Brief Description
There are several species of aquatic turtles common in captivity with the most common being the red-eared slider which has distinctive red lines on both sides of the head. Aquatic turtles can completely withdraw the body into the protective shell when scared, which often makes a small hissing noise as they exhale to make room for their head. The shell is living tissue and should never be pierced or painted. Red-eared sliders and most other aquatic species usually grow to 8-12 inches in shell length and present a challenge for housing due their size and water quality requirements. Aquatic turtle pets are often given up due to more extensive care requirements and larger size than people anticipate at the time of purchase. Many species are invasive and will compete with native animals for food so should never be released in local ponds if unwanted.

Lifespan
With good care the average expected lifespan is 30-50 years but it is often shorter due to inadequate care.

Sexing
Immature turtles can be very difficult to differentiate gender. Once mature the male red-ear sliders have very long toenails on the front feet which are used to court females. Males have a longer more pointed tail than the stubby tail of females as well.

Diet
Aquatic turtles eat as they are swimming and most often will not eat food that is not in the water. So the pellets and vegetables should be dropped directly onto the water surface. A complete pelleted diet should be the staple diet and supplemented with dark leafy greens (turnip greens, collard greens, mustard greens, etc). Zoomed Natural Aquatic Turtle Pellets are a great brand with good calcium content and protein levels. Juveniles can eat the “Growth formula”. Once they become about the size of your whole hand they can eat the “Maintenance formula”. The Reptomin brand has very poor calcium and nutrient content and is not recommended. Shrimp (freeze dried or fresh) is a favorite but is very poor nutritionally so only offer as a treat (once a week or less).

Tank Setup
Red Ear Sliders and other aquatic turtles require most of their habitat to be water deep enough to swim in but also must have an area of land big enough that they can completely get out of the water to dry off. The most common type of caging is a large fish tank/aquarium although adults, especially if kept together, often need an outdoor pond to meet size requirements. The rule of thumb is to provide 10 gallons of water space per 1 inch of shell length per turtle (so a 4 inch turtle needs a 40 gallon tank minimum) and the tank will need to increase in size as they grow, eventually needing a pond or large stock tank. There should be at least one floating dock area where turtles can get completely out of the water and this is where the heat and UVB bulbs should be pointing. Do not use small gravel at the bottom of the tank as turtles may eat them and get impacted. Aquatic turtles produce large amounts of waste in their water and in small tanks waste products (ammonia, nitrates) will build up quickly, which creates a toxic environment and subsequent illnesses. Failure to provide a large enough cage causes excessive waste and toxin buildup leading to health problems, injuries from overcrowding, and stunted growth.
Examples of good tank setups:

Water quality is one of the most important, yet most challenging aspects of aquatic turtle care!
Check water quality at least twice monthly to make sure toxin levels are in safe ranges (pH should be 7-8, Ammonia <0.25ppm, Nitrate <30ppm). An aquarium filter will help reduce buildup of wastes – use a filter rated for at least 2x the actual gallon size of your tank since turtles are so messy. The filters labeled for specifically turtles (like the ReptoFilter) are often not strong enough. Sometimes more than one filter per tank is needed to keep up. Change at least 25% of the water on a weekly basis to remove additional waste and maintain good water quality. Water should still be treated for chlorine/chloramines before adding to the tank. If the water quality is still testing poor or appears dirty then changing may be needed more frequently or up to 50-75% of the water volume. You can use the Aqueon siphon vacuum into a bucket to remove water more easily from the large tanks. It really helps to use a smaller separate tank (even a large Tupperware container) with water in it for feeding purposes to help minimize food breakdown and waste buildup in the main tank.

Lighting and Temperature
Aquatic turtles need a warm place to bask out of the water (85-90 degrees) on one side of the cage in order digest food and nutrients properly. The water needs to be at least 10 degrees cooler to allow thermoregulation (75-80 degrees) so they don't overheat. A thermometer should be placed on the basking area and in the water to accurately measure temperatures. An aquarium heater can be used to maintain this temperature in the winter. Lights should be on for 10-12 hours each day and then total darkness at night.

Aquatic turtles MUST have UVB light to survive and a lack of UVB will lead to Metabolic Bone Disease, severe deformation, and death. A commercially available UVB bulb is necessary as UVB does not penetrate glass or plastic so having the cage near a window does not work. Look for UVB listed specifically on retail packaging before buying. After about 6 months of use most bulbs will stop emitting adequate levels of UVB, even though they are still shining, so it's important to change the bulb every 6 months.

Other good sources of information on Red Ear Slider Turtles:
www.redearslider.com
www.anapsid.org/reslider.html
http://www.austinsturtlepage.com/Care/caresheet-red_ear_slider.htm