# EDUCATOR'S GUIDE FOR

# ULTRA SQUAD

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# ABOUT THE BOOK


**Author:** Julia DeVillers
**Illustrator:** Rafael Rosado
**Co-Author:** R.R. Wells

**ISBN:** ISBN-978-1-7327030-0-1

**Summary:**

Four girls are chosen to be a Secret Inter-GIRL-actic Team with new Ultra-Super-GirlPowers and team up with four bizarro-cute extraterrestrial sidekicks to battle an evil force determined to destroy the Galaxy.

Posey, Anna, Lyric, and Sky discover that their unique personalities, passions and the power of friendship can make a difference in and out of this world.

They're ultra-fierce, they're ultra-unstoppable,
they're the UltraSquad!

# TEACHER REFERENCES

| THESE NOTES ARE FOR: | KEY LEARNING AREAS: | THEMES: |
|---|---|---|
| MIDDLE GRADE<br>AGES 7-12 | ENGLISH<br>SCIENCE<br>BOOK TYPE:<br>GRAPHIC NOVEL | FRIENDSHIP<br>TEAMWORK<br>COURAGE<br>PERSEVERANCE |

**Online Resources:**

Teaching
http://www.teachingcomics.org/

Why Use Graphic Novels in the Classroom?
A TED Talk by the former National Ambassador for Young People's Literature, Gene Yang:
https://www.youtube.com/watch?v=Oz4JqAJbxj0

"Using Comics and Graphic Novels in the Classroom"
http://www.ncte.org/magazine/archives/122031

# COMMON CORE STANDARDS

**The Common Core is a set of high-quality academic standards in Mathematics and English Language Arts/ Literacy (ELA). These learning goals outline what a student should know and be able to do at the end of each grade.**

UltraSquad correlates to the following common core standards:

- CCSS.ELA-LITERACY.SL.2.1
- CCSS.ELA-LITERACY.W.3.2
- CCSS.ELA-LITERACY.SL.2.1 B
- CCSS.ELA-LITERACY.W.3.2 B
- CCSS.ELA-LITERACY.SL.2.4
- CCSS.ELA-LITERACY.SL.3.1
- CCSS.ELA-LITERACY.W.2.2
- CCSS.ELA-LITERACY.SL.3.4



**See http://www.corestandards.org/ for further information.**

# NEXT GENERATION SCIENCE STANDARDS (NGSS)

ESS1.B: Earth and the Solar System

· The solar system consists of the sun and a collection of objects, including planets, their moons, and asteroids that are held in orbit around the sun by its gravitational pull on them. (MS-ESS1-2),(MS-ESS1-3)

· This model of the solar system can explain eclipses of the sun and the moon. Earth's spin axis is fixed in direction over the short-term but tilted relative to its orbit around the sun. The seasons are a result of that tilt and are caused by the differential intensity of sunlight on different areas of Earth across the year.
(MS-ESS1-1)

· The solar system appears to have formed from a disk of dust and gas, drawn together by gravity. (MS-ESS1-2)

Grades 3-5:
Students who demonstrate understanding can:
5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down.
5-ESS1-1. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from the Earth.
5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

Grades 6-8:
Students who demonstrate understanding can:
MS ES-11-2 Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.
MS ES-11-2 Analyze and interpret data to determine scale properties of objects in the solar system.

https://www.nextgenscience.org/

# PRE-READING

**Before reading the book, answer the following questions.**

**What is a graphic novel?**

A graphic novel is a book written and illustrated in the style of a comic book. They are different from a picture book or illustrated novel, as they use a combination of words and pictures sequentially to tell the story.

**How do you think this story would be told differently if it was a book with only words?**

Responses will vary.

**Looking at the cover, what do you think the book is about?**

Responses will vary.

**What does the prefix "ultra-" mean?**

Beyond, extreme

# VOCABULARY

**For each of the vocabulary word, do the following:**

- Write the word
- Write the definition
- Name the part of speech
- Draw a picture to help you remember
- Add to your Vocabulary Journal

**Science Vocabulary Words:** (in order of appearance)

- terrestrial
- black hole
- vortex
- mass
- vestibular
- hologram
- velocity
- nebula
- orbit
- helix

# LITERARY ELEMENTS

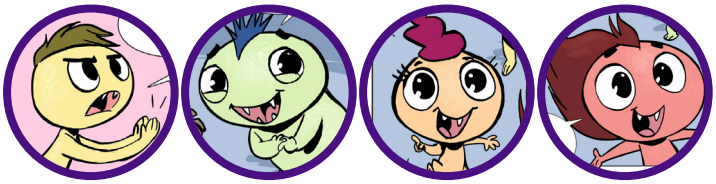
## Characters

### The Squad:

-Posey
-Anna
-Lyric
-Sky

### Extraterrestrials

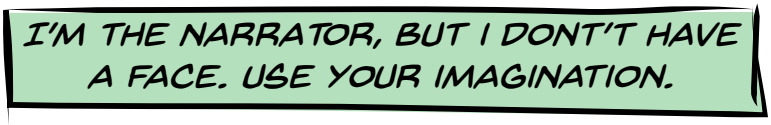
-Z/School Secretary
-Bob
-Shlunk
-Jane
-Louie



### The Villain

-Morfran

### The Narrator



# CHARACTER ACTIVITIES

1. Create your own data file

2. Fill out a data file for your favorite literary character from a different book. Use your imagination to fill in the answers.

3. Make a Venn diagram comparing two characters

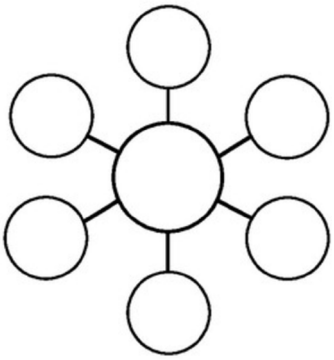
4. Choose one member of the UltraSquad and discuss how she shows growth throughout the story.

5. Which character is most like you? Why? Which is most different? Why?

6. Create a character web using descriptive words
In the center of the circle, with the name of the character.

In the outer portion of the web, place a word that describes the type of person (characteristic) he/she is, for example, greedy, shy, intelligent, etc.

Underneath, write a description of the situation from the book where the character displayed that characteristic.



# LITERARY ELEMENTS

**Theme**

Discuss the themes of UltraSquad:

- Teamwork: Pooling your strengths with others can be more effective than working alone.
- Facing your fears can help you succeed.

**Plot**

Explain foreshadowing. It is mentioned on p. 28. Find evidence of foreshadowing on p. 1.

Create a Timeline of Events

Discuss: What did you think was the most climactic scene?

**Setting**

This story takes place in different settings. What are they?

What are some descriptive words that describe each of the settings?

# WRITING ACTIVITIES

**Writing Prompts:**

**1. What is your superpower? Why did you choose it?**

**2. What is your dream superpower? What would you do with it?**

**3. What is your personal motto?**

**4. If you could have a creature sidekick, what would yours be? Describe.**

**5. Which character is most like you? Why? Which character is most unlike you? Compare and contrast.**

**6. If you could transform your school bus into anything, what would you turn it into?**

**7. What does the quote "Everyone has their strengths and weaknesses" mean?**

**8. How do you think each girl felt when she encountered her fear? How does she conquer her fear? Choose one (sample responses might include):**

- Lyric - heights; scales the scaffold to save them
- Anna - monsters; faces Robo-goons and wins
- Posey - dark, perseveres with new coping tools
- Sky - small spaces; goes through the dark tunnel

**9. Write a paragraph about earth from the point-of-view of one of the Pallies.**

# ART ACTIVITIES

**Prompts:**

1. How do a graphic novel's illustrations create mood?

2. How do you think colors show differences between characters?

3. Draw your own Pallie. Or create one of your own Pallies using digital drawing tools.

4. Design your own prototype space vehicle.

5. Illustrate your own graphic novel. Or team up with a partner and have one of you illustrate and one of you write one.

# STEAM ACTIVITIES

**Note:**

These science-based, STEAM-focused activities will explore the connection between UltraSquad and their corresponding science standards.

The following are not in-depth lessons, but are meant to integrate science and literacy in an interactive way to connect STEAM with the graphic novel.

# STEAM ACTIVITIES

**Create a Model of the Solar System**

Sort the plastic foam balls into different sizes. The largest ball should be the sun. The next largest should be Jupiter and Saturn, followed by Uranus and Neptune, and then Mercury, Venus, Earth, Mars and Pluto.

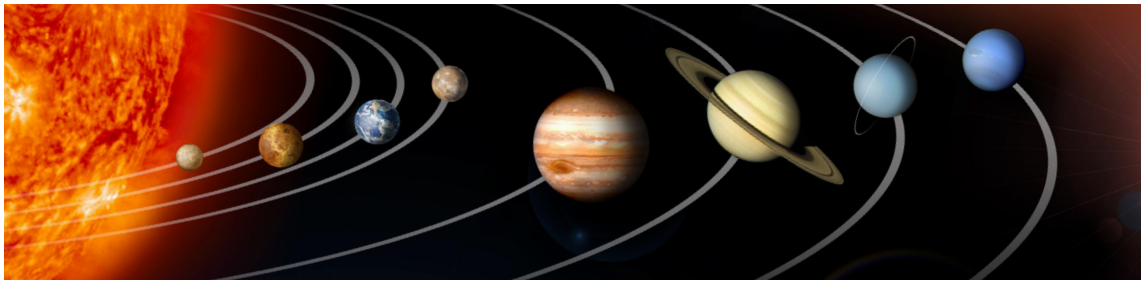
Paint the balls with these colors:

Yellow: Sun
Gray: Mercury
Orange: Jupiter
Pale yellow: Venus and Saturn
Red: Mars
Blue: Earth, Neptune and Uranus

Cut four rings out of poster board. They should be large enough to make the planetary rings for Jupiter, Saturn, Uranus and Neptune. Glue the planetary rings to Jupiter, Saturn, Uranus and Neptune.

Teach students the order of the planets. Mercury, Venus, Earth, Jupiter, Uranus and Neptune. Use this mnemonic device:
“My Very Excellent Mother Just Served Us Noodles”

Line up the planets in their order.



# STEAM ACTIVITIES

**Make Your Own Moon Surface**

Create a replica of the the moon's surface using aluminum pie plates and moon sand:

Moon sand gets its name because of its crumbly texture and how similar it looks to the surface of the moon. While you can buy moon sand or "kinetic sand" at the store, you also can safely and easily make your own.

Combine eight cups or flour and one cup of baby oil. Mix it up until the oil has soaked into the flour.
Pour it into the pie plates for a round moon.

Create craters. The moon has many craters created by impact.

Have students drop balls (marbles, golf balls, etc.) of different sizes and weights from different heights onto the moon surface to create craters. DIscuss how the different sizes and weights affect the size and depth of the craters.

# STEAM ACTIVITIES

## Launch a Rocket

### How do space engineers know when to launch?

Well, nothing in space stands still. Everything either orbits around something else, or moves toward or away from something else. So how do space engineers aim a spacecraft so it lands on Mars or meets up with a particular comet or asteroid? Not only are Earth and the target constantly moving in their different orbits around the Sun, but our Earthly launch pad is spinning at about 1,000 miles per hour when we launch the rocket!

# STEAM ACTIVITIES

**If you didn't think that was a hard problem, try this:**

1. Gather up whatever small, round objects you have. They can be tennis balls, softballs, whiffle balls, golf balls, or bean bags. Or you can make small "paper basketballs" by tightly wadding up pieces of notebook-sized paper.

2. Put the balls in a bucket or bag to make them easy to carry.

3. Find another empty container like a bucket or wastebasket or laundry basket to be the "basket."

4. Take the paper balls (in their container) and the basket to the nearest park or playground that has a merry-go-round. (Not the kind with horses, but the kind you push around then hop on and ride.)

5. Place the basket on the ground about 3 or 4 meters (9 to 12 feet) from the merry-go-round. Then, step up on the merry-go-round with your container of balls.

6. Without moving the merry-go-round, try tossing a few balls into the basket on the ground.

7. Now, leaving the container of balls on the merry-go-round, hop off, push it to get it going slowly (or have someone else push it), then hop back on.

8. Now, try tossing the balls into the basket on the ground as you go around.

**Adding the motion makes it a lot harder to hit your target, doesn't it? Now imagine the target is on another spinning merry-go-round on the other side of the playground. Even if your paper balls were real basketballs or baseballs, you'd have a lot of trouble. What you will probably find out is that timing is everything!**

https://spaceplace.nasa.gov/

# STEAM ACTIVITIES

## Black Hole Word Search

### The UltraSquad learns of the "Black Hole Machine" that the villains are trying to harness. What is a Black Hole?

According to NASA, a black hole is an area of such immense gravity that nothing--not even light--can escape from it. Black holes can form at the end of some stars' lives. Once a star's energy is used up, it no longer has the energy to support itself and it collapses. All of that collapsing matter creates a magnificent explosion. The material left over after the explosion falls into an infinitely small point. Because no light can get out, people can't see black holes. They are invisible. But scientists can see how the strong gravity affects the stars and gas around the black hole.

https://spaceplace.nasa.gov/black-holes/en/

### Find all the words related to black holes in the Word Search:

ENERGY
EXPLOSION
GAS
GRAVITY
INVISIBLE
LIGHT
MATTER
STAR

O B B W K R P P D G F J Y Y Q
Y U D T E U A K J W B T T H N
E K Q T U L O V V D F C I K I
C M T M R L I F C P O Q V D D
M A L N D A J G K U W S A Z H
M P B R O F D X H S C K R K T
E L B I S I V N I T S I G O Q
O R G P K W S Q U A C I B K Z
Q I E Z A I A O K R F L V O J
U U Z J F Q P J L U H Q N Q U
E N E R G Y Y B U P N R K H K
Z X X S E G K N V B X I J N K
A B G A A E C V M Q P E G T I
E Z R S Q E E S Y E K D H S R
H J A G F Y N I L F D N B R X

## Maze To Taco

Be like Louie. Have a Taco Tuesday to celebrate finishing the book!

Help Louie find the food at the end!