

CLASSROOM GUIDE

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Clouds in Space

Nebulae, Stardust, and Us

BY **Teresa Robeson**

ILLUSTRATED BY
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REAL SPACE SCIENCE MEETS BEAUTIFUL IMAGES in this lyrical nonfiction introduction to one of the most alluring wonders of our universe—the nebula.

Nebula means “cloud” in Latin, but these little-known astronomical phenomena are different from Earth’s clouds. They can be the last breaths of supernovas, spreading the elements of life far and wide, or they can be star nurseries, swirling molecules together to form stars and planets. In this gorgeous nonfiction look into the cosmos, the nebula narrator invites young astronomers to learn more about these immense space clouds, from how they form to what they do. Readers will be entranced by the vibrant illustrations, which incorporate real photographs of nebulae, and the poetic text, which reveals that we are all grown from scattered stardust. Rich back matter provides details about nebulae and how people have studied them and lists resources for further learning.

“The elegant text offers both scientific explanations and dreamy descriptions, while incandescent artwork blazes on every page, depicting even the depths of space as warm and inviting. . . . An eminently approachable introduction to an intriguing aspect of our universe.” –BOOKLIST

DISCUSSION QUESTIONS

- ★ What is the “secret” of the night sky that is described in the beginning of the book?
- ★ Why do you think the book is structured so we have to pause after reading “WHAT’S OUT THERE? It’s . . .”? What effect does having to turn the page for the rest of the response have on the reading experience?
- ★ What does “nebula” mean in Latin?
- ★ Why did stargazers from long ago think that nebulae were clouds?
- ★ The author describes nebulae as, “immense, stretching thousands of miles, light-years in width.” What do you think “immense” means? What synonyms can you think of for the word “immense”?
- ★ Look back through the illustrations in the book. What extra information do you learn from the illustrations that you don’t learn from the text?
- ★ How are YOU connected to a nebula?
- ★ How does the book change after Nebula waves to the girl on Earth who whispers her name?
- ★ What’s the difference between nebula and nebulae?
- ★ What is the main idea of *Clouds in Space*? What facts did you learn about the topic?



The discussion questions, activities, and worksheets in this guide were created by Leigh Courtney, Ph.D. She teaches in the Global Education program at a public elementary school in San Diego, California. She holds both master’s and doctoral degrees in education, with an emphasis on curriculum and instruction.

ACTIVITIES FOR STUDENTS

Night Sky Classroom

Look at the nebulae photos at the end of the book in the “Cast” section. Using chalk or pastels on black construction paper, create a portrait of your favorite nebula. Label each drawing with the nebula’s name, its type, and the constellation in which it appears. Display all the nebulae portraits on the ceiling to make a night sky in the classroom.

Make a Nebula Model

SUPPLIES NEEDED:

- A clear jar with a lid or an empty water bottle with a lid
- Water
- Blue food coloring
- A handful of cotton balls
- A bit of glitter

INSTRUCTIONS:

Fill the jar or bottle half full of water. Add a few drops of blue food coloring. Tear up the cotton balls and place them in the container. Add more water to fill the jar or bottle almost to the top. Add a bit of glitter, then seal the container.

Nebulae Creation

Read the section at the end of the book about how nebulae are formed. Use this information to create a three-paneled illustration showing the three different ways nebulae are created. Add a caption to each panel explaining each method.

The Pleiades

Research The Pleiades star cluster. Where is it located in space? How did it get its name? Why do you think the illustrator of *Clouds in Space* chose to depict the star cluster as she did? Create a poster report of The Pleiades with key facts and your own illustration of the star cluster.



Name: _____

AWESOME ALLITERATION

Alliteration is the repetition of the same sound at the start of a series of words. Author Teresa Robeson uses alliteration throughout *Clouds in Space*. Hunt through the book to find examples of alliteration. List them below.

EXAMPLE: **Family forged in fire**

1. _____

2. _____

3. _____

4. _____

5. _____



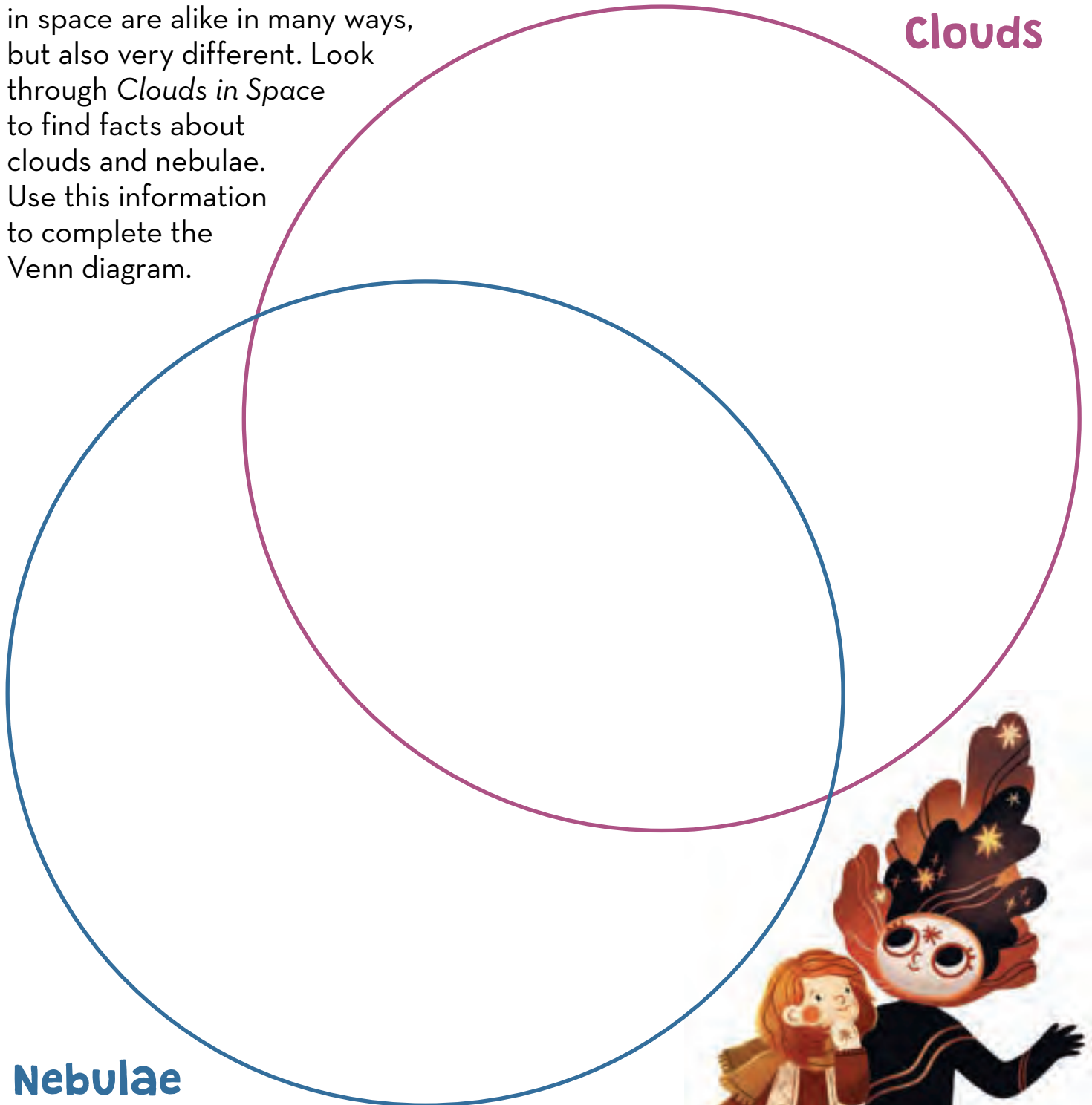
Name: _____

COMPARING CLOUDS AND NEBULAE



Clouds in Earth's atmosphere and nebulae in space are alike in many ways, but also very different. Look through *Clouds in Space* to find facts about clouds and nebulae. Use this information to complete the Venn diagram.

Clouds



Nebulae

Name: _____

PICKING PERFECT WORDS



With just a handful of words on each page, the author of *Clouds in Space* helps paint beautiful images for the reader of what is in the night sky. Take a closer look at the words in the story and choose some to sort into the categories in the chart.

WORDS THAT ARE THINGS (NOUNS)	WORDS THAT DESCRIBE (ADJECTIVES)	WORDS THAT SHOW ACTION (VERBS)