

# Astronomy Merit Badge – Pre-Class Discovery Questions

Greetings, fellow stargazers! I'll be your guide to the cosmos, your tour leader through the galaxy, and your friendly neighborhood space nerd—ready to explore the universe with you!

Astronomy isn't just about stars and planets — it's about mind-blowing discoveries, cosmic chaos, and asking the biggest questions humans have ever dared to ask. In this class, we won't just learn about space... we'll explore it.

We'll learn how to safely explore the sky, identify planets and constellations, navigate using the stars, and uncover the secrets of exploding stars, mysterious black holes, and distant worlds. We'll ask big questions, play fast-paced games, work as teams, and discover why humans have always looked up and wondered "*What's out there?*"

These questions are meant to get you thinking and ready for class. Try your best — you don't need to know all the answers!

I look forward to meeting each of you on February 28th!

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## Astronomy Safety

1. Why is it dangerous to look directly at the Sun?
2. What equipment can make observing the Sun safe?
3. Why are red flashlights often used during stargazing?
4. Name one safety rule for using a telescope or binoculars.

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## **Our Solar System**

5. What galaxy do we live in?
6. Is the Sun a planet or a star?
7. Name as many planets as you can in order from the Sun.
  - a.
  - b.
  - c.
  - d.
  - e.
  - f.
  - g.
  - h.
  - i.
8. Which planet has rings?
9. Which has the Great Red Spot?

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## **Moons & Stars**

9. What is the difference between a planet and a moon?
10. Name a planet with more than one moon.
11. What makes stars shine?
12. How can you tell a planet from a star in the night sky?

## **Constellations**

13. What is a constellation?
  
  
  
  
  
14. Name one constellation you know.
  
15. Why have people used constellations throughout history?

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## **Just for Fun**

16. If you could visit one planet or moon, which would it be and why?
  
  
  
  
  
17. Do you think there is life elsewhere in the universe? Why or why not?
  
  
  
  
  
18. What space question are you most curious about?

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## **Counselor Notes**

Bring your answers to class — we'll use them for games, discussions, and challenges!