

Celebrating Saturn and Cassini

A Cassini approach view of Saturn.



LESSON TIME

About 2 hours total

MATERIALS CHECKLIST

For each student:

- Completed “Notes for Final Writing Project Worksheet” from Lesson 11
- A copy of “Saturn and Cassini Final Writing Choices Directions”
- Paper
- Pencil
- Saturn Discovery Log

TO SEE EXAMPLES OF STUDENT WORK, CLICK HERE

LESSON NO. 12

- *Language Arts Focus — Final Nonfiction Writing Practice: Descriptive; Compare and Contrast; Summary*
- *Science Focus — Sharing New Knowledge with Peers*

OVERVIEW

Though this unit on Saturn is coming to a close, students will be beginning a lifelong journey of learning about the mysteries of space and challenges of space travel. For the final lesson, students will use pre-writing notes to write a nonfiction piece about Saturn or Cassini. These final projects provide a way for children with varying learning styles to consolidate and share their learning.

WHY THIS WORKS

For the final project, students are given a choice about the type of writing they will use. Providing this choice helps students become more invested in their writing. Descriptive writing/poetry is emphasized, because being able to “paint a picture” is critical to all types of fiction and nonfiction writing. Compare and contrast writing is a popular nonfiction writing type that will be called for throughout students’ careers. Comparing and contrasting is a high-level thinking skill, and offers students the opportunity to provide an original perspective on the facts and understanding they have obtained. Summary writing is also frequently called for in and out of school. The writing assignment tasks provides students with explicit ways to plan and revise their work.

Objectives

Teachers will:

- Learn how well students have internalized knowledge about Saturn and Cassini.
- Learn how well students are able to meet nonfiction writing goals for a particular type of nonfiction writing.

Students will:

- Learn how to organize their knowledge of science to meet the requirements of a type of nonfiction writing.
- Learn how to communicate this knowledge to others.



Teacher Preparation

- Make sure students have available their completed “Notes for Final Writing Project Worksheets” from Lesson 11.
- Print out and make a copy for each student of student handout 1, “**Saturn and Cassini Final Writing Choices Directions**” (3 pages), and make a copy for yourself for discussion.

What to Do

Describe Final Writing Project Choices — Suggested time 15 minutes

1. Tell the students that they will be choosing one type of nonfiction for a final writing project.
2. Give each student a copy of “Saturn and Cassini Final Writing Choices Directions.”
3. Read through the directions with the students. If your class has had experiences writing poetry, then you may want to encourage students to write the descriptive piece as a poem.
4. Ask the class to brainstorm people or organizations that students could share their work with (for example, students in another classroom, families, NASA).
5. Record the students’ ideas on the board.
6. Allow the students time to choose which type of nonfiction writing they would like to do for their final writing project.
7. Remind students to follow the step-by-step directions for the final writing project. (They will need to do the final step — sharing with people outside of the classroom — later.)
8. Let the students know that everyone will have an opportunity to share their final project with the class.
9. Remind the class that each type of writing has a writing goal that should be written at the top of the paper. A partner will be looking at the work to see if the goal was met, and you will be looking at the work as well to see if the writing goal was met.

Write, Edit, and Revise — Suggested time 45 minutes

1. Circulate and assist the students while they write, peer edit, and revise.
2. Encourage them to remember the writing goal for their piece, and to keep in mind the person(s) they will be sharing their pieces with.



Revise Based on Teacher Notes — Suggested time 15 minutes

1. Using the “Saturn and Cassini Final Writing Directions” handout, evaluate whether the writing goal was met and provide revision notes.
2. Have the students revise their pieces based on your notes. This does not necessarily mean that the children need to rewrite the pieces. They may be able to insert information or make changes without rewriting the whole thing. If students are going to send their writing to an organization, they may wish to take the time to rewrite or word-process a clean copy after they have made their final revisions.

teacher TIP

Sharing work with the rest of the class could be done at another time in the day or week, especially if students need more time to revise their writing.

Share with the Class — Suggested time 30 minutes

1. Have the students share their pieces with the class.
2. Have the students share things they like about the piece and questions and suggestions.

Discuss Sharing Outside of the Classroom — Suggested time 10 minutes

- Encourage students to share their writing piece with three other people or organizations that they listed on their project.

Extensions

Multimedia Presentation

Have the students adapt their final writing projects to HyperStudio projects, and present the projects to each other or invited guests.

Class Book

Compile the final writing projects into a class book, and have students read from it to other classrooms, to a community organization, or invite the parents in for a reading.

Publish!

You may want to encourage students to share their final projects with a local newspaper or science museum, or with the Cassini project at NASA/JPL.

Where Is Cassini Now?

Children can visit the following website to track Cassini’s progress and discoveries, and give summary updates to the class — <http://saturn.jpl.nasa.gov/>



Assessment

As you review the students' work, ask yourself the following questions:

1. Did the child meet the writing goal specific to each type of nonfiction writing? (The writing goal should be written on the top of each student's paper.)

Either share your thinking in a conference with the child or by writing notes next to the writing goal. If you don't think the child met the writing goal, go through the same steps that the children did when doing the peer assessment, and give specific revision suggestions that would help the child meet the goal. This can guide the child's second revision of the piece. You may want to allow class time for this, or give the second revision as a homework assignment.

2. Are there any misunderstandings that I would like to address?

If so, at this point, since the unit is almost complete, you may want to have a one-on-one conversation with the student, if it seems that he or she is ready to learn more about the misunderstanding or lack of knowledge.

Standards

National Council of Teachers of English and International Reading Association Standards for the English Language Arts

All students must have opportunities to:

- Adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.
- Employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.
- Participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities.
- Use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

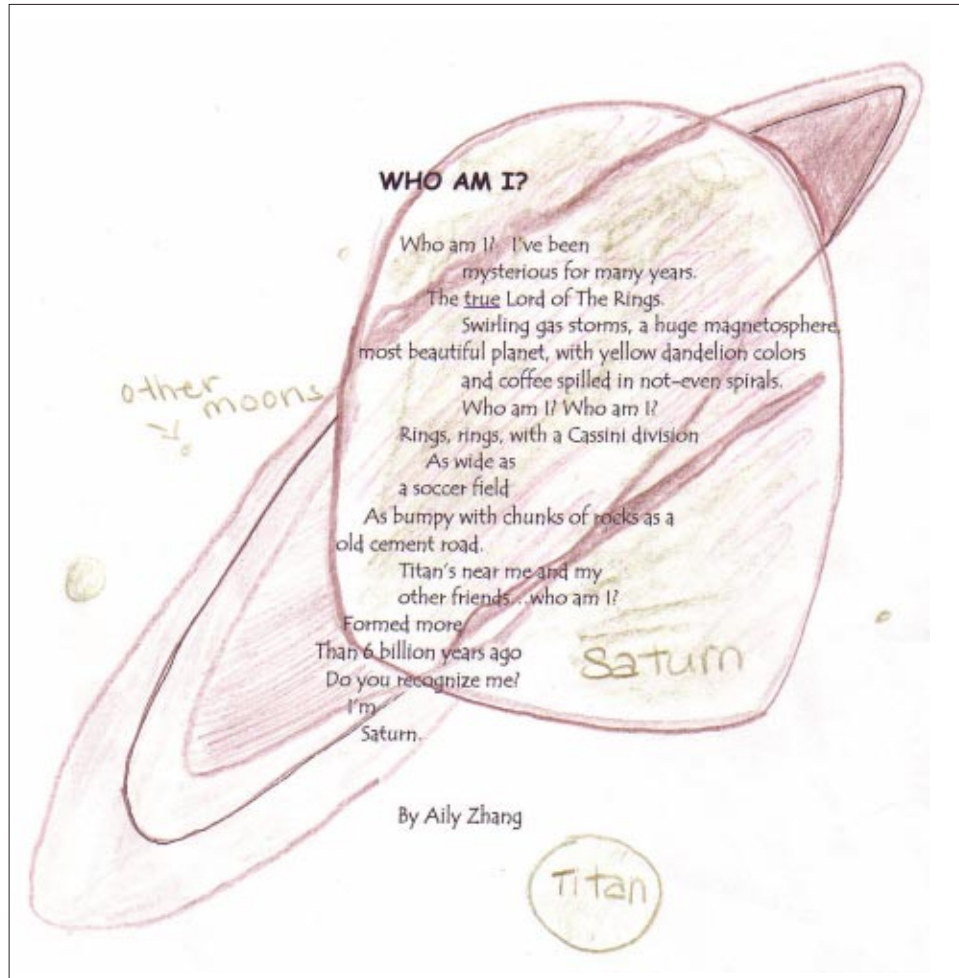
National Science Education Standards

As a result of their activities in grades K–4, all students should develop understanding:

- Of position and motion of objects (Physical Science).
- Of objects in the sky (Earth and Space Science).
- About science and technology (Science and Technology).
- Of science as a human endeavor (History and Nature of Science).



Example of Student Work



Saturn and Cassini Final Writing Choices

Directions

Below you will find a choice of three nonfiction writing projects. Read through them and choose the one that you would like to do. Then follow the directions carefully for the project that you choose.

1. DESCRIPTIVE WRITING

You will use your descriptive writing notes to describe Saturn or Cassini.

WRITING TIPS

The purpose of descriptive writing is to help the reader really picture what you are describing.

WRITING GOAL

The reader can picture Saturn or Cassini and know what makes it special.

WHAT TO DO

1. Get a piece of paper for your writing project.
2. Write the Writing Goal at the top of the paper. This will be your main goal to keep in mind as you write.
3. Beneath the Writing Goal, write your name, the date, and the title you have chosen for your piece of writing.
4. List three people or organizations that you would like to share your writing with in the margin of your paper at the top.
5. Using your "Descriptive Writing Notes" from the "Notes for Final Writing Project" worksheet, write a piece of writing that describes Saturn or Cassini. You can write about both if you would like to.
6. Have a partner read your piece and draw a shaded-in circle at all the spots that they can really picture Saturn or Cassini. Have your partner draw a blank circle at all the spots where they think you could add details to help them picture it better.
7. Reread your piece, and any time you see a blank circle, add more details to help the reader picture it better, and know why it is special.
8. Illustrate your writing when you are finished.
9. Share your writing with the three people or organizations that you listed above. Ask them to write one thing they like about your piece at the top, and to underline their favorite sentence or phrase.



Saturn and Cassini Final Writing Choices Directions contd.

2. COMPARE AND CONTRAST WRITING

You will use your compare and contrast writing notes to compare Saturn or Cassini to anything you choose.

WRITING TIPS

The point of compare and contrast writing is to show how two things are similar and different.

You may want to use the following words in your compare and contrast writing:

different	differences	differ	unlike
alike	in common	similar	the same

WRITING GOAL

Choose the five most interesting similarities and five most interesting differences for your paragraphs.

WHAT TO DO

1. Write the Writing Goal at the top of your paper. This will be your main goal to keep in mind as you write.
2. Beneath the Writing Goal, write your name, the date, and the title you have chosen for your piece of writing.
3. List three people or organizations that you would like to share your writing with in the margin of your paper at the top.
4. Using your "Compare and Contrast Writing Notes" from the "Notes for Final Writing Project" worksheet, compare Saturn or Cassini to something. Your first paragraph should show five ways that the two things are similar, and the second paragraph should show five ways that the two things are different.
5. Have a partner read your piece and look at your notes. See if your partner agrees or disagrees that you choose the most interesting similarities or differences.
6. Reread your piece, and make changes based on your partner discussion.
7. Illustrate your writing when you are finished.
8. Share your writing with the three people or organizations you listed above. If possible, ask them to write one thing they like about your piece at the top, or underline their favorite sentence.



Saturn and Cassini Final Writing Choices Directions contd.

3. SUMMARY WRITING

You will use your summary writing notes to write the most important and interesting things that you have learned about Saturn and Cassini.

WRITING TIPS

The purpose of a summary is to help people learn about something when they don't have much time. A summary contains only the most important or interesting information.

WRITING GOAL

For every sentence you write, you should be able to say why you think it is important or interesting enough to include in this summary.

WHAT TO DO

1. Write the Writing Goal at the top of your paper. This will be your main goal to keep in mind as you write.
2. Beneath the Writing Goal, write your name, the date, and the title you have chosen for your piece of writing.
3. List three people or organizations that you would like to share your writing with in the margin of your paper at the top.
4. Using your "Summary Writing Notes" from the "Notes for Final Writing Project" worksheet, pretend you were talking to someone at recess and that person said, "Hey, I heard there is a spacecraft named Cassini going to Saturn. Do you know anything about Saturn and Cassini?" What would you say? The recess bell is going to ring in 10 minutes, so you can only tell them the most interesting and important things.
5. For your last sentence, write: "If I could only tell a person one thing about Saturn and Cassini, it would be that . . ."
6. Have a partner read your piece and draw a circle next to any sentences that they think are not interesting or important enough to include in your summary. Have a discussion with them to try to agree about whether or not to include it. Ask your partner if he or she thinks that there is any other information that should be included.
7. Reread your piece, and delete information if you decided it was not important enough to include, or add information if you and your partner agreed it should be there.
8. Illustrate your writing when you are finished.
9. Share your writing with each of the three people or organizations you listed above. If possible, ask them to underline the most interesting part of your summary.

