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| [http://web.chem.ucsb.edu/~kalju/chem110L/public/tutorial/images/b_dna_ray.png](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=zkMSbAG7twRrkM&tbnid=jZ-PQmCEZ1YEDM:&ved=0CAUQjRw&url=http://web.chem.ucsb.edu/~kalju/chem110L/public/tutorial/intro.html&ei=AilcUtaqJYnW9QTdpYHACQ&bvm=bv.53899372,d.eWU&psig=AFQjCNEuBId2n8y5isHevcbpLQEsbmRHPA&ust=1381857824178168)[https://thetartan-assets.s3.amazonaws.com/uploads/33758/original/macromolecule_scitech.jpg](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=-nQOQxfVYzSB1M&tbnid=i1dSaIuVibjaEM:&ved=0CAUQjRw&url=http://thetartan.org/2013/2/4/scitech/scinewsbriefs&ei=vyhcUt3HIofK9gTK_oGAAg&bvm=bv.53899372,d.eWU&psig=AFQjCNEuBId2n8y5isHevcbpLQEsbmRHPA&ust=1381857824178168)Macromolecules Project |
| Due Date: October 22-23, 2014 |
| **Where do I get this information?** Use the internet, notes and/or your textbook to research the 4 macromolecules (Carbohydrates, Lipids, Proteins and Nucleic Acids). |
| **What are the requirements?**   1. You should have one section per macromolecule. Each section should include the following… 2. Atoms the macromolecule consists of 3. Different types 4. At least 3 examples 5. How does it apply to your life? 6. What would happen if you didn’t have/couldn’t use the macromolecule? 7. Two interesting facts about the macromolecule 8. Diagram or picture 9. You need to use appropriate grammar, spelling and punctuation 10. You need to take your time and make your project NEAT…remember, it is a TEST grade! 11. Any drawings, sketches or diagrams should be colored 12. Your project does NOT have to be computer generated…you may hand write it if need be. |
| **What format do I use?**   1. Pamphlet: a piece of paper folded into thirds (with a cover page) talking about each macromolecule. 2. Advertising Poster: Use a poster to “sell” the attributes of each organic molecule. 3. Comic Book Poster: Use a poster to explain the properties of each macromolecule as if they are superheroes. 4. Wanted Poster: Create 1-4 wanted posters for each of the 4 macromolecules. 5. Build a Model: Build a model of each macromolecule and write a paragraph including the above requirements for each macromolecule (total of 4 models and 4 paragraphs). 6. Rap, Song or Poem: Must include all of the above requirements and be performed in front of the class! 7. Do you have any other ideas? Check with me for approval. |
| **How will I be graded?** See the rubric on the back of this page for specific grading guidelines. |
| Please turn **THIS SHEET** in with your project on the due date. I need the rubric on the back to grade you with. Failure to provide a rubric will result in a 5 point penalty from your final project grade. |
| **Please note:** 10 points per day will be subtracted from your final project grade if it is late! |

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|  | **1: Needs Work** | **2: Average** | **3: Good** | **4: Excellent** |
| **Molecules** | Only one macromolecule is included in the project. | Only two macromolecules are included in the project. | Only three macromolecules are included in the project. | All four correct organic macromolecules are included in the project – carbohydrates, lipids, proteins, and nucleic acids. |
| **Atoms** | One macromolecule is described by the types of atoms it has, or all are incorrect. | Two macromolecules are described by the types of atoms they have, or most are incorrect. | Three macromolecules are described by the types of atoms they have, or some are incorrect. | Each macromolecule is described by the types of atoms it has – some combination of carbon, hydrogen, oxygen, phosphorus, and nitrogen. |
| **Types** | Three macromolecule’s types are missing or incorrect. | Two macromolecule’s types are missing or incorrect. | One macromolecule’s type is missing or incorrect. | All types of each macromolecule are included and described in the project – carbohydrates (mono- and polysaccharides), proteins (structural, transport, and regulation), lipids (true fats, phospholipids, steroids), and nucleic acids (DNA and RNA). |
| **Examples** | Real-world examples are given of only one macromolecule, or three are incorrect. | Real-world examples are given of only two macromolecules, or two are incorrect. | Real-world examples are given of only three macromolecules, or one is incorrect. | Three real-world examples are given of each macromolecule. |
| **Life Application** | The student describes the importance of only one macromolecule to their life. | The student describes the importance of two macromolecules to their life. | The student describes the importance of three macromolecules to their life. | The student describes the importance of each macromolecule to their life. |
| **Deficiency** | The student describes what would happen to a person who didn’t have or could not use one of the four macromolecules. | The student describes what would happen to a person who didn’t have or could not use two of the four macromolecules. | The student describes what would happen to a person who didn’t have or could not use three of the four macromolecules. | The student describes what would happen to a person who didn’t have or could not use carbohydrates, lipids, proteins, or nucleic acids. |
| **Interesting Facts** | At least two interesting facts are provided for one macromolecule, or many are missing. | At least two interesting facts are provided for two macromolecules, or some are missing. | At least two interesting facts are provided for three macromolecules, or 1-2 are missing. | At least two interesting facts are provided for all four macromolecules. |
| **Writing** | The student has many grammar, punctuation, and/or spelling mistakes in their project. Proofreading and editing is not evident. | The student has 4-6 grammar, punctuation, and/or spelling mistakes in their project. | The student has 1-3 grammar, punctuation, and/or spelling mistakes in their project. | The student uses correct grammar, punctuation, and spelling throughout the project. It is obvious that the work has been proofread and edited. |
| **Neatness** | The student’s work is very messy and disorganized, and it appears as if the project was rushed. | The student’s work is a little messy and could have spent more time on it. | The student’s work is neat, but more effort could have been put into it. | The student’s work is very neat and great effort was put into it. |
| **Creativity** | The student did not complete the project with an approved format. |  |  | The student’s work is very creative and utilized the available formats to his/her advantage. |
| **TOTAL** |  |  |  | \_\_\_\_\_\_\_/40 |