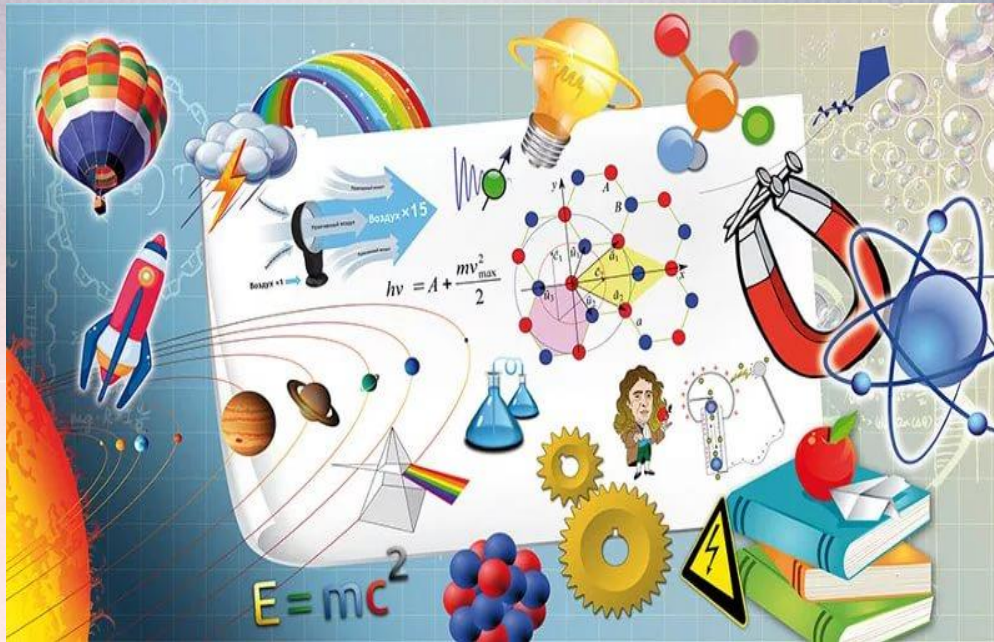


Электронный журнал ПЕРВЫЕ ШАГИ В НАУКУ

5 - 11 классы

ВЫПУСК 2



НОУ «Эврика»
Научный руководитель: Пичугова Е.Н.

Читайте в номере:

- ❖ День науки «Альтернативные источники энергии»
- ❖ Интерактивные уроки «Тайны магнитов»
- ❖ День науки «Атмосферное давление»
- ❖ Рубрика «Наши достижения»

random]plasmid



День науки

«Альтернативные источники энергии»

15 ноября - день науки "Альтернативные источники энергии". Мероприятие, для учащихся 10-11 классов, проводил директор информационного центра по атомной энергии г. Владимир Житков Илья Константинович. Он рассказал о достоинствах и недостатках альтернативных видов энергии, проекте Росатома "Зеленый квадрат».



Учащиеся приняли участие в проведении экспериментов по выработке электроэнергии с ветряным двигателем, солнечной батареей и термоэлементом.



...sequences have structural purposes, or are involved in regulating the use of this genetic information.

Chemically, DNA consists of two long polymers of simple units called nucleotides, which are known as the sugar-phosphate backbone. The two strands run in opposite directions to each other and are therefore antiparallel. Attached to each nucleotide is a nitrogenous base, which may be a purine or a pyrimidine. In the DNA double helix, the bases of one strand are paired with those of the other strand, and a DNA strand is called a nucleosome and one or more nucleosomes are linked together.

Although the B-form of DNA is the most common, other conformations have been observed. The A-form is a compact, narrow, zig-zag structure with the major groove deep and narrow. The Z-form is a narrow, zig-zag structure with the major groove deep and narrow. The Z-form is a narrow, zig-zag structure with the major groove deep and narrow.

Каждый класс представил команду для участия в интерактивной игре "Своя игра". Победителем стала команда 11 А класса.



DNA codes in the
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Although the B-DNA
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Уроки «Тайны магнитов»

Лекторская группа НОУ «Эврика»,
учащиеся 9-х и 10 - х классов,
провели интерактивные уроки
«Тайны магнитов»
в начальной школе.

Участники лекторской группы
рассказали младшим школьникам
о свойствах магнитов, их
применение в жизни.



DNA codes in the
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Продемонстрировали интересные опыты: как найти «иголку в стоге сена» и увидеть невидимое. Занятия проходили в форме групповой работы. Вечер оставил у учащихся неизгладимое впечатление, а для некоторых из них послужил началом серьезного увлечения наукой.



День науки «Атмосферное давление» (физическая мозаика)

Как яйцо втягивается в бутылку, почему вода поднимается за поршнем в шприце, как устроить барометрическую поилку для птиц, можно ли разорвать полушария из которых откачан воздух? На эти и другие вопросы отвечали и участвовали в проведение опытов учащиеся **7-8 классов**. Физические явления и законы были обнаружены и продемонстрированы неожиданным образом, учащихся заинтересовала возможность самостоятельного выполнения увлекательных физических опытов и наблюдений физических явлений в повседневной жизни.



DNA codes its instructions in the order of the four nucleotide bases: adenine, thymine, guanine and cytosine. The sequence of these bases determines the amino acid sequence of a protein, which in turn determines the protein's structure and function.

The first published paper on the structure of DNA was published in 1953 by James Watson and Francis Crick, with the title 'Molecular Structure of Nucleic Acids. A Model for the Salt and Sugar-Phosphate Linkage in the Nucleic Acid Molecule'.

Some of the DNA strand is made from phosphate and sugar residues (10).

Compared to a double-stranded DNA molecule, a single-stranded DNA molecule is more flexible and can form a variety of structures, such as hairpins and loops.

Рубрика «Наши достижения»

random]plasmid

Deoxyribonucleic acid (DNA) is a nucleic acid that contains the genetic instructions used in the development and functioning of all known living organisms and some viruses. The main role of DNA molecules is to store and transmit genetic information. DNA is often compared to a set of blueprints or a recipe, or a code, since it contains the instructions needed to construct other components of organisms that carry this genetic information. The DNA genes, but other DNA sequences have structural purposes, or are involved in regulating the use of this genetic information.

Chemically, DNA consists of two long polymers of simple units called nucleotides, with bases made of sugars and phosphate groups joined by ester bonds. These two strands run in opposite directions to each other and are therefore anti-parallel. Attached to each sugar is one of four types of molecules called bases. It is the sequence of these four bases along the backbone that encodes information. This information is read using the genetic code, which specifies the sequence of amino acids within proteins. The code is read by copying stretches of DNA into the related messenger RNA, in a process called transcription.

Within cells, DNA is organized into long structures called chromosomes. These chromosomes are duplicated before cells divide, in a process called DNA replication. In eukaryotic organisms (animals, plants, fungi, and protists) most of the DNA is contained in cell nuclei and some of the DNA is contained in mitochondria or chloroplasts. [1] In contrast, prokaryotes (bacteria and archaea) store their DNA only in the cytoplasm. Within the chromosomes, chromatin proteins such as histones compact and organize DNA. These complex structures guide the interactions between DNA and other proteins, helping control which parts of the DNA are transcribed.

DNA is a double helix structure made from two strands. The strands are made from a sugar-phosphate backbone. The sugar is deoxyribose and the phosphate is phosphoric acid. The two strands are held together by hydrogen bonds between the nitrogenous bases. The bases are adenine, thymine, guanine, and cytosine. Adenine pairs with thymine and guanine pairs with cytosine. The sequence of the bases is the genetic code.

The backbone of the DNA strand is made from alternating phosphate and sugar residues. The phosphate groups are attached to the 5' carbon of the sugar, and the sugar is attached to the 3' carbon of the phosphate. This creates a repeating unit of phosphate-sugar-phosphate-sugar.

The nitrogenous bases are attached to the 1' carbon of the sugar. The bases are adenine, thymine, guanine, and cytosine. Adenine and thymine are purines, and guanine and cytosine are pyrimidines. Adenine pairs with thymine and guanine pairs with cytosine.

The hydrogen bonds between the bases hold the two strands together. There are two hydrogen bonds between adenine and thymine, and three hydrogen bonds between guanine and cytosine.

The overall structure of the DNA molecule is a right-handed helix. The distance between two full rotations of the helix is 3.4 nanometers. The width of the helix is 2.0 nanometers.

DNA codes for proteins. The sequence of the bases is the genetic code. The code is read by copying stretches of DNA into the related messenger RNA, in a process called transcription.

The first published paper on the structure of DNA was by James Watson and Francis Crick in 1953. They were awarded the Nobel Prize in 1962 for their discovery.

Although the B-DNA conformation is the most common, other conformations have been observed. These include A-DNA, C-DNA, and Z-DNA.

Compared to B-DNA, A-DNA is a narrow, compact form. It is found in dehydrated conditions and in the cores of nucleosomes.

Z-DNA is a left-handed helix. It is found in regions of high salt concentration and in some viral genomes.

Научно-практическая конференция обучающихся, посвящённая юбилейным датам учёных-земляков

И.А. Леднева и Н.А. Леднева

Исследовательский проект «Электропунктурная нейротерапия»
учащийся 9 «В класса» Хисаметдинов Джамиль – диплом II
степени.



Поздравляем!





Работая над проектом Хисаметдинов Д. посетил
областную госпиталь для ветеранов войн (ГБУЗ ВО
«ОГВВ») Камешковский район, д. Пенкино.
Познакомился с лечебными методами воздействия по
электропунктуре.



Ученик 10 «Б» класса Михаил Шахмин стал призёром районной научно-практической конференции «ВЕКТОР ПОЗНАНИЯ»



Поздравляем!

