11-23-15

Temperature

 affected by 2 things: velocity (how quickly it moves; faster water is colder) and depth

 thermocline- occurs in deep pools of water (warmer on top, colder on bottom)

 amount of vegetation

 season changes

 natural springs

 changes in temperature affect the wildlife

 carp and catfish

 current and velocity

 current is unidirectional

 exerts a force on the animal

 mollusks – pseudopods

 fish – streamlined

 velocity decreases with decreased slope, the widening of the river causes the velocity to slow down

 velocity is low at the water’s surface (it brushes up against the air) and also at the bed (it brushes against the rocks)

 velocity is quickest in the middle of the stream because water is flowing over water

 substrate – the material that lines in and around the stream

 sunlight

 turbidity – clarity of the water

 suspended materials, erosion, warm temperatures affect it

 dissolved solids – magnesium, calcium, potassium, iron, sodium, sulfur, silicon, nitrogen, and phosphorus

 dissolved gases – O2 and CO2

 faster moving waters contain more oxygen than slower waters

 colder waters contain more oxygen than warmer waters

 organic matter – algae, plankton, wood, leaves, decaying organisms

 pH – in PA its about 6.5 rain pH is about 5.5

 acid mine drainage – yellow boy (reddish orange coloration), usually heavy metals like iron

 1. much of PA receives some of the most acidic precipitation in the US

 2. rocks of the state contain minerals that contribute to acidification

 3. the coal mines – natural buffer