Molecular Biology **Reference Sheet 3**

 **OBLIGATION POINTS**

***Each quarter you are required to earn 20 Obligation Points (or “OP”).***

* These points count toward the SRI portion of your grade, as two SRI scores.
* All current events, programs, artwork, models etc. must be about BIOLOGY – not just any science!
* *Generally the # of points awarded are based on the quality of the work and the amount of time and effort invested*. **Points shown are the maximum possible.** *Maximum points will be awarded only to the highest quality, most labor-intensive work, original work. Copies of diagrams we have used in class will receive minimal credit.*
* Work can be turned in any time up to about the last week of the grading period. You will have one week notice of the latest date that work will be accepted.
* O.P. work won’t always be returned so if you need a copy please make one before turning it in.
* Points above 20 can sometimes carry to next quarter but they cannot be used as “extra credit”.

**1. Current event** *(up to 5 points):*  Write a one-page report on a magazine or newspaper article having to do with BIOLOGY (including evolution, DNA, biochemistry, the environment, cells, genetics, or any topic covered in your textbook). Your writing must be original i.e. in your own words and you must demonstrate that you understand the scientific concept in the article. Any quotes from the article must be clearly indicated. The article (or a copy of it) must be stapled to your report.

**2. Appropriate T.V. program, movie, or video** *(up to 5 points):* Write a one-page report on a biology-related documentary program, movie or video you have seen (*examples: Nova, National Geographic, Discovery Channel).* Name, subject, date, time and channel must be included. Writing must be original and any quotes used must be clearly indicated. NOTE: Documentaries on relevant topics are acceptable but other Hollywood movies will not be accepted!

**3. Artwork** *(up to 10 points):* Express a biological process or concept artistically. Must be original and must be on a topic we either have studied or are studying currently. Examples: natural selection, mitosis, codominance, cycles of matter. For maximum credit, work must demonstrate your understanding, be informative and understandable to the viewer, be neat and be done with care. ***You will not receive credit for copying something from the book or from class handouts!***

**4. Research** *(up to 10 points):* Write a two-page report on a topic in biology that interests you. Writing must be original (in your own words!!). A bibliography citing all sources used is required. Any quotes used must be credited. Students need to schedule an appointment before or after school with the teacher to submit their reports. At that time they should be prepared to discuss the topic and to explain any terms used in the report (so don’t use words you don’t understand!).

**5. Model** *(up to 10 points):* Make a three-dimensional model of something we have studied or are currently studying. The model must be fully labeled. Some ideas are: a DNA molecule, a cell, an organelle of a cell, a virus, a bacterium etc. Points given will reflect the complexity of the model, the completeness (ask me what is required for your particular model), the creativity and the quality. You need to make the model this year (i.e do not turn in a model that you made in middle school!!).

**6. Do an experiment** *(up to 20 points for long-term, complex experiments):* Do a biology experiment on your own at home (in some instances this could be done at school -- for example if you need to use any of the equipment or materials in the classroom). Write it up in the format we use for labs in class. You must get approval of your idea from the teacher before doing the experiment. Experiments conducted without prior approval will not be accepted.

**7. In class** *(varies)* Throughout the year there will be opportunities in class to earn obligation points. Most quarters if you do all the homework and group work in class you will have very close to the 20 points if not more.