

Candling Eggs - 4-H Embryology

Why do we need to candle the eggs?

1. If you leave eggs in your incubator that are not fertilized ("yolkers"), or have embryos that have quit growing ("quitters"), your incubator (and room) will get very smelly. These eggs rot if left in an incubator!
2. You can check to see how the embryos are growing.

What can be used to candle the eggs?

1. **You need a bright light.** You don't need any special tools. You can use a very bright flashlight or build your own Candler.
2. **You need a dark room.** The room should be near the incubator or in the same room as the incubator so you can put the eggs right back in after you are done.

How to Candle an Egg:

If you are nervous about handling one of your eggs, practice first with an egg you bought from a grocery store. These eggs are not fertile. Be sure to get permission from your parents!

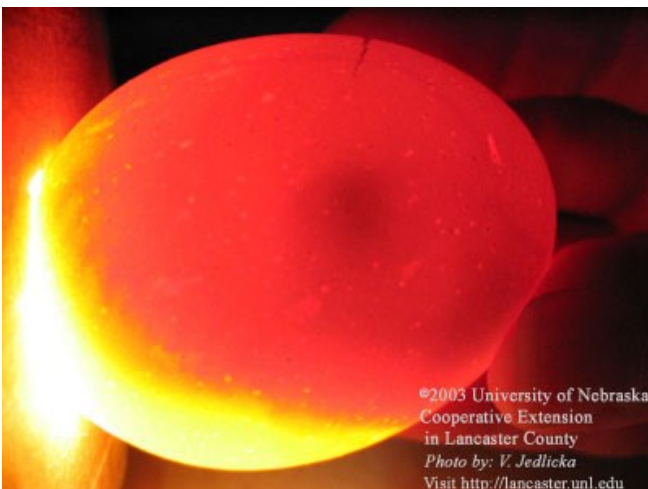
When you are ready, turn on your bright light (Candler) and shut off the lights in the room so it is dark. Without looking directly at the bright light, hold the larger end of the egg up to the light and slowly turn it until you can see inside the egg. The light won't hurt the embryo but it isn't a good idea to hold it up there a long time especially if the light gets hot.

Be very careful when you are holding the egg so you don't accidentally crack it. When you are finished, carefully place the egg back in the incubator.

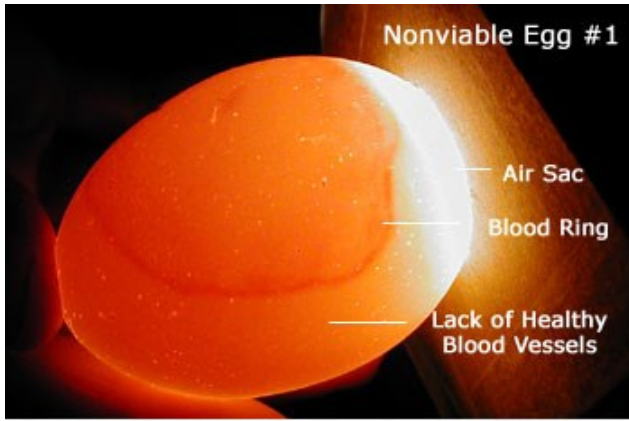
When you candled the eggs, what did you see?

Do you see the air sac? Can you see the pores in the egg shell? Can you see the yolk? Do you see blood vessels or a thin red ring around the yolk? If the egg has been in the incubator for a week, you may see the embryo move! If your egg is colored or a brown egg, it is harder to see through the shell, you may want to wait a few days and try again.

Candling photos and descriptions:



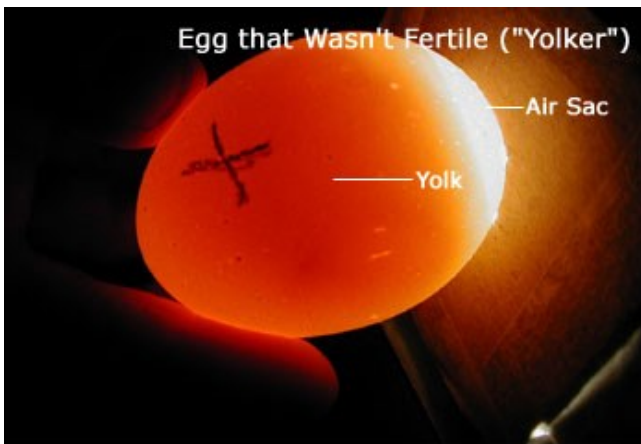
WINNERS. When embryos have developed, we call them "winners". In the first few days, you may see a network of blood vessels. About day seven, you should be able to see the embryo's eye, the shadow of its body and if your lucky, it may move for you!



QUITTERS. When embryos stop growing, we call them "quitters". You will see a thin, blood ring around the yolk. Quitters are removed from the incubator and thrown away. If you want to view the embryo, have your parent or teacher help you open the egg. Be sure to wash your hands.

Candling

April 8, 2002, 8:45 a.m. CT



YOLKERS. Some eggs in the incubator may not be fertile. We call those "yolkers". When you look at a yolker, you won't see a spot in the yolk, blood vessels or a blood ring around the yolk. [Photo of an egg that is not fertile.](#)

Candling

April 8, 2002, 8:45 a.m. CT



When we candle eggs in the classrooms and find a "yolker", students usually ask "Can you eat a yolker"? The answer is No. Don't eat any eggs that have been in an incubator! We throw yolkers away.