# ACSP

# Summer Gazette

## 2020-2021 Edition

## ENTERING 6TH GRADE

- CURRICULUM
- UNIFORMS
- CONTACT INFO

**STUDENT NAME:**


AcadeMir Charter School Preparatory

19185 SW 127 Ave.

Miami, Fl 33177

AcadeMir Charter School Preparatory
*"Expect Excellence"*

AcadeMir Charter School Preparatory is proud and excited to offer all students our summer assignments. This summer magazine contains all REQUIRED Reading, Mathematics, and/or Science project based learning activities for your child's incoming grade. Enclosed you will also find other pertinent information to help your family prepare for the upcoming school year. As always, use these assignments as a way to connect with your child and acclimate students to what will be expected next year. ALL magazines will be collected during the first week of school and will be evaluated for a participation grade. We hope you have a wonderful and restful summer.

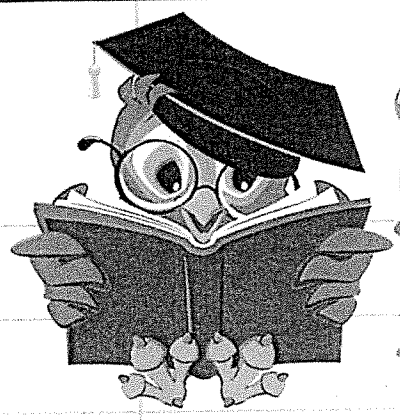
Sincerely,

M. Kristina Ledo Ed. D.
Principal

AcadeMir Charter School Preparatory está orgulloso y emocionado de ofrecer a todos los estudiantes nuestras asignaciones de verano. Esta revista de verano contiene todas las actividades de aprendizaje basadas en proyectos de Lectura, Matemáticas y / o Ciencias REQUERIDAS para el grado de su hijo. Adjunto encontrará también otra información pertinente para ayudar a su familia prepararse para el próximo año escolar. Como siempre, utilice estos proyectos como una manera de conectarse con su hijo y aclimatar a los estudiantes a lo que pueden esperar el próximo año. TODOS los proyectos se recogerán durante la primera semana de la escuela y serán evaluados para un grado de participación. Esperamos que tengan un maravilloso y tranquilo verano.

Sinceramente,

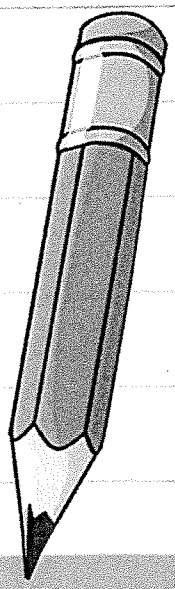
M. Kristina Ledo Ed. D.
Principal



# School Ready

## STRESS-FREE SUMMER & HASSLE-FREE BACK-TO-SCHOOL!

- ✓ NO WORRY OF OBTAINING SCHOOL SUPPLIES.
- ✓ NO WAITING IN LONG LINES.
- ✓ NO STRESS OVER SOLD-OUT ITEMS.
- ✓ ALL SUPPLIES SHIPPED IN ONE DELIVERY TO THE SCHOOL.
- ✓ ALL SUPPLIES LABELED WITH STUDENT NAME & CHARACTER.
- ✓ NO CARRYING OF BAGS OR BOXES.
- ✓ NO DELIVERY FEE.
- ✓ OPTION TO ORDER ONLINE
- ✓ OPTION TO BUY HEADPHONES SEPARATELY.
- ✓ OPTION TO BUY SUPPLY KITS BY CATEGORY.



WWW.SCHOOLREADYSUPPLIES.COM

# Middle School

T I G E R S

## Classroom Supplies

**General Supplies**:

- ✓ #2 Pencils
- ✓ 2 Blue / Black Pens
- ✓ 2 Red Pens
- ✓ 2 Highlighters
- ✓ 2 Erasers
- ✓ Sharpeners with Covers

**Homeroom Supplies:**

- ✓ 1 Bottles of Hand Sanitizer
- ✓ 2 Tissue Boxes
- ✓ 1 Bottles of Lysol
- ✓ 1 Paper Towels
- ✓ 2 Dry Erase Markers (Black/ Blue/Red/Green)
- ✓ 2 Reams of Copy Paper (White)
- ✓ 1 Pack of Color Copy Paper
- ✓ 1 Pack of College Ruled Loose Leaf Paper

**ELA/Reading**:

- ✓ 1- 2inch Binder
- ✓ 1- Duo-tang folder w/pockets
- ✓ 2- Composition Notebooks
- ✓ 1- Pair of Headphones
- ✓ 1-8GB USB memory stick

**Math:**

- ✓ 1- Duo-tang folder w/pockets
- ✓ 2- Composition Notebooks

**Science:**

- ✓ 1- Composition Notebooks
- ✓ 1- Duo-tang folder w/pockets
- ✓ 6 Dividers with pockets plastic covers
- ✓ 12 Pack of color pencils

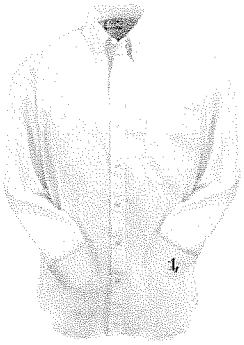
***Please keep in mind that this is just a general supply list. Teachers will be including additional supplies in their syllabus that will be required. This will be given out during the first TWO days of school.***

ease Note: If supply states "BOYS ONLY" only boys purchase this item. If supply states "GIRLS ONLY" only girls purchase this

# AcadeMir Charter School Preparatory

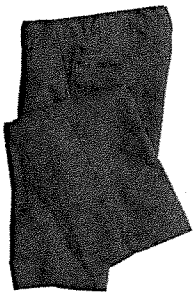
Unisex Polo Spandex

Polo Rugby

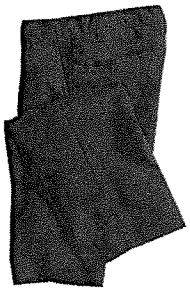


Oxford Gala

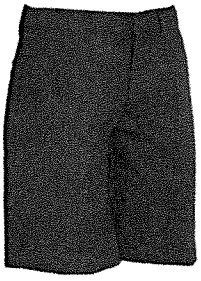
Polo Dress
$34.99 - $36.99



Flat Front Pant
$23.99

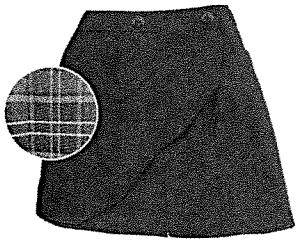


Flat Front Pant
$19.99



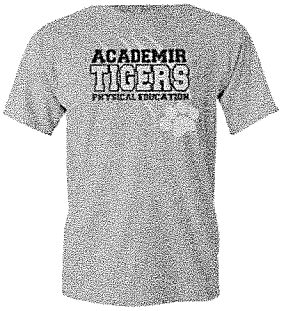
Flat Front Short
$14.99 - $19.99

Tie



Skort With Flap Plaid

Pe Short




Pe T-Shirt

Snap Fleece Jacket

V-Neck Cardigan

V-Neck Vest -Gala

**Ibiley School Uniforms:** 11530 SW 120th Street, Miami FL. 33176 - 305. 625. 8050


Dear ACSP Families:

Books can take your imagination to faraway places, on fantastic adventures, or back in time. You can learn about new things, meet new characters, and experience other cultures when you read. Reading can be relaxing, fun and rewarding - we know that people become better readers by reading!

This summer, we want you to take some time to *READ.* You can either enjoy the book on your own or read it with a grown-up. Our Grade Level Reading List can be found below. After you read your book, *complete the summer reading activity that has been assigned to your grade level.* Please bring your finished project in during the first week of school and give it to your teacher. It will be shared and displayed in class!

If you have any questions, please call our school office (305) 964-7542. Have a wonderful summer!

| Grade Level | Book |
|---|---|
| Entering Kindergarten | All Are Welcome by Alexandra Penfold |
| Entering 1st grade | The Little Butterfly that Could by Ross Burach |
| Entering 2nd grade | Jabari Jumps by Gaia Cornwall |
| Entering 3rd grade | Ranger in Time: Hurricane Katrina Rescue by Kate Messner |
| Entering 4th grade | Ways to Make Sunshine by Renee Watson |
| Entering 5th grade | Key Hunters: The Mysterious Moonstone by Eric Luper |
| Entering 6th grade | I Survived the American Revolution, 1776 by Lauren Tarshis |
| Entering 7th grade | I Survived the Battle of Gettysburg, 1863 by Lauren Tarshis |
| Entering 8th grade | The Big Game by Tim Green |

**Students Entering Grades 1-3**

- *In addition to the summer reading books above, students entering grades 1-3 will be required to complete 45 minutes Lexia weekly.*

**Students Entering Grades 4-8**

- *In addition to the summer reading books above, students entering grades 4-8 will be required to complete Reading Plus weekly.*

**Total to be completed by August 1 :**

- *10 See Readers reading comprehension activities*
- *10 Read Arounds vocabulary activities*

*Summer 2021*

# Character Analysis Essay:

**ANALYZE A CHARACTER'S PERSONALITY, NEEDS, AND OBSTACLES.**

- Analyzing key components of a character can you understand the important role character motivation plays in fiction writing. It will also get you to think about how motivation relates to the larger themes of any given piece of literature.
  - Step 1:
    - Pick a character from your summer reading book.
  - Step 2:
    - Answer the following focus questions to help you plan out your essay:
      - INTRODUCTION
        - How would you describe this character's personality? Is he or she brave, cowardly, nervous, unsure, and/or strong? Find examples from the book that prove these descriptions.
      - BODY PARAGRAPHS
        - What is the character's main goal throughout the book?
        - What are the obstacles that stand in their way of reaching their goal?
      - CONCLUSION
        - Does the character start off one way and then shift as the story progresses? If so, how?
        - How do they try to overcome those obstacles? Do they succeed?
  - Step 3:
    - Write a well-written 4-5 paragraph essay using these focus questions to guide you in your writing.
    - Make sure you have an introduction with a clear thesis statement, at least 2 body paragraphs, and a conclusion.
      - Please type your essays using 12 pt. Arial or Times New Roman font. Print it and turn it in with your summer magazine
      - Leave a space in between each new paragraph.
      - Spelling, punctuation, and grammar will count.
      - Please see the character analysis rubric – this will be used to score your essay.

# Character Analysis Essay Rubric

| Domains | 6 | 3 | 1 |
|---|---|---|---|
| **Thesis Statement** | The thesis statement of the essay has a clearly listed character as its subject. The thesis statement appears at the end of the first paragraph. | The thesis statement possesses a clear character as its subject. The thesis statement appears at the end of the first paragraph. | The thesis statement has a character subject. The thesis statement appears in the first paragraph. |
| **Body Paragraphs** | The essay has at least 2 body paragraphs. Paragraphs must be at least five sentences long with one supporting example or quote from the text. | The essay has 1 body paragraphs that possess topic sentences. Each paragraph is at least five sentences long with a supporting example or quote present in each paragraph. | The essay has a body paragraph with a topic sentence somewhat related to the thesis statement. One quote is present in the paragraph and it is at least five sentences long. |
| **Topic Sentences** | Each body paragraph starts with a topic sentence that conveys the general subject of the paragraph. The subject of each topic sentence is taken directly from the thesis statement. | Each body paragraph starts with a topic sentence that conveys the general subject of the paragraph. The subject of the topic sentence contains a reference to the thesis statement. | Each body paragraph starts with a topic sentence that conveys the general subject of the paragraph. |
| **Supporting Statements** | All statements in the body paragraphs directly relate to the topic sentences of the paragraph. | Some statements in the body paragraphs are directly related to the topic sentences of the paragraph. | One statement in the body paragraphs has a sentence subject that directly relates to the topic sentence of the paragraph. |
| **Spelling/Grammar** | No spelling or grammar errors are present in the essay. The essay contains no occurrences of passive voice. | One-two spelling and/or grammar errors are present in the essay. Some instances of passive voice are present. | Multiple spelling and/or grammar errors are present along with multiple occurrences of passive voice. |

SCORES ____/30

# LESSON 7 Quiz

**Read the passage and answer the questions that follow.**

## Amazing Fungi Facts

1 Mushrooms are a beloved food the world over. In many parts of the world, mushroom hunting—searching out wild mushrooms in forests—is a cherished pastime. But mushrooms are so much more than a tasty food or a hobby. They are one of the world's most fascinating life-forms and have been the subject of a great deal of scientific study.

Mushrooms, toadstools, yeasts, mildew, and molds: these organisms are neither plants nor animals. They are members of the third great kingdom of multicellular organisms, the kingdom of Fungi. Here are a few facts about these amazing organisms.

### The vast majority of fungi species are unknown to us.

Before the microscope was invented in the 1600s, very few fungi had been identified. Nevertheless, for centuries people have used fungi to make such foods as bread and cheese. Now about 80,000 different species of fungi have been identified, and it is believed that many, many more remain to be discovered. Mycologists, the scientists who study fungi, estimate that there are about 1.5 million species of fungi living on Earth today!

### Fungi are closer cousins to us than to plants.

Until the middle of the twentieth century, scientists thought of fungi as plants and categorized them as part of the plant kingdom. Fungi do resemble plants in many ways. They don't move around as animals do, for example, and many of them grow from the soil. However, fungi do not have chlorophyll, the pigments that help plants convert light into food. Like animals, they get their food from other organisms. In fact, a close examination of the molecules which make up fungi shows that they are more closely related to animals than they are to plants.

### Instead of consuming their food, fungi live in it.

5 Although fungi get their food from other organisms, they do not have mouths or stomachs. They do not put their food inside their bodies to digest it, as animals do. Instead, a fungus secretes enzymes from its body into the area where it is growing. The enzymes break up the food in that area, just as enzymes break up the food inside our stomachs. The fungus then absorbs the food into its body. As a fungus runs out of food in the area where it is located, it grows toward areas where it can get more food.

### An individual fungus might be much, much larger than you think.

An individual mushroom may look something like a little plant, but it is actually just a small part of a fungus. It is the part of a fungus called the fruiting body, or sporophore. The fruiting body produces spores, which are like seeds. New fungi grow from spores.

Most of the fungus that makes a mushroom grows underground. It is made up of long strands called hyphae. The network of hyphae that make up an individual fungus is called the mycelium. The mycelium can grow several yards in diameter and, if its hyphae were extended end-to-end, may have a length that would be measured in miles. In fact, the world's largest organism is a fungus. It is a honey mushroom growing in Oregon's Blue Mountains that covers nearly four square miles and is at least two thousand years old.

Not all fungi are large. Yeast, for example, grows as individual cells that reproduce by budding or by fission, which is the process of splitting or breaking apart.

**Without fungi, life as we know it would not exist.**

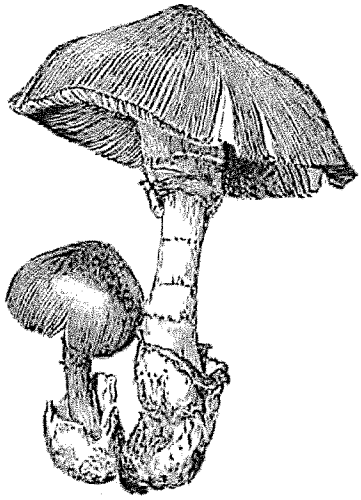
We eat fungi, such as mushrooms and truffles. Yeast and molds also help us make bread and many cheeses. But we need fungi for so much more than food.

10 For example, together with bacteria, fungi are responsible for decomposition. Decomposition is the process of breaking down waste products and dead organisms. This process returns carbon and mineral nutrients to the environment, where other organisms can use them. Life on Earth depends on this process.

**(Some) fungi save lives.**

Not all fungi are decomposers. Some are parasites that get their food from living plants and animals. Many of these parasites can harm their hosts, causing such problems as athlete's foot, as well as blight and other diseases that kill plants. But other fungi are very helpful to humans and even save lives.

Through most of history, even a small cut could be deadly if it became infected. That all changed in 1928, when the Scottish scientist Alexander Fleming found that a mold, *Penicillium notatum,* inhibited the growth of bacteria. This discovery led to the development of penicillin and other antibiotics. Thanks to the fungi that provide these medicines, infections are no longer the life-and-death problem they once were.



1. The word organism in paragraph 2 means

   **A.** plant.

   **B.** mushroom.

   **C.** body part.

   **D.** living thing.

2. It can be inferred from paragraph 3 that very few fungi had been identified before the 1600s because

   **A.** many of them are very small.

   **B.** only a few of them have practical uses.

   **C.** most of them evolved only recently.

   **D.** some of them were confused with plants.

3. In paragraph 4, how does the author support the idea that fungi are more like animals than plants?

   **A.** by explaining the life cycle of fungi

   **B.** by telling the history of scientific thinking about fungi

   **C.** by comparing fungi with plants and animals

   **D.** by describing the features of fungi

4. According to paragraph 5, enzymes are used for

   **A.** finding food.

   **B.** growing food.

   **C.** digesting food.

   **D.** consuming food.

5. Which of the following details explains why some fungi become so large?

   **A.** "In fact, a close examination of the molecules that make up fungi shows that they are more closely related to animals than they are to plants."

   **B.** "As a fungus runs out of food in the area where it is located, it grows toward areas where it can get more food."

   **C.** "An individual mushroom may look something like a little plant, but it is actually just a small part of a fungus."

   **D.** "Yeast, for example, grows as individual cells that reproduce by budding or by fission."

6. Why did the author MOST LIKELY include paragraphs 9–12?

   **A.** to show reasons why fungi are helpful

   **B.** to describe what decomposers do

   **C.** to compare decomposers with parasites

   **D.** to explain how antibiotics work

7. What is the effect of the decomposition that is accomplished by fungi?

_____

_____

_____

_____

**Read the passage and answer the questions that follow.**

# Beautiful Debris

1 Hey, look! Did you see that streak of light? It flashed across the sky, and then it disappeared just as quickly as it had appeared. Oh, look! There's another one! Did you see it? And there's another one!

Those fleeting streaks of light that can be seen at night are sometimes called *shooting stars* or *falling stars.* Scientists call them *meteors.* The source of a meteor is not actually a star, however. It is a rock or another object that has entered Earth's atmosphere, burning up as it goes. Objects like these are called *meteoroids.*

## What Are Meteoroids?

Some meteoroids are bits from the surfaces of the moon and Mars that have hurtled into space after a large impact. Only a very small number of meteoroids are created in this way, though. The vast majority of meteoroids are fragments from comets and asteroids.

A comet is a small object that moves around the sun, usually in an orbit that is highly eccentric, or elongated. Because of its elongated orbit, a comet is sometimes much, much closer to the sun than it is at other times. When a comet's orbit brings it close to the sun, an envelope of dust and gas develops around its icy center. Many comets also develop a streaky tail.

5 An asteroid is a rocky object that orbits the sun, most often in the asteroid belt between the orbits of Mars and Jupiter. Asteroids and meteoroids can be distinguished in two ways. First, asteroids are larger. An object that is house-size or smaller is typically called a meteoroid. Second, whereas an asteroid is typically thought of as orbiting in space, a meteoroid is often considered to be an object that might collide with another one, such as a spacecraft or Earth.

## Why Do Meteoroids Burn?

A meteoroid enters the atmosphere at an extremely high speed—traveling 25,000 miles per hour or even faster. As the meteoroid collides with the molecules in Earth's atmosphere, it becomes so hot that its surface melts and turns to vapor.

Some meteoroids actually survive this scorching trip through the atmosphere. Those that make it to Earth's surface are called *meteorites.*

## What Is a Meteor Shower?

At certain times of the year, the rate of meteor sightings increases. The meteors seem to fall in the same direction from the same place in the sky. These events are called *meteor showers.* During a typical meteor shower, dozens of meteors appear per hour. Other meteor showers are quite spectacular, with hundreds or even thousands of meteors per hour.

Some meteor showers occur when Earth passes through a meteor stream. A meteor stream is a group of meteoroids that travels in the same orbit around the sun. Other meteor showers occur when Earth passes through the orbit of a comet. Debris from the comet enters the atmosphere and blazes across the sky. Many of these meteor showers occur at predictable intervals and are often named for the star or constellation from which the meteors seem to emerge.

### Meteoroid? Meteor? Meteorite?

In common usage, people often confuse these three words. Most often, people use the word *meteor* to refer to something that is actually a meteoroid or meteorite. Here's a handy guide to the meaning of each word.

**meteoroid:** a small, stony or metallic body traveling through space, often a leftover part of a comet

**meteor:** a fleeting streak of light caused by the entry of a meteoroid into Earth's atmosphere

**meteorite:** a meteoroid that has survived entry into the atmosphere and landed on Earth's surface

### Some Notable Meteor Showers

| Shower | Time of Year | Associated Comet |
|---|---|---|
| Eta Aquarid | early May | Halley |
| Perseid | mid-August | Swift-Tuttle |
| Orionid | mid-October | Halley |
| Leonid | mid-November | Tempel-Tuttle |
| Geminid | mid-December | (3200) Phaethon |

**8.** In paragraph 1, how does the author introduce the subject of meteors?

**A.** by comparing meteors with stars

**B.** by dramatizing what it is like to see meteors

**C.** by describing where meteors come from

**D.** by telling where to find meteors in the sky

**9.** It can be inferred from paragraph 2 that meteors are similar to stars because of their

**A.** age.

**B.** speed.

**C.** brightness.

**D.** composition.

**10.** In the section titled "What Are Meteoroids?," why does the author MOST LIKELY include the descriptions of comets and asteroids?

**A.** Meteoroids are types of comets and asteroids.

**B.** Meteoroids are similar to comets and asteroids.

**C.** Meteoroids eventually become comets or asteroids.

**D.** Meteoroids are made of bits from comets and asteroids.

**11.** The word <u>orbit</u> in paragraph 4 means

**A.** very long distance.

**B.** celestial body, such as a planet.

**C.** small object that moves around.

**D.** curved path around a planet or star.

**12.** The word collide in paragraph 5 means

**A.** to fall.

**B.** to crash.

**C.** to circle.

**D.** to break off.

**13.** According to information in the passage and on the chart, the meteor showers listed on the chart MOST LIKELY

**A.** appear only occasionally.

**B.** result in large numbers of meteorites.

**C.** are caused by the debris from comets.

**D.** should actually be called *meteoroid showers.*

**14.** What does the passage tell about meteor showers that the chart does not?

_____

_____

_____

_____

LESSON 1

# GCF and LCM

## PLUG IN Factor Pairs

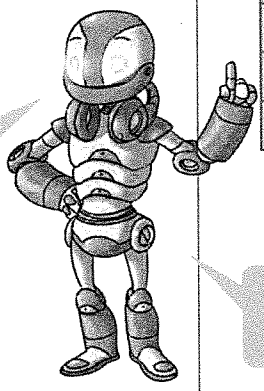
In the sentence $2 \times 3 \times 4 = 24$, 2, 3, and 4 are called **factors** of 24. You multiply 2, 3, and 4 to get the **product** 24. If only two factors are used to get a product, then the two factors are called a **factor pair**. The number 18 has three factor pairs:

$1 \times 18 = 18$

$2 \times 9 = 18$

$3 \times 6 = 18$

I see! The numbers of equal rows and columns of an array show a factor pair of a number.



A multiplication table can be used to find factor pairs. The numbers at the beginning of each column and row are factors that can be multiplied together to get a product.

| × | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
|---|---|---|---|---|---|---|---|---|---|---|
| **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **1** | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **2** | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | **18** |
| **3** | 0 | 3 | 6 | 9 | 12 | 15 | **18** | 21 | 24 | 27 |
| **4** | 0 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 |
| **5** | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
| **6** | 0 | 6 | 12 | **18** | 24 | 30 | 36 | 42 | 48 | 54 |
| **7** | 0 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 |
| **8** | 0 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 |
| **9** | 0 | 9 | **18** | 27 | 36 | 45 | 54 | 63 | 72 | 81 |

$2 \times 9 = 18$

$3 \times 6 = 18$

I get it! The factor pairs of 18 are $1 \times 18$, $2 \times 9$, and $3 \times 6$.

**Words to Know**

**factor**
a number that is multiplied in a multiplication sentence

$2 \times 3 \times 9 = 54$

2, 3, and 9 are factors of 54.

**factor pair**
two factors that can be multiplied together to get a product

$18 \times 3 = 54$

$18 \times 3$ is a factor pair of 54.

**product**
the answer to a multiplication problem

$18 \times 3 = 54$

54 is the product of $18 \times 3$.

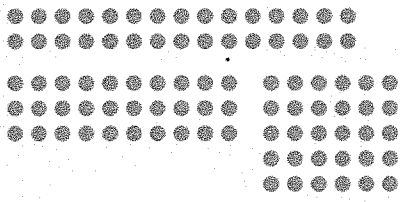
**DISCUSS** Does every number have a factor pair?

**A** You can use counters to find factor pairs of a number.

**DO** Find all the factor pairs of 30.

1. Write the factor pair that has 1 as a factor.
2. Arrange counters in equal rows and columns to show as many factor pairs as you can.
3. Write the factor pairs that the models show.

__1__ × _____



The factor pairs are _____ × _____, _____ × _____, _____ × _____, and _____ × _____.

**B** You can use a multiplication table to find factor pairs of a number.

Multiplication Table can be found on p. 211.

**DO** Find the factor pairs of 20.

1. Write the first factor pair.
2. Look in the multiplication table for all the 20s. Write equations for each product of 20.
3. Write the factor pairs. Only list a factor pair one time.

__1__ × _____ = 20

__2__ × _____ = 20, __4__ × _____ = 20

__5__ × _____ = 20, __10__ × _____ = 20

The factor pairs of 20 are _____ × _____, _____ × _____, and _____ × _____.

# PRACTICE

**Write the factor pairs shown by the model of a number.**

**1** 16

Factor pairs: __1__ × _____, _____ × _____, _____ × _____

**Complete the factor pairs. Use a multiplication table.**

**2** 15

__1__ × _____

_____ × _____

**3** 25

__1__ × _____

_____ × _____

**4** 49

__1__ × _____

_____ × _____

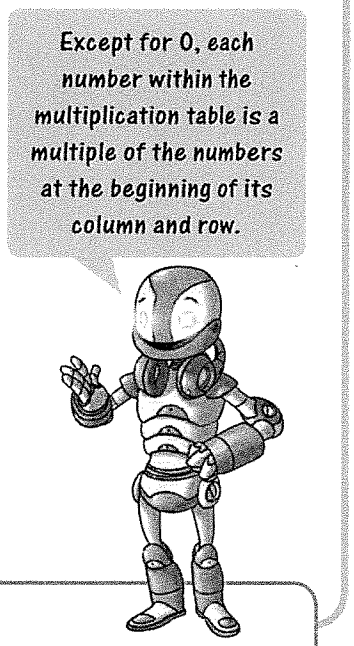
## POWER UP Multiples

In the sentence $32 = 4 \times 8$, 32 is a multiple of 4 and 8. Use a multiplication table to tell if a number is a **multiple** of another number.

Is 24 a multiple of 6?

1. Find 6 in the top row.
2. Follow the column down to 24. So 24 is a multiple of 6.
3. Follow the row across from 24 to the number at the beginning of the row, 4. This means that 24 is also a multiple of 4.

| × | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
|---|---|---|---|---|---|---|---|
| **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **1** | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| **2** | 0 | 2 | 4 | 6 | 8 | 10 | 12 |
| **3** | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
| **4** | 0 | 4 | 8 | 12 | 16 | 20 | **24** |
| **5** | 0 | 5 | 10 | 15 | 20 | 25 | 30 |
| **6** | 0 | 6 | 12 | 18 | 24 | 30 | 36 |




**Words to Know**

**multiple**
a number that is the product of a given number and another number

$2 \times 3 = \mathbf{6}$

6 is a multiple of both 2 and 3.

**DISCUSS** What multiples of 5 are shown in the multiplication table above?

**A** You can use a multiplication table to tell if a number is a multiple of another number.

**DO** Is 16 a multiple of 3?

1. Circle the row for 3.
2. List the multiples of 3 that are shown in the table.
3. See if the multiples of 3 include 16.

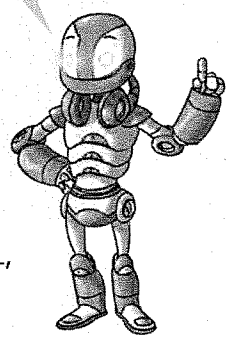
| × | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
|---|---|---|---|---|---|---|---|
| **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **1** | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| **2** | 0 | 2 | 4 | 6 | 8 | 10 | 12 |
| **3** | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
| **4** | 0 | 4 | 8 | 12 | 16 | 20 | 24 |
| **5** | 0 | 5 | 10 | 15 | 20 | 25 | 30 |
| **6** | 0 | 6 | 12 | 18 | 24 | 30 | 36 |

The multiples of 3 are **3**, _____, _____,

_____, _____, and _____.

So, 16 _____ a multiple of 3.

Now I see! I can think of a multiple as a product. When two numbers are multiplied, the product is a multiple of those numbers.



**B** You can write multiplication facts to help determine if a number is a multiple of another number.

DO Is 48 a multiple of 8?

1. Write some multiplication facts for 8.
2. List the multiples of 8 that you found.
3. See if the list includes 48.

$8 \times 1 =$ **8** $\quad 8 \times 5 =$ _____

$8 \times 2 =$ _____ $\quad 8 \times 6 =$ _____

$8 \times 3 =$ _____ $\quad 8 \times 7 =$ _____

$8 \times 4 =$ _____ $\quad 8 \times 8 =$ _____

Some multiples of 8 are _____, _____, _____, _____, _____, _____, _____, and _____.

48 _____ a multiple of 8.

**C** You can use multiplication facts to find missing multiples.

DO Fill in the missing multiples of 6.

6, _____, _____, 24, 30, 36, _____, 48, _____

1. Write some multiplication facts for 6.
2. Determine which multiples are missing.
3. Write the missing multiples.

$6 \times 1 =$ **6** $\quad 6 \times 4 =$ _____ $\quad 6 \times 7 =$ _____

$6 \times 2 =$ _____ $\quad 6 \times 5 =$ _____ $\quad 6 \times 8 =$ _____

$6 \times 3 =$ _____ $\quad 6 \times 6 =$ _____ $\quad 6 \times 9 =$ _____

The missing multiples are _____, _____, _____, and _____.

DISCUSS How do you know if a number is a multiple of another number?

## PRACTICE

**Write *is* or *is not* to tell if the number is a multiple of the other number.**

1. 28 _____ a multiple of 7.
2. 48 _____ a multiple of 9.

**Fill in the missing multiples.**

3. Multiples of 4: 4, 8, _____, 16, 20, 24, _____, 32, _____
4. Multiples of 7: 7, 14, 21, _____, 35, 42, _____, _____, _____, 70

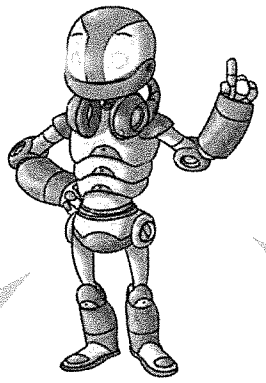
## READY TO GO GCF and LCM

To find the **greatest common factor (GCF)** of two numbers, list all the factors of each number. Then find the factors they have in common. Look for the greatest factor that appears in both lists.

Factors of 14: 1, 2, 7, 14
Factors of 35: 1, 5, 7, 35

The common factors of 14 and 35 are **1** and **7**.

The greatest factor in both lists is **7**.



I get it! The GCF of 14 and 35 is 7.

To find the **least common multiple (LCM)** of two numbers, list the first few multiples of each number. Then find the multiples they have in common. Look for the least multiple that appears in both lists.

Multiples of 4: 4, 8, 12, 16, 20, 24
Multiples of 6: 6, 12, 18, 24, 30, 36

**12** and **24** are two common multiples of 4 and 6.

The least multiple in both lists is **12**.

OK! So the LCM of 4 and 6 is 12.

**Words to Know**

**greatest common factor (GCF)**
the common factor of two numbers that has the highest value

Factors of 18: **1**, **2**, **3**, **6**, **9**, 18
Factors of 27: **1**, **3**, **9**, 27

The GCF of 18 and 27 is **9**.

**least common multiple (LCM)**
the common multiple of two numbers that has the smallest value

Multiples of 3: 3, 6, 9, 12, 15, 18, 21, **24**, 27
Multiples of 8: 8, 16, **24**, 32

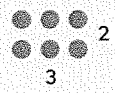
The LCM of 3 and 8 is **24**.

**DISCUSS** How do you know when you can stop listing multiples when finding the LCM?

### LESSON LINK

**PLUG IN**

**You can use arrays or a multiplication table to help you find factor pairs of a number.**




$2 \times 3$ is a factor pair of 6.

**POWER UP**

**You can use multiplication facts to help you find multiples.**

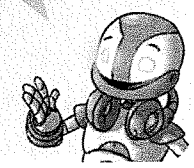
$4 \times 1 = \mathbf{4}$ $\quad$ $4 \times 3 = \mathbf{12}$

$4 \times 2 = \mathbf{8}$ $\quad$ $4 \times 4 = \mathbf{16}$

4, 8, 12, and 16 are some multiples of 4.

**GO!**

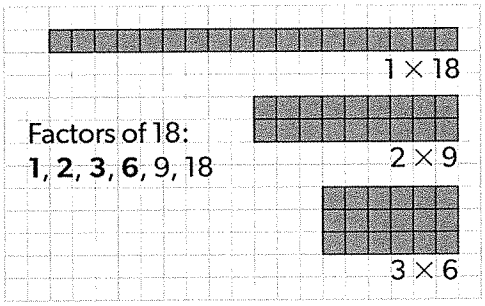
I see! Knowing how to find factors and multiples will help me find the GCF or LCM of two numbers.

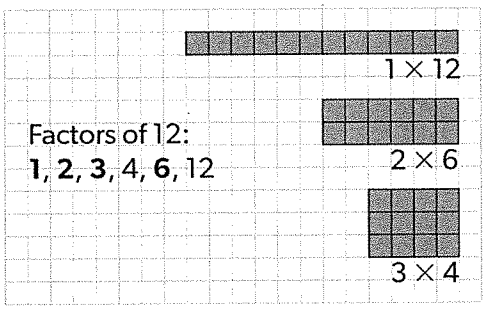


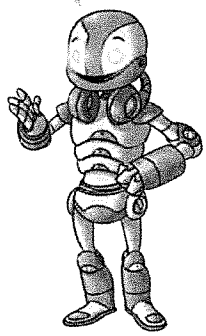
## WORK TOGETHER

You can use Grid Paper to find the GCF of two numbers.

- Find the greatest common factor of 18 and 12.
- The rectangles show the factor pairs and factors of 18 and 12.
- The factors that 18 and 12 have in common are 1, 2, 3, and 6.
- The greatest common factor is 6.




Grid Paper can be found on p. 241.

**A** You can use Grid Paper to find the GCF of two numbers.

**DO** Find the GCF of 42 and 56.

1. Draw rectangles to find the factor pairs of 42 and 56.
2. List the factors.
3. Write the factors that 42 and 56 have in common.
4. Write the greatest common factor.

Factors of 42: _____, _____, _____, _____, _____, _____, _____, _____

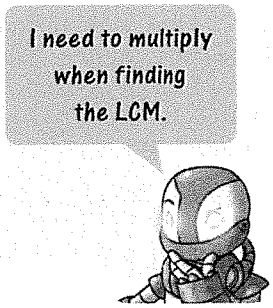
Factors of 56: _____, _____, _____, _____, _____, _____, _____, _____

The common factors are _____, _____, _____, and _____.

The GCF is _____.

**DISCUSS** Zach used counters to find the LCM of 2 and 3.


Did Zach find the LCM, or does he need more counters? Explain.



# PRACTICE

**Find the GCF of the pair of numbers.**

1. 7 and 27

GCF = _____

2. 24 and 30

GCF = _____

**REMEMBER**
The GCF is the *greatest* factor the two numbers have in common.

3. 10 and 14

GCF = _____

4. 32 and 60

GCF = _____

5. 18 and 45

GCF = _____

6. 12 and 72

GCF = _____

**Find the LCM of each pair of numbers.**

7. 10 and 12

LCM = _____

8. 8 and 4

LCM = _____

**HINT:**
8 is a multiple of itself.

**Find the LCM of the pair of numbers.**

**9** 3 and 7

LCM = _____

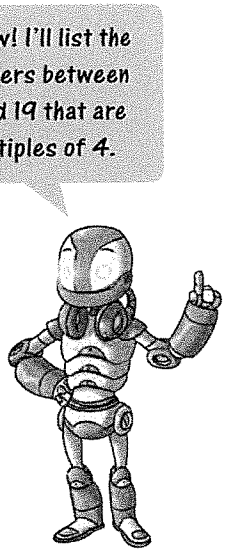
**10** 9 and 12

LCM = _____

**Solve.**

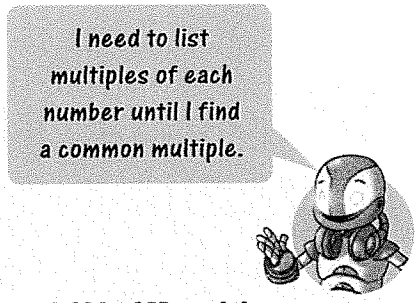
**11** The GCF of two numbers is 4. The two numbers are between 11 and 19. What are the two numbers? _____

**12** The LCM of two numbers is a multiple of 10 and a multiple of 6. The two numbers are both less than 10. What is the LCM? _____




DISCUSS **Analyze**

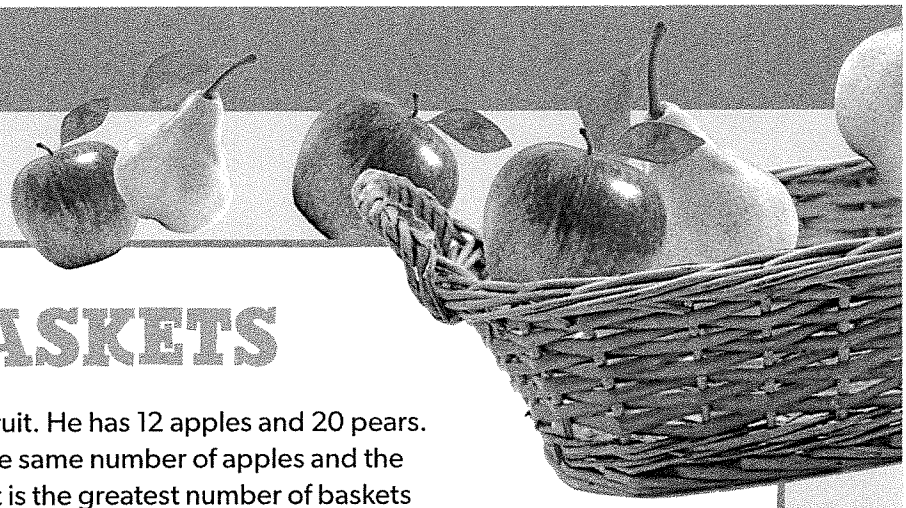
Emma says that another way to find the LCM of two numbers is to multiply the two numbers and then divide the product in half. Use Emma's advice to find the LCM of the numbers below. Write *is* or *is not*.




| **Find the LCM of 10 and 12.** | **Find the LCM of 5 and 6.** | **Find the LCM of 11 and 4.** |
|---|---|---|
| $10 \times 12 = 120$ | $5 \times 6 = 30$ | $11 \times 4 = 44$ |
| $120 \div 2 = 60$ | $30 \div 2 = 15$ | $44 \div 2 = 22$ |
| 60 _____ the LCM of 10 and 12. | 15 _____ the LCM of 5 and 6. | 22 _____ the LCM of 11 and 4. |

Explain why you agree or disagree with Emma, based on the results you found.

## PROBLEM SOLVING



# FRUIT BASKETS

**READ**

David is making baskets of fruit. He has 12 apples and 20 pears. If each basket will contain the same number of apples and the same number of pears, what is the greatest number of baskets he can make?

**PLAN**

- What is the problem asking you to find?

  The _____ number of baskets David can make

- What do you need to find to solve the problem?

  The GCF of _____ and _____.

- How can you find the GCF of the two numbers?

  List the factors of each number. Then find the GCF.

**SOLVE**

List the factors of each number to find the greatest common factor.

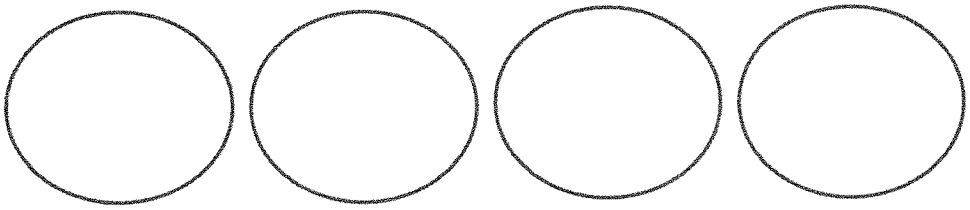
12 Factors: _____, _____, _____, _____, _____, and _____

20 Factors: _____, _____, _____, _____, _____, and _____

The common factors are _____, _____, and _____. The GCF is _____.

**CHECK**

Model the problem. Draw an oval to represent each basket.



Divide 12 apples and 20 pears equally among the 4 baskets.

There are _____ apples in each. There are _____ pears in each.

The greatest number of baskets David can make is _____.

# PRACTICE

**Use the problem-solving steps to help you.**

1. A pet store fills aquariums with fish. The store has 27 angelfish and 45 lionfish. If the aquariums will contain the same number of each kind of fish, what is the greatest number of aquariums that the store can fill?

CHECKLIST
- ☐ READ
- ☐ PLAN
- ☐ SOLVE
- ☐ CHECK

2. Tara is making a scrapbook using 24 photos and 8 newspaper clippings. She wants to put the same number of photos and clippings on each page. What is the greatest number of scrapbook pages Tara can make?

CHECKLIST
- ☐ READ
- ☐ PLAN
- ☐ SOLVE
- ☐ CHECK

3. Wyatt wants to make bags of party favors to give to his friends. Toy cars come in packages of 6. Gliders come in packages of 8. What is the least number of toy cars and gliders Wyatt can buy to have an equal number of each?

CHECKLIST
- ☐ READ
- ☐ PLAN
- ☐ SOLVE
- ☐ CHECK

4. Frankie's Meats sells frankfurters in packages of 10, and hot dog buns in packages of 8. What is the least number of frankfurters and buns Selma can buy to have an equal number of each for a barbecue?

CHECKLIST
- ☐ READ
- ☐ PLAN
- ☐ SOLVE
- ☐ CHECK

# 6th Comprehensive Science Course 1

# Nature of Science

**Standard: SC.6.N.1.1:** Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.

*Join the investigation into our class hamster's respiration! In this interactive tutorial, we will explore different methods of investigation, hypothesize, interpret data, determine appropriate conclusions, and make predictions.*

**Interactive Tutorial Lesson:**

1. Visit: https://www.floridastudents.org/PreviewResource/StudentResource/183216
2. Start the tutorial: **Class Hamster Science: Part 1**
3. Complete each practice question.
4. Print the certificate of completion.

**Interactive Tutorial Lesson:**

1. Visit: https://www.floridastudents.org/PreviewResource/StudentResource/183543
2. Start the tutorial: **Class Hamster Science Part 2: Research & Experimental Design**
3. Complete each practice question.
4. Print the certificate of completion.

**Interactive Tutorial Lesson:**

1. Visit:https://www.floridastudents.org/PreviewResource/StudentResource/183547
2. Start the tutorial: **Class Hamster Science Part 3: Experimental Testing & Results**
3. Complete each practice question.
4. Print the certificate of completion and submit to your Science teacher.

**Standard: SC.6.N.1.2:** Explain why scientific investigations should be replicable.

Help Ryan revise his soccer science experiment to make it replicable. In this interactive tutorial, you'll learn what "replicable" means and why it's so important in science.

**Interactive Tutorial Lesson:**

1. Visit: https://www.floridastudents.org/PreviewResource/StudentResource/183903
2. Start the tutorial: **Soccer Science: Why Experiments Need to be Replicable**
3. Complete each practice question.
4. Print the certificate of completion and submit to your Science teacher.

# 6th Comprehensive Science Course 1

# Nature of Science

**Standard: SC.6.N.1.3:** Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.

Investigate the benefits and limitations of experiments, observational studies, and comparative studies with this interactive tutorial.

### Interactive Tutorial Lesson:

1. Visit: https://www.floridastudents.org/PreviewResource/StudentResource/184696
2. Start the tutorial: **Let's Investigate!**
3. Complete each practice question.
4. Print the certificate of completion and submit to your Science teacher.

**Standard: SC.6.N.2.2:** Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.

Explore the processes of science and how it changes over time. This interactive tutorial uses the historical development of The Cell Theory to illustrate these ideas.

### Interactive Tutorial Lesson:

1. Visit: https://www.floridastudents.org/PreviewResource/StudentResource/179541
2. Start the tutorial: **Science Changes**
3. Complete each practice question.
4. Print the certificate of completion and submit to your Science teacher.

# 6th Comprehensive Science Course 1

# Nature of Science

Student Name: _____ Student ID: _____

| Week | Interactive Tutorial Lesson | Date Completed |
|---|---|---|
| 1 | Class Hamster Science: Part 1 | |
| 1 | Class Hamster Science Part 2: Research & Experimental Design | |
| 2 | Class Hamster Science Part 3: Experimental Testing & Results | |
| 2 | Soccer Science: Why Experiments Need to be Replicable | |
| 3 | Let's Investigate! | |
| 4 | Science Changes | |

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