Much of this information comes from the Avian Anatomy and Physiology (ANSC 535) class I took at Purdue University as an undergrad. Some is also firsthand experience from my own trial and error. In ANSC 535 we focused mainly on chickens but this information applies to ducks and other poultry as well.

From about day 1-8 the chick embryo is surrounded by the highly vascularized region of the yolk sac called the Area Vasculosa. Its function as a gas exchanger ceases after day 8 of incubation. The Chorioallantoic Membrane (CAM) begins to replace the respiratory function of the Area of Vasculosa by day 6. By day 12 it lines the entire inner surface of the shell membrane. The CAM makes contact with the inner shell membrane. The outer surface is well vascularized. The respiratory function of the CAM lasts up to pipping. At pipping the lungs take over respiratory function. Internal pipping punctures the Chorioallantoic Membrane and inner shell membrane. Pulmonary respiration is initiated using the air from the air cell.
Egg Turning: Eggs must be turned a minimum of three times a day. Lack of egg turning results in reduced hatch rate and embryonic growth is retarded. It also impairs gas exchange at the level of the CAM. In addition it retards movement of albumen (aka egg white) into the amnion and absorption from the amniotic fluid. Unabsorbed albumen becomes more viscous by losing water early in incubation. The CAM fails to fold around the unabsorbed albumen. The albumen is interposed between the CAM and the inner shell membrane. The interposition of the albumen reduces the gas exchange of the CAM causing a pronounced fall in arterial oxygen.
Turning the egg is what causes the CAM to form correctly. If it does not form correctly then the baby bird will not develop correctly and/or hatch. If you candle an egg that is a few days from hatching and the light passes straight through the bottom, small end, and it looks transparent or yellowish but the top half has a baby in it with blood vessels then that egg was not turned properly to allow the CAM to form all the way around the egg. A normal egg should be dark all the way around and all over and there shouldn't be any large transparent patches after about two weeks of incubation. Turning at the first half of incubation is the most important. The white (aka albumen) of the egg has to be incorporated into the amniotic sac that surrounds the chick. Turning the egg allows the CAM to incorporate the albumin into the amniotic sac. If no turning or improper turning occurs then the white won't get incorporated. The albumin then sticks to the inner shell membrane and the CAM can't form next to the inner shell membrane there and therefore can't exchange oxygen and carbon dioxide. The embryo's growth is retarded and it will die from acidosis and/or hypoxia. It's the buildup of carbon dioxide and lack of oxygen to the embryo that causes it to die when the embryo gets too big for the underdeveloped CAM. Interesting fact: As the chick/duckling develops it actually swallows the albumen and uses it as a source of nutrition.

To sum up: The eggs need turned at least 3 times each day. You can overturn the eggs too though so don’t overdo it. Turning allows for the proper development of the CAM. The CAM refers to the network of blood vessels that surround the inside of the egg. The blood vessels take oxygen that diffuses through the egg pores and brings it to the chick. Carbon dioxide from the chick is released into these blood vessels were it travels to the shell and moves out of the shell pores. The CAM needs to cover the entire inside surface of the shell for it to be truly effective. Turning the egg cause the CAM to do this.