

# HUNT

See these through **binoculars or a telescope**:

**Star Nursery** These newborn stars are wrapped in a warm haze of gas and dust.

*I saw...*



**Planetary Nebula** The symmetry of gas from dying stars makes beautiful viewing.

*I saw...*



**Supernova Remnant** While it's unlikely you'll see a star go supernova tonight, you can still see the ghostly remnants of past explosions.

*I saw...*



**Double Star** Imagine living on a planet orbiting more than one star!

*I saw...*



**Globular Cluster** These dense groups of stars are like swarms of bees orbiting our galaxy.

*I saw...*



**Another Galaxy** This is the farthest object we can see. Everything else you've seen is part of our own galaxy.

*I saw...*



## PLANET QUEST THE SEARCH FOR ANOTHER EARTH

This cosmic recycling process is happening all over our **galaxy** and in galaxies across the Universe, creating the building blocks for new stars, planets, and moons.

NASA scientists are discovering a multitude of **exoplanets - planets around distant stars**. In fact, it appears that most stars host planets!

Access the latest discoveries:

[planetquest.jpl.nasa.gov](http://planetquest.jpl.nasa.gov)

National Aeronautics and  
Space Administration



## CELESTIAL TREASURE HUNT

**Have you heard that we're made of stardust? It's true!** The material that makes up our Sun and all the planets in our Solar System, including Earth, was once buried inside other stars.

Our Solar System is not alone. The Universe recycles old stars to make new stars and planets throughout our galaxy and beyond.

Looking up, you can see the steps in this process. **See how many pieces of the story you can find in the sky tonight.**

You may be surprised to see how much you can spot just looking up. The first 5 objects are easy to see without a telescope, if you know where to look. Then treat yourself to a look through binoculars or a telescope for some sights you won't see every night.

Note which example you observed in the space provided.

# TREASURE

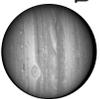
There are many objects visible in the sky without any help from binoculars or telescopes. If you know where to look on a clear dark night, you can **find these things with your eyes alone:**

**A Moon** Earth's Moon is the easiest thing to find, if it's up! Did you know you could see some moons of other planets with binoculars?



*I saw...*

**Planet (not Earth)** While you can see a few with your eyes alone, look through a telescope for a real treat!



*I saw...*

**Star with Planet** Our Sun is not the only star with planets. You can even see some of these stars tonight.



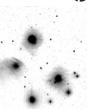
*I saw...*

**Red Stars** Did you know stars are different colors? See if you can find a red star. (Don't be fooled by Mars!)



*I saw...*

**Open Cluster** Once you find this loose group of stars, you'll want to see more with binoculars or a telescope.



*I saw...*

## Where Do Stars and Planets Come From?

The Universe is a huge cosmic recycling factory, constantly creating stars and planets. Here's how it works:

Stars are born in clouds of gas and dust, like those seen in the **star nursery**. Many of these stars, like our Sun, are born nurturing **planets** and **moons** in orbit around them. As they become “teen-agers,” they blow off the gas and dust surrounding them, and are found grouped together in **open clusters**. Eventually they take off on their own (or as **double stars** and sometimes in groups of 3 or more!). A star like our Sun stays quite stable for a very long time. But as it nears the end of its life, it gets big and bloated, becoming a **red giant** star. As this giant star dies, it throws off gas and dust and forms a **planetary nebula**.

The biggest stars are rare and live short lives that end differently from all other stars. They finish their lives in a giant explosion called a **supernova**. This flings gas and dust into the surrounding space, eventually creating a new **star nursery** and starting the process again. The calcium in our bones and iron in our blood were once part of these large stars!

