

Exploring Jupiter's Moons

A 45-minute companion lesson

For use with *Exploring Jupiter's Moons with Galileo* by C.A. Worman.

GRADE LEVEL	TIME	SUBJECT	SETTING
Grades 3–5 Family or class	40–45 minutes One class or night	Science / Space Observe and record	Classroom or home Requires the picture book

Students will...

- Record one fact and one drawing for each of Jupiter's four largest moons.
- Name habits that helped Galileo make discoveries.
- Plan a spacecraft mission to Jupiter and say what they hope to find.

Materials

You will need the picture book, copies of student pages 2–3, and pencils (optional coloring tools). Print pages 1 and 4 for the adult only.

To purchase a single copy: [amazon.com/dp/B0DQKYX6DQ](https://www.amazon.com/dp/B0DQKYX6DQ)

For bulk orders (5+), contact the author at: [caworman.com/contact](https://www.caworman.com/contact)

How the book is organized

The story visits Jupiter, then its four largest moons: Ganymede, Callisto, Io, and Europa. It ends when Christa and her dad plan a trip to the planetarium. Educational summaries come after the story: Galileo's life and discoveries, the Apollo 15 hammer-feather drop on the moon, how Jupiter's moons got their names, how to make a homemade telescope, and NASA missions to Jupiter.

Lesson sequence

1	Read-aloud 12–15 min Read the story through the bedtime pages. Revisit each moon as needed so students can write and draw. Save the back pages for step 3.
2	Moon chart 10–12 min For each moon, students write one fact from the book and draw what they think it would look like to visit.
3	Back pages 12–15 min Read the Galileo page, Apollo 15 page, and NASA missions pages together. Students complete page 3. Skip the other pages unless you have extra time and the required materials to make a telescope.
4	Sharing student missions 3–5 min Invite two or three students to read about their spacecraft and its mission.
5	Europa Clipper video 1–2 min Watch NASA's official mission trailer for Europa Clipper: https://www.youtube.com/watch?v=AOEtSq7XHA8

Words to preview

Preview these words before you read: telescope, diameter, craters, volcanoes, to “harbor” life, ocean, and spacecraft.

Note. This pack is a companion to the picture book. It is not a reprint and not a NASA lesson. NASA has free Europa Clipper labs for a later science class.

Name _____

Date _____

Exploring Jupiter’s Moons

For each moon described in the story, write one fact from the book and draw what it might look like to visit.

1. Ganymede One fact from the book: Draw what it might look like to visit:	2. Callisto One fact from the book: Draw what it might look like to visit:
3. Io One fact from the book: Draw what it might look like to visit:	4. Europa One fact from the book: Draw what it might look like to visit:

Date _____

Use additional context from the pages after the story.

Galileo made important discoveries using his telescope. What else do you think helped? Check all that apply.

☐	Being curious and asking creative questions	☐	Testing his ideas with experiments and math
☐	Watching carefully and noticing when things changed	☐	Inventing better tools so he could see more
☐	Writing detailed notes and drawing what he saw	☐	Trusting the evidence even when others disagreed

If you could send a spacecraft to Jupiter, where would it visit and what would you hope to discover?

Draw your spacecraft:

Answer key

Do not hand this page to students. One solid fact and a drawing per moon is enough.

Moon facts from the story

- Ganymede: biggest of the four; larger than Mercury and Pluto; magnetic field; ocean under ice; layered like a sandwich.
- Callisto: cratered for nearly 4 billion years; rocky, icy surface; ice on the craters.
- Io: hundreds of active volcanoes; lava lakes; stretches by 300 feet due to gravity; causes lightning storms on Jupiter.
- Europa: ocean under ice with more water than on Earth; may have what life needs to survive; water plumes.

Galileo's notebook

All six items should be checked. They describe important aspects of experimental science.

Student's mission to Jupiter

Any wonder that stays within the book is enough. For example, does Europa's ocean have life?

Activities for advanced students

NASA offers free Europa Clipper classroom activities here: <https://www.nasa.gov/stem-content/explore-jupiters-moon-europa-with-hands-on-activities/>