain how your invention solves a problem.

#### Example:

Need: Holding onto items when you only have one hand available because you have crutches.

Materials: Cardboard box, scissors, ruler, tape, glue, index card, rubber bands, small cup, paper tube

Invention Name: The portable crutch holder

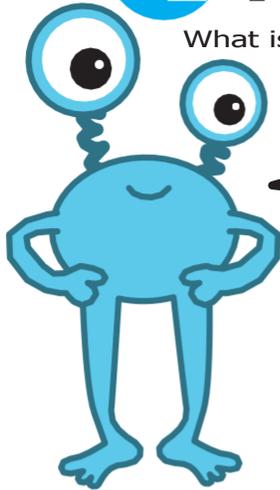


Explanation: Using recycled material to create the portable crutch holder is great for the environment and people that use crutches to get around. There are plenty of facts out there on why recycling is important. The world population is growing, not shrinking, and currently each human being adds significant waste to the planet over his or her lifetime. However, the effort involves not only recycling existing products, but purchasing products that have already been recycled. By gaining more participation in recycling we can significantly reduce the volume of waste in landfills, and by extension, the number of landfills needed! My invention is great for the planet, and for people who use crutches to get around. Using my invention lets people carry any necessary items while saving the planet.

# STEM Engineering process

## 1 Ask

What is the problem I need to solve??



I need to design a prototype...

## 2 EXPLORE

what are some ways to solve this problem?



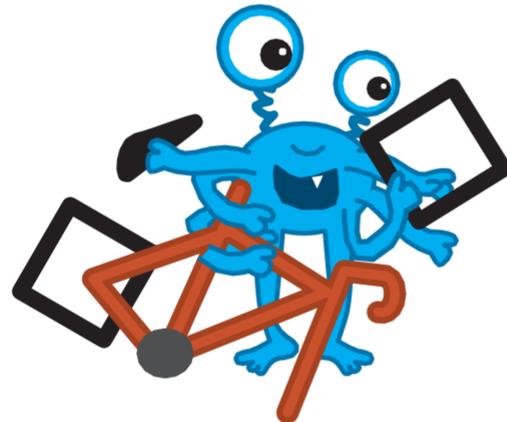
## 3 MODEL

WHAT ARE YOU GOING TO DO TO SOLVE THE PROBLEM? DRAW A PICTURE OF YOUR FINAL DESIGN.



## 4 create

Let's build it!!!



## 5 EVALUATE

DID YOUR MODEL SOLVE THE PROBLEM?



## 6 EXPLAIN

What can we do to make it better?



# SUMMER STEM CHALLENGE

**ASK**

What is the problem?

**Model**

Draw a picture of your final design.

**Explore**

How can you try to solve the problem?



Did your model solve the problem?

**EVALUATE**

**EXPLAIN** How would you change your design? How would these changes improve your design?



SUMMER



# STEM Challenge

Picture of your design



Did your model solve the problem? Explain one weakness and one strength of your model.

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# stay connected



AcademiR Charter School East

11300 NW 41 ST Miami, FL 33178

305-485-9911

[www.academircharterschooleast.com](http://www.academircharterschooleast.com)



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Fifth Grade  
remind 

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Receive announcements, reminders, and updates  
right to your phone!

## Important Dates:

[Back to School Orientation: August 19, 2021](#)

Kindergarten: 9:30 am

1st Grade: 12:30 pm

2nd Grade: 3:00 pm

[Back to School Orientation August 20, 2021](#)

3rd Grade: 9:30 am

4th Grade: 12:30 pm

5th Grade: 3:00 pm

**\*First Day of School: August 23, 2021**

