

## Nucleic Acids Web Assignment

Name: \_\_\_\_\_

### **PART A: Review of DNA structure**

Visit the web site <http://science.halleyhosting.com/> and click the link for [Gresham High School Biology](#) and select IB Biology. Then, click the link for unit 4, nucleic acids and under “notes” click “nucleic acids.” This will take you through a set of notes on DNA. Answer the following questions as you view the site. **STOP at slide 11.**

1. What are the functions of nucleic acids?
2. What is a nucleotide?
3. What are the three parts of a nucleotide?
4. Draw the structure of a nucleotide.
5. What are the two types of pentoses that are found in all nucleotides? Sketch and label each, highlighting the one difference between them.
6. Contrast the structure of pyrimidines with that of purines.
7. Which nitrogen bases are purines? Which are pyrimidines?
8. The nitrogen bases join together via what kind of bond?
9. Which bases are able to bond to each other?
10. What is the spiral staircase shape of DNA called?



On the right hand side of the page, click for page 29 – DNA is packaged in a chromosome. Click the link at the bottom of the page for the animation. Go through it once, and then repeat, this time answering the following questions.

1. What are histones? Describe their location on the DNA.
2. What is chromatin?
3. How many proteins make up a histone core?

**PART C: Access Excellence**

Go to <http://www.accessexcellence.org/AB/GG/nucleosome.html> and answer the following questions.

1. What is a nucleosome?
2. Why is DNA packing so important?
3. Describe the structure of the nucleosome.
4. Sketch and label a section of a nucleosome.