

# GENETICS AND DNA



**DIGITAL ESCAPE**

TM

# COLOR CODE

DRAG AND DROP the elements to fill in the reading passage,  
then enter the COLOR CODE.

**chain**      **molecule**      **thymine**

**spiral**      **offspring**

When a baby is born, genes are passed down from the parents to the \_\_\_\_\_. Genetics explains how babies get some of their parents' features but not others. DNA stands for deoxyribonucleic acid, and it is unique to each human. It is a \_\_\_\_\_ found in each cell of the human body. DNA is made up of molecules called nucleotides. DNA has four types of bases or nucleotides: adenine (A), \_\_\_\_\_ (T), cytosine (C), and guanine (G). DNA is composed of nucleotides in a specific order. Every 3 letters are called a codon and they all connect together like a \_\_\_\_\_. There are thousands of letters in DNA held together by phosphate and deoxyribose. Each person has a unique sequence (order) of the nucleotide letters. A double helix is the name given to the \_\_\_\_\_ ladder shape of DNA molecules.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# 9 CHALLENGES

After successfully completing each challenge students will earn a number for the final lock code.

Nice job sleuth!

4

CONTINUE



# PIGPEN CIPHER

REVEAL A DECODER HIDDEN BENEATH THE IMAGE ON THE LEFT,  
THEN DECODE THE WORDS.

SCRATCH ME

1.

2.

3.

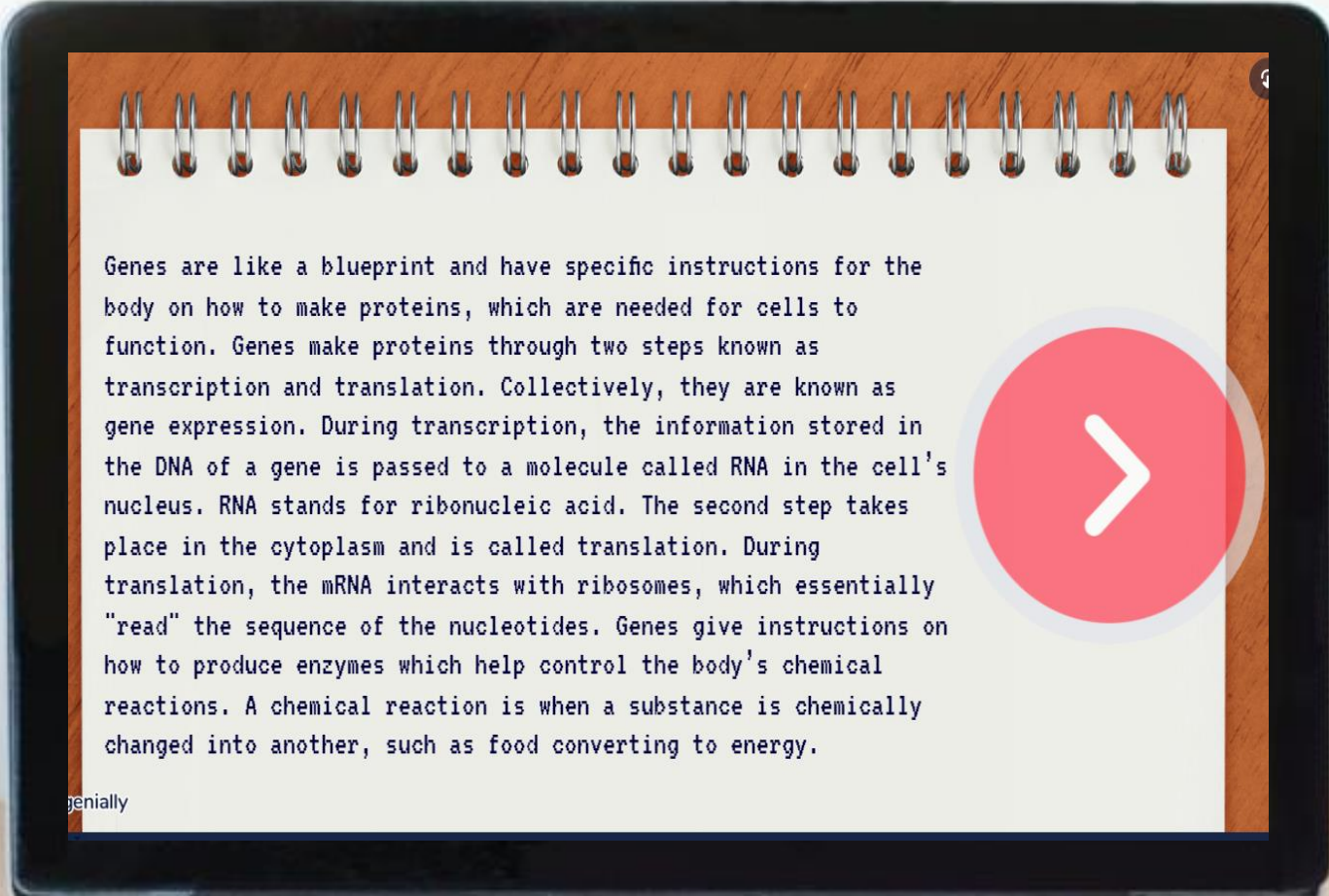
4.

✓ CHECK



# 6 PASSAGES

STUDENTS WILL READ 6 SHORT PASSAGES ABOUT THE TOPIC,  
THEN ANSWER QUESTIONS.










Genes are like a blueprint and have specific instructions for the body on how to make proteins, which are needed for cells to function. Genes make proteins through two steps known as transcription and translation. Collectively, they are known as gene expression. During transcription, the information stored in the DNA of a gene is passed to a molecule called RNA in the cell's nucleus. RNA stands for ribonucleic acid. The second step takes place in the cytoplasm and is called translation. During translation, the mRNA interacts with ribosomes, which essentially "read" the sequence of the nucleotides. Genes give instructions on how to produce enzymes which help control the body's chemical reactions. A chemical reaction is when a substance is chemically changed into another, such as food converting to energy.

genially



# WHAT'S INCLUDED?

-  **TEACHER GUIDE**
-  **9 PUZZLE CHALLENGES**
-  **6 READING PASSAGES**
-  **2 POP UP MYSTERY PUZZLES**
-  **FREQUENTLY ASKED QUESTIONS**
-  **PUZZLE HELP AND ANSWER KEY**
-  **DIGITAL POP-UP HINTS**

**THINK  
TANK**

# CLICK AND BYE

Students will eliminate false answers to reveal a four-digit code to move on.

During transcription, the information stored in the DNA of a gene is passed to a molecule called RNA.

RNA is in the cell's nucleus.

A chemical reaction is when an electromagnetic wave is chemically changed into a gamma ray.

**CLICK ON THE FALSE STATEMENTS TO ELIMINATE THEM AND REVEAL A CODE.**

RNA stands for deoxyribonucleic acid.

Genes make proteins through two steps known as transpiration and transportation.

The second step takes place in the cytoplasm and is called translation.

During translation, the mRNA interacts with ribosomes.

Proteins are needed for cells to function.

Bronchi help control the body's chemical reactions.

**CONTINUE**



# REVEAL

STUDENTS WILL DRAG THE FLASHLIGHT TO REVEAL  
HIDDEN IMAGES.





# SAMPLE

Test the link and solve some  
TEACHER PUZZLES!

[CLICK HERE](#)








# PUZZLE TYPES

QWERTY  
TEXT MESSAGE  
CLICK & BYE  
JIGSAW

COLOR CODE  
DRAG & DROP  
CIPHER  
DIRECTIONAL

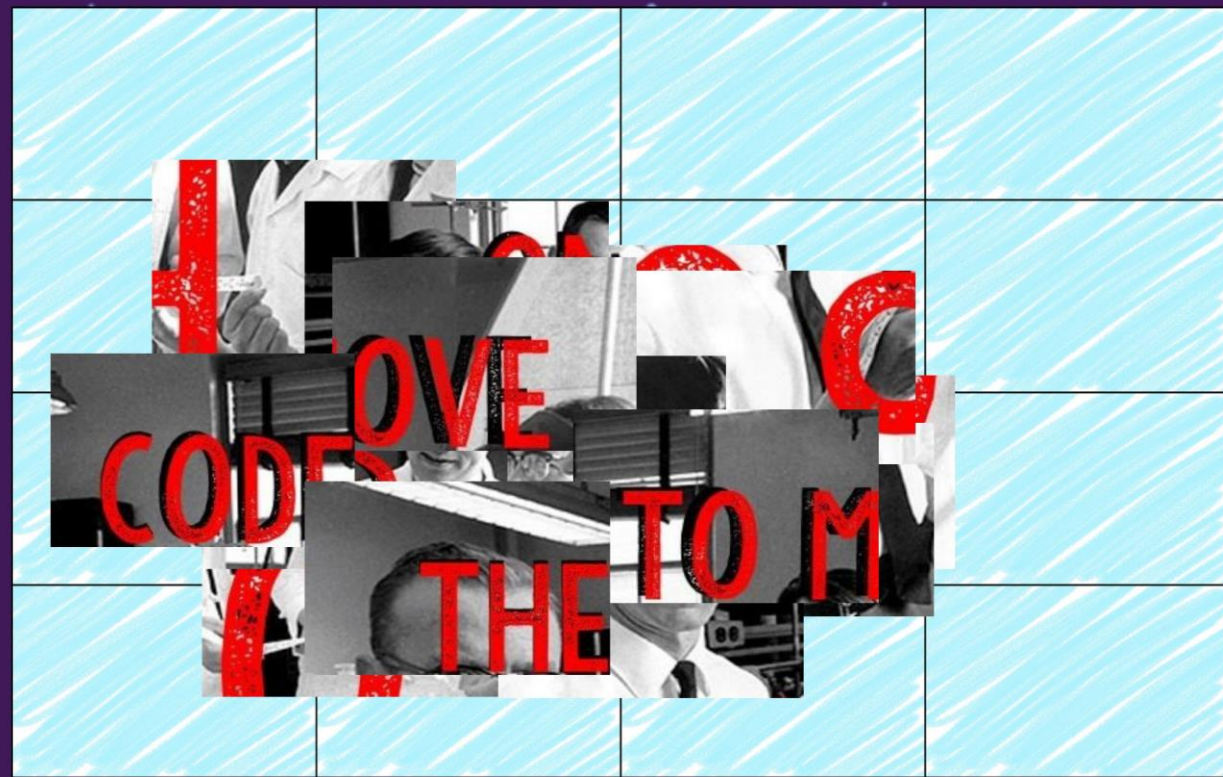


# QUESTIONS

-  5 FILL IN THE BLANK
-  8 DRAG AND DROP
-  9 TRUE OR FALSE
-  6 UNSCRAMBLE WORDS
-  7 MULTIPLE CHOICE

# JIGSAW

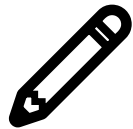
COMPLETE THE JIGSAW PUZZLE TO REVEAL A  
FOUR-DIGIT CODE TO MOVE ON.



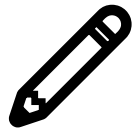
# BENEFITS



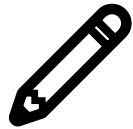
**SELF-GRADING**



**IMMEDIATE STUDENT FEEDBACK**



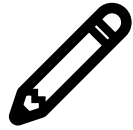
**PAPERLESS**



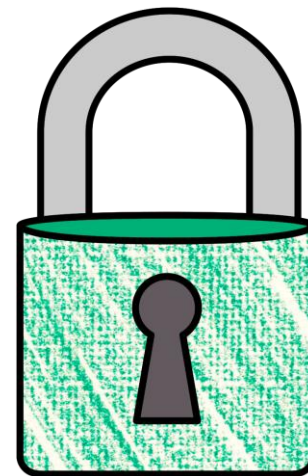
**NO PREP**



**SAVES YOU TIME**



**CRITICAL THINKING**



**THINK  
TANK**

# POP-UPS

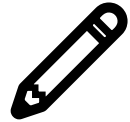
ALONG THE WAY, STUDENTS WILL ENCOUNTER INTERACTIVE  
MYSTERY POP-UP PUZZLES.



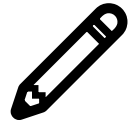
# OPTIONS



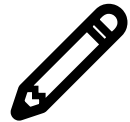
**FRONT-LOADING**



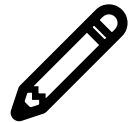
**GROUP STATIONS**



**SUB PLANS**



**UNIT REVIEW**



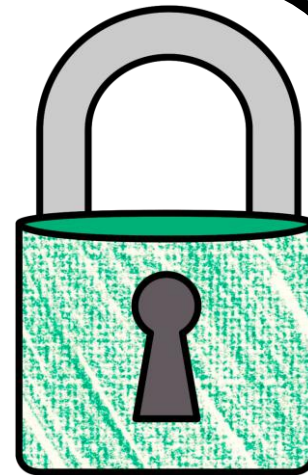
**ENRICHMENT ACTIVITY**



**TEAMWORK ACTIVITY**



**REWARD ACTIVITY**



# COLLECT KEYS

After completing each puzzle, students  
will earn a "key"





# FINAL CODE

STUDENTS ENTER THE FINAL CODE 9-DIGIT CODE  
TO CRACK THE CASE.

ENTER THE  
9 DIGIT CODE TO  
THE THIEF'S VAULT

RETURN

