

# Observing Messier Objects in the Winter Sky - Activities (Ages 8-11)



## Today we are going to investigate:

- Messier objects in the Winter sky
- Some different types of Messier objects
- A famous stellar nursery
- Clusters of young stars
- The death of a star

## Activities

- 1 The Messier Catalogue is a famous list of deep space objects created by a French astronomer over 200 years ago and it is still used today. Let's look at some of the most exciting Messier objects in the northern hemisphere winter sky. Start up Night Sky and use the Space Travel tile to change the date to any evening in January and look south. Find the famous star pattern of Orion the Hunter.

**Activity:** Can you locate Messier 42? (Tip: Look under his belt where his sword would be)

- 2 Messier 42 (The Orion Nebula) is a well-known bright nebula. It is a giant cloud of gas and dust where new stars are forming. This is why astronomers call this type of nebula a "stellar nursery" Tap on  to view more information.

**Question:** Messier 42 can be seen with the unaided eye  
True or False?

- 3 Eventually the gas and dust in a stellar nursery disappears leaving the stars to shine on their own. The group of stars left behind is called an **open cluster**. Let's find a couple of open clusters. Our first one is Messier 41 in the constellation of Canis Major, the Great Dog.

**Activity:** Can you locate Messier 41? (Tip: Look under the brightest star in the sky!)



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- 4 The most famous open cluster of all is Messier 45, the Pleiades star cluster in the constellation of Taurus the Bull. These hot blue stars are some of the youngest ever seen. When you find Messier 45 tap on  to bring up more information.

**Question:** What is the more familiar name that Messier 45 is often known by?

- 5 So far we have seen some young stars and where they form, now let's look for where a star once died. Messier 1, the Crab Nebula is a supernova remnant. Supernova remnants are left over when a giant star explodes and tears itself into pieces. To find Messier 1 locate the two horns of Taurus the bull and look above the tip of the lower horn. Tap on the  to bring up the information tile.

**Question:** What year did Chinese astronomers first record seeing the supernova?



### What we have discovered:

- How to find some Winter Messier objects
- Messier 42 is a famous stellar nursery in Orion
- Messier 41 and 45 are clusters of young stars
- Messier 1 marks the location where an old star exploded

 Well done!  
You're a Night Sky  
Superstar! 