Photosynthesis
1) What is the overall equation for photosynthesis?
2) What products of photosynthesis are used for aerobic respiration?
3) When measuring the rate of photosynthesis, what were the purposes of the sodium bicarbonate and the bottle filled with water? Why did we need a heat filter? How did we measure the rate of photosynthesis? What were the results of our experiment?
4) Is absorbed or reflected/transmitted light used for photosynthesis?
5) What molecules in the chloroplasts absorb light?
6) How is absorbed light related to photosynthesis?
7) How is absorbed light related to colors we see?
8) Where does photosynthesis take place in a cell?
9) Describe the 2 stages of photosynthesis in terms of light requirement and products, and specific cell location.
10) What was paper chromatography used to separate, and order of separated molecules? How are the mobile and stationary phases used? How is it related to photosynthesis? Can you calculate Rf if given values?

Respiration
1) Explain how anabolic reactions and catabolic reactions are different. How are they related to aerobic respiration and photosynthesis?
2) What are some metabolic pathways that are followed during aerobic respiration?
3) Recall that glycolysis is the starting point for breakdown of glucose for both fermentation (anaerobic respiration) and aerobic respiration. What is the product of this pathway? What does this product become if fermentation occurs—in yeast, mammals, bacteria? If aerobic respiration occurs? Compare aerobic respiration to Fermentation in terms of 1) cell locations, 2) pathways used, 3) ATP made, and 4) products made (recall different in different organisms).
4) What are some commercial products (good and bad) of fermentation? What organisms make them?
5) In the experiment w/ the mice, purpose of ascarite? What would have happened to our measurements if we had not used it? What was the purpose of the drierite? What’s the difference between ectotherms and endotherms? Who needs to use aerobic respiration more to keep warm? Would you expect a bird or a lizard to obtain warmth by sunbathing? What did our data show for both the mice and the frogs? In this experiment you were measuring the loss or consumption of what gas by the mouse? What was the equipment called that measure the loss of consumption of this gas? Are you an ectotherm or endotherm? What climates/environments are best for each? Who eats more food? Why?
Lower Invertebrates— (Phyla Porifera, Cnidaria, Platyhelminthes, Nematoda)
1) Be able to identify the phylum if given some characteristics or a picture or model
2) Know that Platyhelminthes is first phylum to have bilateral symmetry and the consequences of having this.
3) Know that nematodes (round worms) are the first phylum to have complete digestive system, so separate mouth and anus, better absorption/uptake of nutrients.
4) the 2 body forms of Cnidaria. Which form is mobile/immobile. Which form is predominant.
5) Which phylum has photosynthetic algae as a symbiont. How do they benefit each other?
6) Which phylum has calcium carbonate and its benefit?
7) Which phylum is a filter feeder? Would it benefit by having bilateral symmetry?
8) How do tapeworms get nutrition?
9) What is hermaphroditic, monoecious, dioecious?

Higher invertebrates---- not on exam due to Veteran’s day

Echinoderms to Vertebrates

1) Which term describes embryos that develop a mouth first? —Protostome, Deuterostome, Monogamous
2) What type of symmetry is shown by the adult forms of organisms in phylum Echinodermata? How is this different from the embryos?
3) Name some of the features characteristic of phylum Chordata.
4) Name traits that birds and reptiles share.
5) Name one of the classes of subphylum vertebrata that has a skeleton composed of cartilage.
6) Which of the classes have a swim bladder?—Chondrichthyes, Osteichthyes, Agnatha—What is its use?
7) Would you expect a bird or a lizard to obtain warmth by sunbathing?
8) Pick 2 terms that describe a female duckbill platypus (class mammalia) that lays eggs and has one mate/spouse for life.
   Polyandrous  monoecious  monogamous
   Monotreme  viviparous  ovoviviparous
9) What plant characteristic do tunicates (subphylum urochordata) have?
10) Which class of fish or fish-like vertebrates was the first to have paired appendages and jaws? —Osteichthyes  Chondrichthyes  Agnatha
11) What feature of class mammalia is responsible for its success?
12) The class ________________of subphylum vertebrata gave rise to the mammals and __________________.
13) An anteater warms itself by generating heat by what catabolic process? ________________.
14) What structure found in some mammals allows the babies to rely less on a yolk sac?
Evolution

1) Know definitions of evolution, natural selection, phenotype, genotype, and others from power point slide and lab manual.

2) How does Natural selection work? Can you predict what population or group of organisms will survive under various conditions? Would will blend into the snow better—a white polar bear or a black panther? Who is selected for? Who is selected against?

3) What is meant by differential reproduction?

4) Can you distinguish between homologous and analogous structures?

5) What are the great transformations that lead to the different animals that we have today? (this is in reference to the DVD “Great Transformations”) and the last page of the new lab handout. Be able to answer questions we went over in class for this DVD.

6) Can you read a table that relates appearance/disappearance of an organism to the time frame that event occurred, such as ERA and PERIOD?

Wed 12/9—Genetics workshop, worth 12 points for fully participating. Counts as a quiz grade (so if absent will count as 1 of lowest quiz grades to be dropped). Go over lab exam 2.