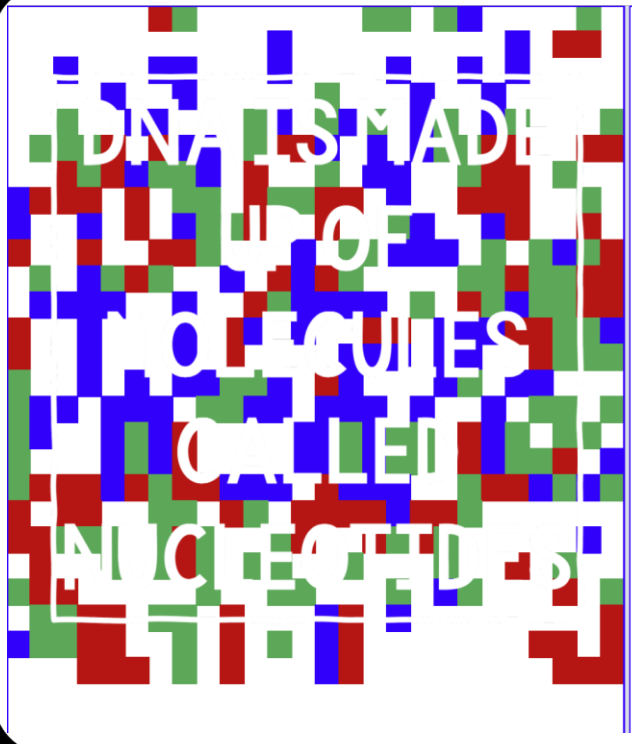
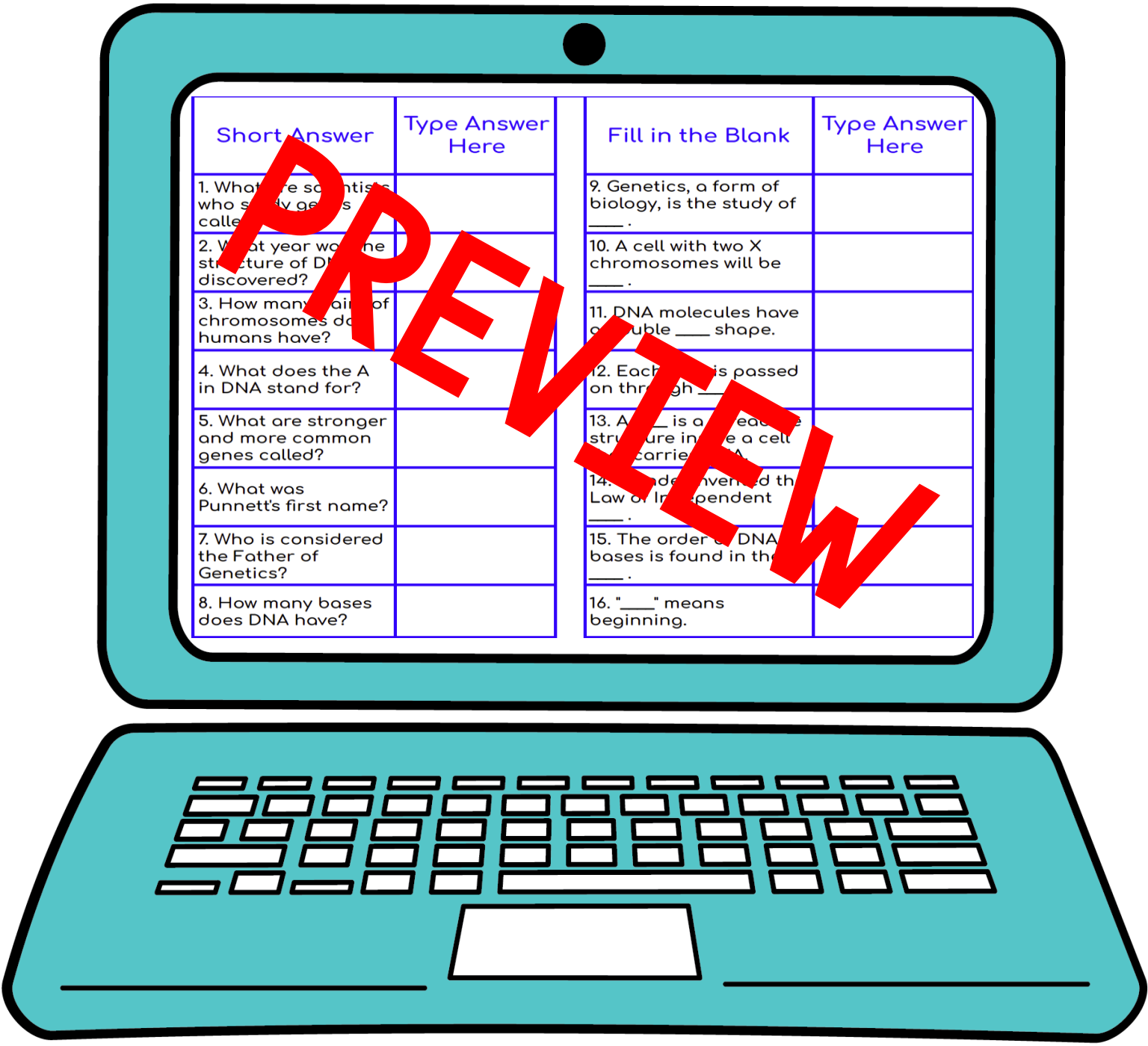


Short Answer	Type Answer Here
1. What are scientists who study genes called?	
2. What year was the structure of DNA discovered?	
3. How many pairs of chromosomes do humans have?	
4. What does the A in DNA stand for?	
5. What are stronger and more common genes called?	
6. What was Punnett's first name?	
7. Who is considered the Father of Genetics?	
8. How many bases does DNA have?	



Short Answer	Type Answer Here
1. What ...e sc...ntis... who s...dy ge...s calle...	
2. W...at year wo...he str...cture of D... discovered?	
3. How many ...ai... of chromosomes d... humans have?	
4. What does the A in DNA stand for?	
5. What are stronger and more common genes called?	
6. What was Punnett's first name?	
7. Who is considered the Father of Genetics?	
8. How many bases does DNA have?	

Fill in the Blank	Type Answer Here
9. Genetics, a form of biology, is the study of ____ .	
10. A cell with two X chromosomes will be ____ .	
11. DNA molecules have a ...uble ____ shape.	
12. Each ...is passed on thr...gh ____	
13. A ... is a ...eac... stru...ure in...e a cell carrie... ...A.	
14. ...de...nven...d th... Law of In...pendent ____ .	
15. The order o... DNA bases is found in th... ____ .	
16. "____" means beginning.	

GENETICS AND DNA

Did you e… Ov… y siblings can look so different, even if they have the same mo… and fath… r example, mom and dad have brown hair and brown eye… why does… aught… e red hair and blue eyes while the son has … ir and … eye… n genetics!

G… …logy … stud… eredity. "Gen" means begi… Genetics explains ho… es and t… et passed from one gen… on to the next. Genes … e the cod… he ap… se of a living be… Scientists who study … …icists…

Gregor Mendel, a sci… …, is co… ed the … Genetics. He experiment… …th … plants in his g… With careful discovery, he saw pat… of in… ance:

1. Each trait is p… sed on… ugh alleles … rnative vers… of a specific gene.
2. Offspring inherits one a… from … arent for each trait.
3. Some alleles may not appear in … ent generation, but th… still be passed to future generations … ple of this would … d hair that may not appear immediately, bu… ow up in fu… generations, with a red-head child at some point.

When you get the same allele from each parent, that allele is expres… phenotype (appearance).

Eventually, Mendel invented the Law of Inheritance and the Law of Independent Assortment.

DNA is the control center where everything begins. DNA (deoxyribonucleic acid) is a molecule that carries genetic instructions or a blueprint for your body. Humans begin life as a single cell, but that one cell divides into two cells, then four cells, then eight cells. Eventually, humans have trillions of cells. Francis Crick and James Watson of England discovered the structure of DNA in 1953. DNA molecules have a double helix shape, kind of like a twisted ladder. DNA determines traits such as gender, height, hair color, and eye color.

DNA is carried in the chromosome. A chromosome is a threadlike structure inside a cell that carries DNA. Chromosomes carry the "recipe" for the cells. DNA has four bases, called G (guanine), C (cytosine), A (adenine), and T (thymine). These chemicals are the genetic code. A always pairs with T, and G always pairs with C. The order of these bases is found in the genome (set of genetic instructions).

DNA stays inside the nucleus, so it creates and sends RNA outside the nucleus into the cytoplasm. From here, RNA forms proteins, and these proteins determine life.

Humans have 23 pairs of chromosomes, which equals 46 chromosomes. Living organisms have various amounts of chromosomes. For instance, an elephant has 56 chromosomes, while a pea plant has 14 chromosomes, and roundworms have 2 chromosomes, while hermit crabs have up to 254 chromosomes.

A pair of chromosomes is responsible for a baby being a boy or girl. Chromosomes are labeled X or Y. A cell with one X and one Y chromosome will be male. A cell with two X chromosomes will be female.

A mother and father both pass chromosomes to the baby. These sets of genes determine the baby's traits. Each gene is responsible for one trait, like …s, eye color, and hair color. Dominant genes are genes that are stronger … mon… …mmon.

To … the possible combinations of alleles offspring may inherit, scientists us… …t square, named after Reginald C. Punnett. A Punnett square use… …s set in a square pattern. One parent's alleles are written a… …eft, and the … arent's alleles are written on the top. Then you fill … square. If b… …ve the same alleles, the offspring would … have those s… …leles … alled homozygous. Heterozygous, on t… …er hand, me… …fferent alleles … or th… same gene. This indicates th… …e two possi… …or the offspring.

… the Punne… …tal letters in… …dominant genes, and … letter… …esen… …ive gene… example, when talking about brow… …es, "B… …ns brown eyes are dor… …. Meanwhile, "b" could indicate a recessive … … blue eyes. Thus, if a P… …t square reveals BB f… color, then offsp… …ld have brown e… …ikew… …if the result… …bb, the dominant color d… …sists. How… …if … …nts h… recessive gene, bb, offspring will have …

Here is a fun fact - the rarest ge… …t … …r… …and blue eyes. Only one percent of the population h… …gene… …ion. Another interesting note - if you untwisted and stretched … DNA strands, the length of the strand would be twice the size of … …meter of the solar system.


PLEASE VIEW
THE VIDEO TO
SEE HOW THIS
PRODUCT WORKS