

# HUMAN HEART

## CUBE CODE

Doctors that study the heart are called \_\_\_\_\_.

\_\_\_\_\_ are the lower chambers of the heart called \_\_\_\_\_.

\_\_\_\_\_ are the upper chambers of the heart called \_\_\_\_\_.

\_\_\_\_\_ are the heart muscle also known as \_\_\_\_\_.

What is the largest artery of the heart?

What is blood composed of?

- A. Alveoli
  - B. Corneas
  - C. Femur
  - D. Tympanic membrane
- A. Aorta
  - B. Atrium
  - C. Vena cava
  - D. None of the above
- A. Platelets
  - B. Plasma
  - C. White blood cells
  - D. All of the above

the percent of total blood volume that plasma makes up MINUS 50.

The FIRST number of the lock is the number (in ounces) the average adult heart weighs MINUS 3.

The THIRD number of the lock is the number of chambers the heart is made up of MINUS 2.

4	ba-boom	7	Platelets
5	lub-dub	8	lower
6	tighten	9	higher

The sound of heartbeats, known as \_\_\_\_\_, is caused by the closing of the heart valves. The first sound is the \_\_\_\_\_, and the second sound is the \_\_\_\_\_.

**STATION 2:**

First, number ALL the paragraphs on your reading passage. Then, read each statement below and determine which paragraph NUMBER the statement can be found in. Lastly, eliminate ANY answer where the answer was found in an EVEN numbered paragraph, leaving only ODD numbers as your final code (in the order of questions). Paragraph numbers MAY be used more than one time or not at all.

**STATION 3:**

Read each statement below and determine if it is true or false. If the statement is true, color or shade the coin that corresponds to the question. If the statement is false, cross out that coin value. After you are finished add the TOTAL of ALL TRUE coin values. Code has been provided for you. If the total is 625, a 6 in the first box, the 2 in the second box and so on.

- A The heart muscle, or myocardium, is composed of specialized cardiac muscle cells called cardiomyocytes.
- B The sound of heartbeats, known as lub-dub, is caused by the closing of the heart valves.
- C Doctors study the human heart.
- D In the lungs, the blood picks up oxygen and gives off carbon dioxide.
- E The human heart is about the size of a fist.
- F The human heart is made up of four chambers.

- A. The atria, or upper chambers, are known as the collecting chambers.
- B. The main role of the heart is to pump oxygen rich blood to the rest of the body.
- C. The human heart beats roughly 60 times per day.
- D. The pulmonary artery carries blood to the lungs.
- E. Atria are separated by a wall called the interventricular septum.

**4 DIGIT CODE**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**HUMAN HEART**

The human heart is an organ responsible for pumping blood throughout the body. The heart is located in the middle of the chest, slightly to the left, and is about the size of an adult's fist. The average adult heart weighs roughly 10 ounces. Blood travels to and from the heart and the rest of the body through vessels.

The human body is made up of trillions of tiny units called cells. These cells need blood that is pumped from the heart because the blood provides oxygen and nutrients that keep them alive and functioning. Every cell in the human body gets blood from the heart, except for the corneas of your eyes. Together, the heart, blood, and blood vessels make up the circulatory system, also known as the cardiovascular system.



### STATION 1:

Use your reading passage or deductive reasoning skills to determine the missing words in the paragraph below. Each missing word has a corresponding NUMBER. The 4-digit code will be the NUMBER of each missing word in the same order in which they appear in the paragraph.

### STATION 2:

First, number ALL the paragraphs on your reading passage. Then, read each statement below and determine which paragraph NUMBER the statement can be found in. Lastly, eliminate ANY answer where the answer was found in an ODD numbered paragraph, leaving only EVEN numbers as your final code (in the order of questions). Paragraph numbers MAY be used more than one time or not at all.

### STATION 3:

Read each statement below and determine if it is true or false. If the statement is true, color or shade the coin that corresponds with that question. If the statement is false, cross out that coin value. When you are finished add the TOTAL of ALL TRUE coin values. One digit of the code has been provided for you. If the total is 625, a 6 would go in the first box, the 2 in the second box and so on.

### STATION 4:

Use your reading passage to determine the combination to the 4-digit lock. You're going to have to use your critical thinking skills and do a tiny bit of math. Pay attention because the "clues" below are NOT in order.

### STATION 5:

Answer each multiple choice question below. Then, count the number of times you used each letter answer (ABCD) to reveal your 4 digit code. Answer options may be used more than once or not at all. If a letter option is not used, simply put a zero in the box.

### STATION 6:

Reread the passage and write the main idea in your own words. Then, add TWO supporting details that back up your main idea or topic sentence.

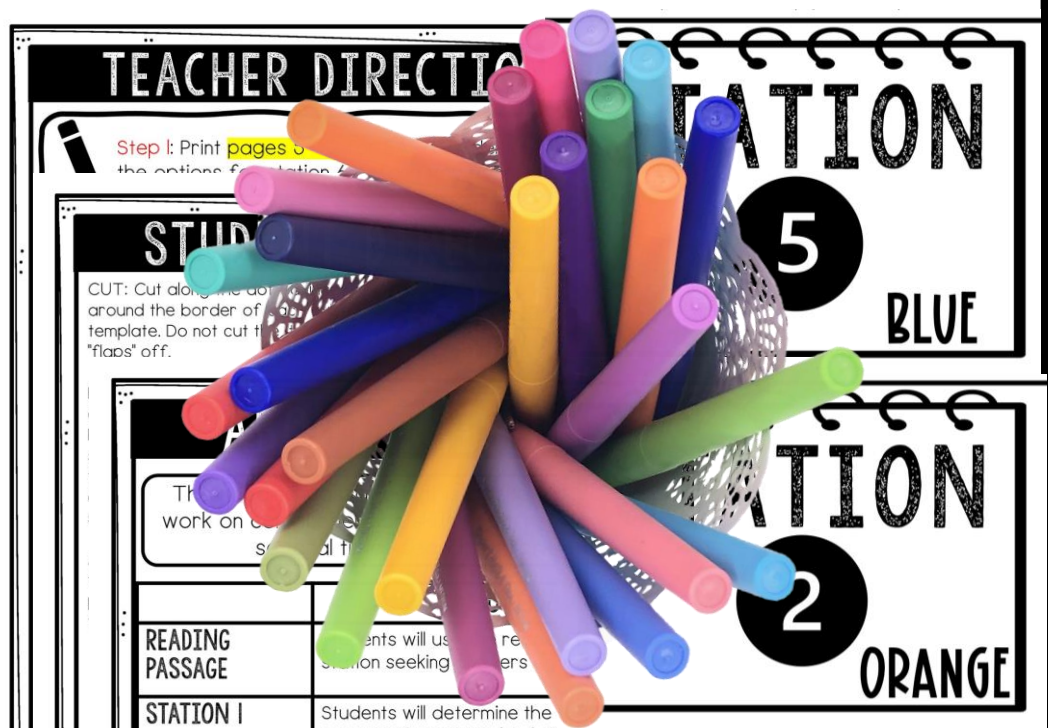
# STATION

# 1

# RED

## WHAT'S INCLUDED?

- READING PASSAGE
- 6 STATIONS
- TEACHER GUIDE
- STATION CARDS
- ANSWER KEY
- STUDENT DIRECTIONS
- TEXT MARKING OPTION
- ALTERNATE STATION
- ASSEMBLY TIPS



# 6 STATIONS

## STATION 1:

Use your reading passage or deductive reasoning to determine the missing words in the paragraph below. The missing word has a corresponding NUMBER. The 4-digit code will be the NUMBER of each missing word in the same order in which they appear in the paragraph.

1	relax	4	ba-boom	7	Platelets
2	atria	5	lub-dub	8	lower
3	Plasma	6	tighten	9	higher

The sound of heartbeats, known as \_\_\_\_\_, is caused by the contraction of the \_\_\_\_\_ of the heart. The atrioventricular valves contract. The second sound is caused by the closing of the semilunar valves \_\_\_\_\_.

The heart pumps \_\_\_\_\_,000 times per day. The heart rate is between \_\_\_\_\_ and \_\_\_\_\_ pulse rates are \_\_\_\_\_, ranging from 70 to 120 beats per minute.

Blood is composed of red cells, white cells, platelets, and plasma.

STATION

1

RED

## STATION 6:

Reread the passage and write the main idea in your own words. Then, add TWO supporting details that back up your main idea or topic sentence.

MAIN IDEA

STATION

6



SUPPORTING DETAIL #2

## STATION 4:

Use your reading passage to determine the combination to the 4-digit lock. You're going to have to use your critical thinking skills and do a tiny bit of math. Pay attention because the "clues" below are NOT in order.

The LAST number of the lock is the number of layers the walls of the aorta are made up of MINUS 2.

The SECOND number of the lock is the number of layers the walls of the aorta are made up of MINUS 2.

STATION

4

GREEN

4 DIGIT CODE

## STATION 5:

Answer each multiple choice question below. Then, count the number of times you used each letter answer (ABCD) to reveal your 4 digit code. Answer options may be used more than once or not at all. If a letter option is not used, put a zero in the box.

What are doctors that specialize in the study of the human heart called?

- A. Cardiomyocytes
- B. Cardiologists
- C. Ophthalmologists
- D. Orthodontists

Every cell in the human body gets blood from the heart except for what?

- A. Alveoli
- B. Corneas

What are the chambers of the heart called?

- A. Ventricles
- B. Atria
- C. Purkinje fibers
- D. None of the above

What is the muscular wall of the heart called?

- A. Myocardium
- B. Cranium
- C. Sinoatrial node
- D. Interventricular septum

- A. Platelets
- B. Plasma
- C. White blood cells
- D. All of the above

STATION

5

BLUE

A B C D

## STATION 3:

Read each statement below and determine if it is true or false. If the statement is true, color or shade the coin that corresponds to the statement. If the statement is false, do not color or shade the coin. One coin has been colored to show the first digit of the code.

STATION

3

YELLOW

A  
75

B  
25

C  
50

D  
100

- C. The human heart pumps roughly 75 times per day.
- D. The pulmonary artery carries blood to the lungs.
- E. Atria are separated by a wall called the interventricular septum.
- F. The circulatory system is also known as the endocrine system.
- G. The heart is located in the middle of the chest, slightly to the left.
- H. The inferior vena cava is the smallest vein in the body.

4 DIGIT CODE

## STATION 2:

First, number ALL the paragraphs on your reading passage. Then, read each statement below and determine which paragraph NUMBER the statement can be found in. Lastly, eliminate ANY answer where the answer was found in an EVEN numbered paragraph, leaving only ODD numbers as your final answer. Paragraph numbers 1-10 are provided.

STATION

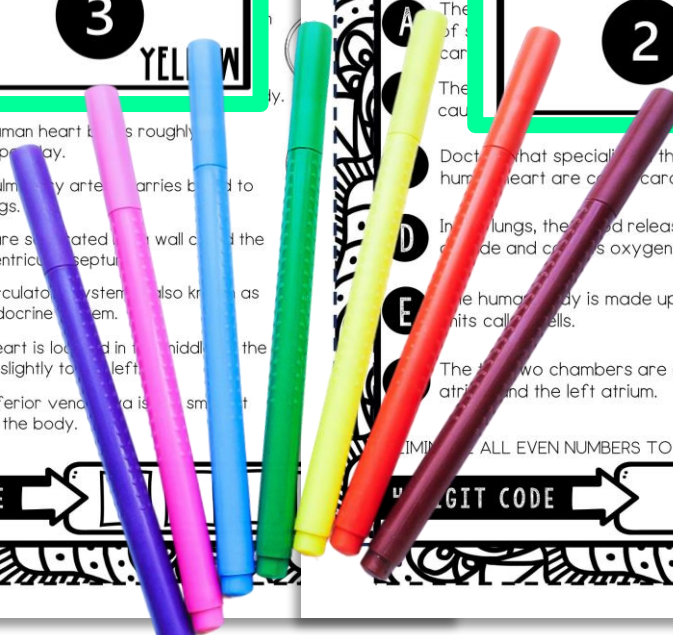
2

ORANGE

- A. The heart pumps blood to the rest of the body.
- B. The heart pumps blood to the rest of the body.
- C. The heart pumps blood to the rest of the body.
- D. The heart pumps blood to the rest of the body.
- E. The heart pumps blood to the rest of the body.
- F. The heart pumps blood to the rest of the body.
- G. The heart pumps blood to the rest of the body.
- H. The heart pumps blood to the rest of the body.
- I. The heart pumps blood to the rest of the body.
- J. The heart pumps blood to the rest of the body.

ELIMINATE ALL EVEN NUMBERS TO DETERMINE THE FINAL CODE.

4 DIGIT CODE



# SAMPLE CUBE



# STATIONS

STATION 1	Students will determine the missing words in the paragraph to reveal a 4 digit code.
STATION 2	Students will number the paragraphs and browse the passage to determine where the answers can be found (paragraph number). After eliminating EVEN numbers, a 4 digit code will be revealed.
STATION 3	Students will read each statement and determine if it is true or false. They will then ADD all TRUE values to find the 4 digit code.
STATION 4	Students will do some basic math here, read the passage to find the answers and then determine the 4 digit code.
STATION 5	Students will answer 6 multiple choice questions which lead them to a 4 digit code based on the number of times they used each "answer".
STATION 6	Option 1: Main idea writing activity Option 2: Color and add topic
TEXT MARKING	OPTIONAL: A color code chart is included in case you want students to mark the text citing evidence of where they found their answers.

**STUDENTS WILL  
USE THE SAME  
READING  
PASSAGE AT  
EACH STATION  
SEEKING  
ANSWERS AND  
TEXT EVIDENCE.**

# HOW IT WORKS



## ENGAGING READING COMPREHENSION PRACTICE!

1

Students work individually (or in pairs) and visit 6 stations, grabbing one side of their cube at each station.

2

Students will answer the questions (found directly in the passage) on their cube sheet before assembly. Students will revisit their reading passage at EACH station!

3

Students will reveal 4-digit codes to move on to the next station. When they finish all stations, they can color and assemble their cube.

**STATION**

Read each statement below and determine if the statement is true, color or shade the corresponding box. If the statement is false, cross out the box. When you are finished add the TOTAL of ALL TRUE statements. A 4-digit code has been provided for you. If the code is 1234, the 1 in the first box, the 2 in the second box and so on.

**A** 75

**B** 25

**C** 50

**D** 100

A. The atria, or upper chambers of the heart, act as the collecting chambers.

B. The main role of the heart is to pump oxygen rich blood to the rest of the body.

C. The human heart beats roughly 72 times per day.

D. The pulmonary artery carries blood to the lungs.

E. Atria are separated by a wall called the interventricular septum.

F. The circulatory system is also known as the endocrine system.

G. The heart is located in the middle of the chest, slightly to the left.

H. The inferior vena cava is the smallest vein in the body.

**4 DIGIT CODE** → [ ] [ ] [ ] [ ]

# COMBINATION



**Each Cube Code is a winning combination of:**


- stations and movement
- close reading
- comprehension skills
- coloring and stress relief
- secret codes
- cut and paste
- citing evidence
- critical thinking

**Everything a teacher dreams of wrapped up into one FUN and engaging activity!**

# BENEFITS



THINK OUTSIDE THE BOX!

-  ANTICIPATORY SETS
-  UNIT REVIEW
-  EARLY FINISHERS
-  STATIONS
-  SUB PLANS
-  PARTNER WORK
-  ENRICHMENT

-  HANDS-ON
-  CROSS-CURRICULAR
-  HIGHLY ENGAGING

