

Listening to Learn Solar System -Sample of Jupiter

Thank you for downloading this sample. In this sample, there are two sets of directions for you to read to your children to teach them about Jupiter while they draw, color, and make notes.

These pages are part of our **Listening to Learn Solar System** resource. The next page contains a list of all the notebooking pages in the full resource as well as a link to buy them.

The first set of directions here is used with the accompanying notebooking page to learn important facts about the Jupiter. The second set of directions leads your children on an imaginary trip to Jupiter.

Print a copy of pages 4 and 6 for each child completing the activity with you. You will need crayons or colored pencils. Read the directions to your children with modifications as stated below, if needed.

For children who need the activity simplified: Break directions up, help them find locations, repeat the directions, and/or modify them in other ways to help them be successful.

These activities are to help teach your children about Jupiter, to learn to begin to take notes, and to give them practice following directions. They are NOT tests. As your children become better at following the directions, decrease the amount of help you are giving them.

If the directions are easy for your children: Make them more challenging by having them remember a fact that was part of the direction. Once they have completed the direction, ask what they were supposed to have remembered.

The Listening to Learn Solar System Contains Directions and Notebooking Pages for the Following Places and Topics

Our Solar System

The Sun

Mercury

Venus

Earth

Our Moon

Mars

Phobos and Deimos, Mars' Moons

The Asteroid Belt and Ceres

Jupiter

Europa, Jupiter's Moon

Io, Jupiter's Moon

Ganymede, Jupiter's Moon

Saturn

Titan, Saturn's Moon

Enceladus, Saturn's Moon

Uranus

Neptune

Triton, Neptune's Moon

Pluto and Charon

Halley's Comet

Kuiper Belt and The Oort Cloud

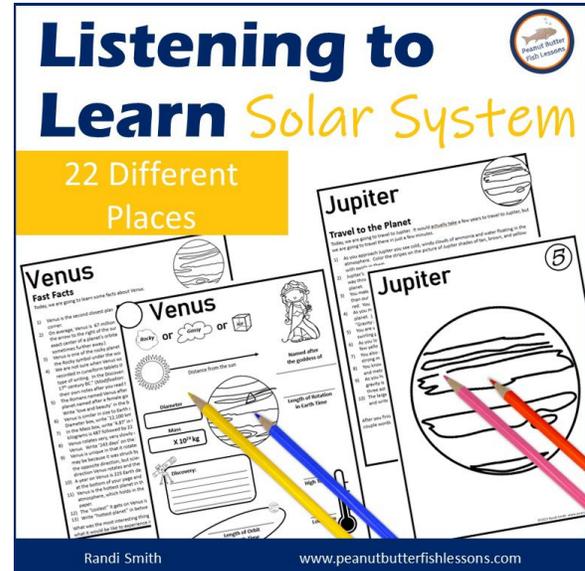
The Milky Way

Stars

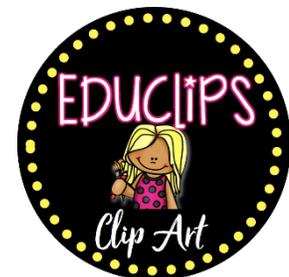
Black Holes

Tarantula Nebula

Purchase Here

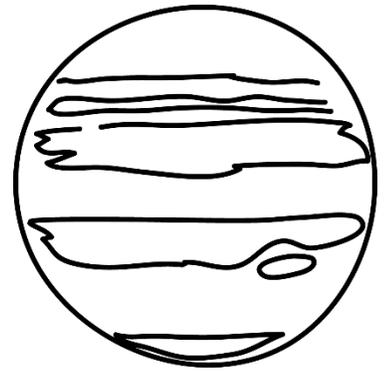


Graphics by:



Jupiter

Fast Facts



Today, we are going to learn some facts about Jupiter.

- 1) Jupiter is the fifth planet from the sun. Write a '5' in the circle in the top left corner of your paper.
- 2) On average, Jupiter is 484 million miles away from the sun. Write '484 million miles' on the arrow to the right of the sun and color the sun yellow. (Since the sun is not at the exact center of a planet's orbital ellipse, the planet is sometimes closer to the sun and sometimes further away.)
- 3) Jupiter is the largest planet in the solar system by far! More than 1300 Earths would fit inside of Jupiter. Write its diameter, 142,984 km, in the Diameter box. (Repeat as necessary.)
- 4) Jupiter also has the largest mass in the solar system. In the Mass box, write '1898' in front of the ' $\times 10^{24}$ '. This means Jupiter's mass in kg is 1898 followed by 24 zeros. (Remind children that mass = weight on earth.)
- 5) Jupiter is the closest gas planet to the sun, which means that it does not have a hard surface. It is full of swirling gases above a solid core. Color the gassy cloud on your paper red or yellow.
- 6) There have been many observations of Jupiter back to at least the 7th or 8th century BC. The first detailed observations were made by Galileo in 1610. In the Discovery box on your paper write: "Observed by the Babylonians in the 7th or 8th century BC." (*Modification:* Simplify for younger children. Let older children make their own notes after you read them the sentences.)
- 7) The Romans named Jupiter after the Roman god Jupiter who was considered the 'king' of all the gods. Write 'king' in the blank below him and color his robe gold.
- 8) Jupiter rotates faster than all the other planets. A day on Jupiter is only 10 hours. Write '10 hours.' on the blank to the right of the picture of Jupiter.
- 9) Jupiter has a faint ring and a red spot, which is a huge storm. Draw a small red ring around Jupiter and color the small oval red. Color the rest of Jupiter tan and reddish brown.
- 10) Jupiter has 80 moons. The most interesting are Io, Europa, Ganymede, and Callisto. Color the moon gray and write '80' below it.
- 11) A year on Jupiter is 4333 Earth days. Write '4333 days' in the middle of the elliptical orbit at the bottom of your page and color the Jupiter in the orbit tan with a reddish-brown streak. You would only have a birthday about every 12 Earth years on Jupiter!
- 12) The temperature on Jupiter changes depending on where in the layers of gases you are, but it is always cold. The average temperature is about -238° F (-150° C). Write this temperature for the Average Temp on your paper.

What was the most interesting thing you learned? Next time, you will 'visit' Jupiter and learn what it would be like to experience it in person.

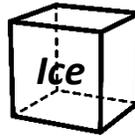
Jupiter



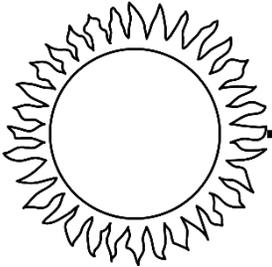
or



or



Jupiter was the _____ of all gods.

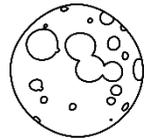


Distance from the sun

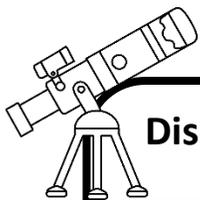
Diameter

Mass

X 10²⁴ kg



_____ Number of moons

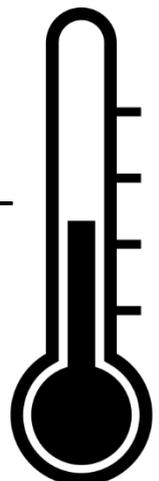


Discovery:

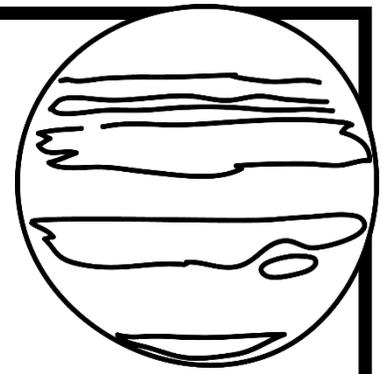
_____ Length of Rotation in Earth Time



_____ Average Temp



Jupiter



Travel to the Planet

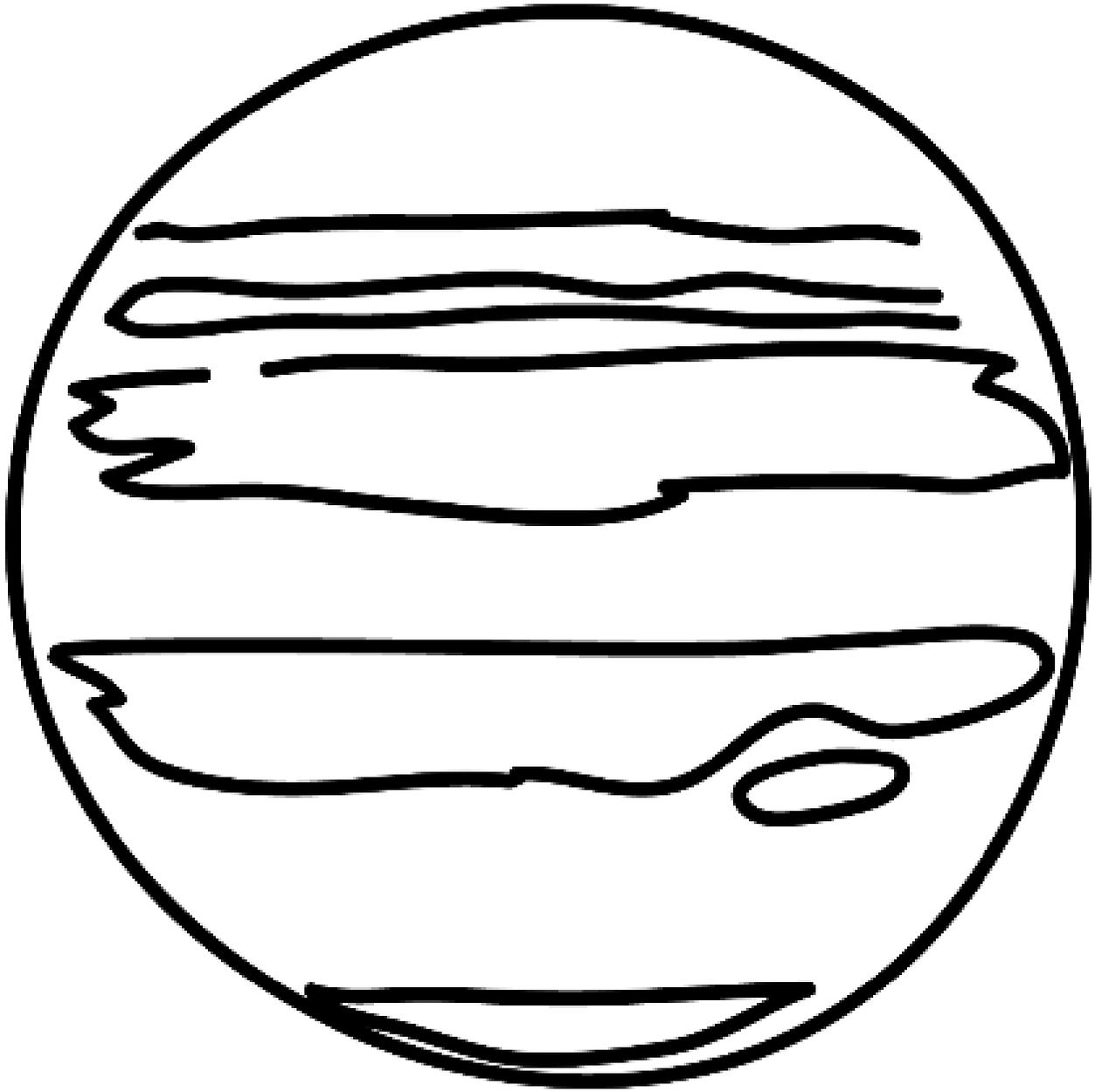
Today, we are going to travel to Jupiter. It would actually take a few years to travel to Jupiter, but we are going to travel there in just a few minutes. At this time, there is not a spaceship that could survive the high pressure on Jupiter, so we are also using a pretend spaceship.

- 1) As you approach Jupiter you see cold, windy clouds of ammonia and water floating in the atmosphere. Color the stripes on the picture of Jupiter shades of tan, brown, and yellow with swirls in them.
- 2) Jupiter's atmosphere is full of storms and your spacecraft is tossed around as you make your way through it. Draw tan and gray winds around Jupiter and write "turbulence" above the planet.
- 3) You make sure to avoid the area around the Great Red Spot, which is a massive storm larger than our Earth and has been occurring for over 100 years. Find the small oval and color it red. You can write "Great Red Spot" next to it if you would like.
- 4) As you move toward Jupiter, its strong gravitational pull tries to pull your spaceship into the planet. Luckily the spaceship has been especially built to resist the pull. Below Jupiter, write "Gravity is 2.4 times the gravity on Earth."
- 5) You are unable to land on Jupiter because it does not have a solid surface. It is a mass of swirling gases. Draw your spacecraft hovering just outside of Jupiter.
- 6) As you look out your window, you see lightning flashes in the clouds around you. Draw a few yellow lightning bolts around Jupiter.
- 7) You also see a blue, red, and orange light show in the distance. These are auroras from the strong magnetic field on Jupiter. Make blue, red, and orange streaks near the top of Jupiter.
- 8) You know from your research that scientists believe Jupiter has a dense core made of rock and metal. Draw a gray circle in the center of Jupiter and write "dense core" next to it.
- 9) As you hover above Jupiter, you see many moons, rings, and asteroids in the sky. Jupiter's gravity is so strong that it pulls many objects into its orbit. Draw four round moons and three asteroids around Jupiter. There are actually about 80 moons that orbit Jupiter!
- 10) The largest moons are Io, Europa, Ganymede, and Callisto. Color one of your moons yellow and write "Europa" next to it. This moon is slightly smaller than our own moon.

After you finish looking out over Jupiter, you fly back to Earth. At the top of your paper, write a couple words to describe your thoughts about Jupiter.

Jupiter

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Thank you, Randi Smith