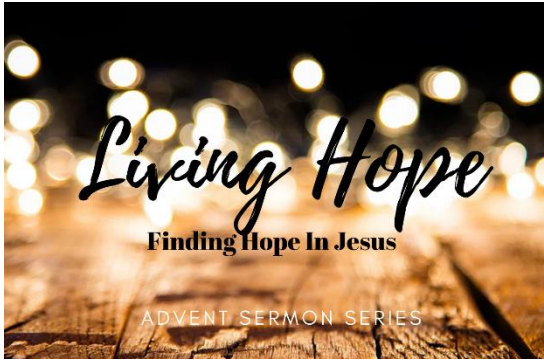


## 11 - 29: Sermon Listening Guide



PA - RUM - PUM - PUM - PUM

**Matthew 1:18 – 25**

New International Version

### **The Magi Visit the Messiah**

**2** After Jesus was born in Bethlehem in Judea, during the time of King Herod, Magi from the east came to Jerusalem

**2** and asked, "Where is the one who has been born king of the Jews? We saw his star when it rose and have come to worship him."

**3** When King Herod heard this he was disturbed, and all Jerusalem with him. **4** When he had called together all the people's chief priests and teachers of the law, he asked them where the Messiah was to be born.

**5** "In Bethlehem in Judea," they replied,  
"for this is what the prophet has written:

**6** "'But you, Bethlehem, in the land of  
Judah, are by no means least among the  
rulers of Judah; for out of you will come a  
ruler who will shepherd my people Israel.'"

**7** Then Herod called the Magi secretly and  
found out from them the exact time the  
star had appeared.

**8** He sent them to Bethlehem and said,  
"Go and search carefully for the child. As  
soon as you find him, report to me, so that I  
too may go and worship him."

**9** After they had heard the king, they went  
on their way, and the star they had seen  
when it rose went ahead of them until it  
stopped over the place where the child  
was.

**10** When they saw the star, they were  
overjoyed.

**11** On coming to the house, they saw the  
child with his mother Mary, and they  
bowed down and worshiped him. Then  
they opened their treasures and presented  
him with gifts of gold, frankincense and  
myrrh.

**12** And having been warned in a dream  
not to go back to Herod, they returned to  
their country by another route.

## THREE - QUESTIONS:

1. What are you \_\_\_\_\_ for?
2. How far would you \_\_\_\_\_ ?
3. What \_\_\_\_\_ will you  
bring?



**NOTES:** \_\_\_\_\_

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## **APPLICATION QUESTIONS:**

**The King of the Universe is here!**

1. Are you looking for Him? Where?

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2. How far would you go?

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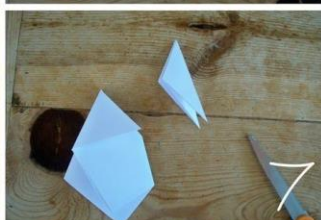
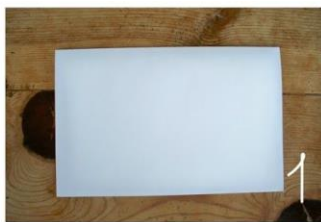
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3. What gifts will you bring?

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# HOW TO MAKE PAPER STARS



adventuresofadiymom.com



Star trails in the southwestern sky hover over attendees of the Albufeira Star Party held at Lagoa de Albufeira, Sesimbra, Portugal.

## **Learn how to observe the sky in 10 easy steps**

Amateur astronomy is fun and easy. Follow these tips and you'll be viewing the universe in no time.

Astronomy remains a vibrant science because something's always making news. When you're an amateur astronomer, not only can you read about what's going on, but you can also participate. In essence, the sky is calling. But how do you start observing the sky? What do you need to know?

### **1. Learn the sky in a general sense**

And I mean general: Earth rotates once a day and orbits the Sun once each year. The first motion causes sky objects to move from east

to west, and the second causes different constellations to appear in each season's sky. Next, learn why the sky is the celestial sphere. It has a north pole, an equator, and a south pole. Two sky coordinates exist: Right ascension is like earthly longitude, and declination mimics latitude.

Read up on Moon phases. The Moon first becomes visible as a thin crescent low in the western evening sky. Each night thereafter, it appears to grow and move eastward until Full Moon, after which its lit part shrinks to invisibility. When you again spot the thin crescent low in the west, roughly 30 days have passed. You'll want to know the Moon's phase because its light can prevent you from seeing faint objects.



The Moon offers beginning observers hundreds of easy-to-see targets. It's also bright, so you can view it from any location through any size telescope.

Finally, become familiar with bright seasonal constellations. Start with just a couple per season: Taurus the Bull and Orion the Hunter in winter; Scorpius the Scorpion and Cygnus the Swan in summer; and so on. Don't worry about the faint ones. If you haven't heard of them —

for example, Lacerta and Serpens — there's probably a good reason why.

## **2. Immerse yourself in the subject**

You've made a good start. In each issue, *Astronomy* magazine features a combination of science- and hobby-related articles. "The Sky this Month" is an up-to-date guide to the current sky. But there's so much more out there. Your public library and bookshops offer many observing guides. Except for where you'll find the planets, such texts don't go out of date.

## **3. Try (equipment) before you buy**

You wouldn't buy a car without first getting behind the wheel, so don't purchase a telescope without first viewing through it. Some astronomy shops will set up equipment for you, and a few even will walk you through its operation.

Another way to test-drive a scope is to attend an observing session or a regional star party hosted by an astronomy club. Take your time, visit manufacturer websites, ask lots of questions, and you'll soon enjoy a lifetime of viewing pleasure through your very own scope.



You won't see galaxies under a light-polluted sky. That means you'll have to pack up your scope and accessories and head to a dark sight. Choose it carefully.

#### **4. Pick your observing site carefully**

If you'll be content with the Sun, the Moon, planets, and double stars, pretty much any location will do. To see faint, diffuse objects like nebulae and galaxies, however, you'll need a dark site.

Some things to consider are how light-polluted the location is, the driving distance, how portable your telescope is, safety (do you get cell phone service?), and weather factors. The last point includes how generally clear the sky is and how steady the air is.

#### **5. Double your observing time with the Sun**

Night isn't the only time you can sky watch. The Sun beckons beginning observers because it's big, bright, and full of features that change

daily. Put safety first by using a filter, and even a small scope will deliver high-quality views.

After several years of quiescence, when few sunspots appeared across its face, our nearby star has begun offering observers lots to see again. Be sure to get a filter that fits correctly over the front end of your telescope. A good solar filter — many retailers sell such accessories — will not transmit harmful ultraviolet or infrared radiation. It will also drop the brightness of the Sun to a viewable level.

## **6. Comfort is everything**

Comfort means a lot more than just staying warm during the winter. In particular, I see many observers who use various gyrations while looking through an eyepiece. The one my late observing buddy Jeff Medkeff labeled the “monkey squat” is pretty hard on the back and requires keeping all kinds of muscles tense to hold your eye at the eyepiece.

So, sit. I find that when I am seated comfortably at the eyepiece, I spend more time observing (and see a great deal more) than I do while standing. Many amateurs use adjustable chairs sold specifically for observing. You will want an observing chair.

## **7. Photography is rewarding but time-consuming**

Here's the good news: You can take pictures of astronomical objects. Here's the other side: Astroimaging takes practice, and there is a learning curve. The higher the quality of the final image, the steeper the curve. Remember that producing a high-quality picture involves two stages. First you acquire the data through your camera, and then you process that image with appropriate software.

Lots of resources exist to help you learn the art of astrophotography. Read all you can, take lots of images, and eventually you'll proudly show off your results to family and friends.

## **8. Keep a log**

You will want to remember what you've seen. A simple log contains the date and time of your observation, what object(s) you looked at, and a brief description, like, "Saw spiral arms!" or "Really blue, but no details visible."

More-detailed logs might contain information about the telescope you used, what eyepiece(s) and magnification(s), sky conditions (percent of cloud cover, amount of light pollution, steadiness of stars), and the faintest star you could see with your naked eye. Observers call that quantity the sky's "limiting magnitude."

## **9. Become a social astronomer**

Visit a planetarium. Attend a star party.  
Observe with other amateur astronomers.

Without question, the best step you can take is to join a local astronomy club. Attend its meetings and observing sessions. This will place you with a group of like-minded individuals who can either answer your questions or help you figure out where to get them answered.

Most astronomy clubs have members who look for opportunities to share information about the hobby we all love. Get involved, volunteer to help out at events, and before long you'll be the one answering the questions.

## **10. Observe everything!**

I've heard it a million times. "I'm a lunar observer," or "I only observe galaxies." Really? Are these amateur astronomers in fact saying they'd pass up watching a total lunar eclipse, a bright comet, or a rich meteor shower?

While your telescope may be best suited for a particular type of celestial object, you can view any object through any scope. So why not view them all?