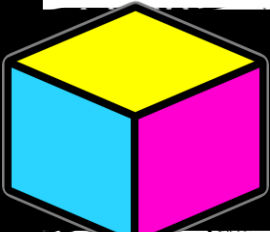


LAYERS OF EARTH

CUBE CODE



average thickness of continental crust?

A. 2
B. 4
C. 6
D. 8

When was Inge Lehmann's theory proven?

A. 1960
B. 1970
C. 1980
D. 1990

What is the mantle composed of?

A. Semi-solid rocks
B. Minerals
C. Melted iron
D. All of the above

What is the earth's heaviest layer?

A. Crust
B. Mantle
C. Inner core
D. Outer core

What is the percent of the earth's surface on top of the continental crust MINUS 39.

The FIRST number of the lock is the number of major tectonic plates covering earth MINUS 5.

The THIRD number of the lock is the number of main layers the earth is made up of MINUS 3.

hurricane
iron
carbon

4
5
6

7
8
9

1929
1934
tsunami

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. When you are finished add the TOTAL of ALL TRUE coin values. The 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.

STATION 3:

A. Transform boundaries are where two plates slide past each other.
B. Below the asthenosphere is the mesosphere.
C. The mantle is the thinnest layer of the earth.
D. The magnetic field creates a protective barrier around the earth.
E. The earth's core is divided into two parts. Earthquakes and volcanoes are also a result of tectonic plates shifting, called plate tectonics.
F. The asthenosphere is where the crust and mantle begins.
G. The inner core is the earth's coldest layer and is exposed to the atmosphere.

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.

A. The layer of earth just below the lithosphere is known as the asthenosphere.
B. As the earth spins, the iron inside the outer core moves around.
C. On land, tectonic plates form the boundaries of the earth.
D. In 1929, Inge Lehmann discovered the inner core.
E. The outer core is liquid.
F. Over time, the outer layers of the earth cooled down and the outer crust turned hard. The inside of the earth remained hot.

LAYERS OF EARTH

Although the earth looks like one solid planet, it is more complex than that. Instead, the earth is made up of four main layers, some solid and some liquid. From the outermost to the innermost, these layers are known as the crust, mantle, outer core, and inner core. Over time, the outside layers cooled down and the outer crust turned hard. The inside of the earth remained hot.

The crust is the thinnest layer of the earth. It is the outermost layer where all life exists including humans, animals, sea life, and plants. The crust underneath the ocean is known as the oceanic crust and it is about 8km thick. This crust, also called sima, is made up of mostly basalt rock (a dark fine grained rock).

THINK TANK

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.

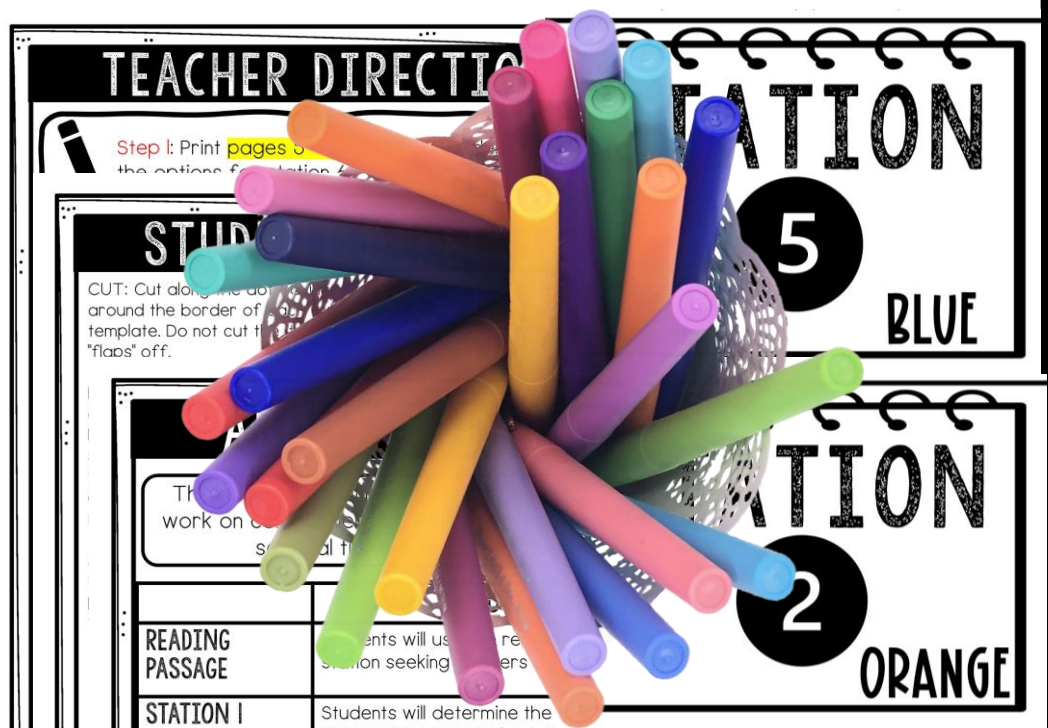
STATION

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	hurricane	4	earthquake	7	1929
2	iron	5	altitude	8	1934
3	carbon	6	pressure	9	tsunami

The inner core is the center of the earth, made up of molten iron and nickel. It is the hottest layer and believed to be the only place where solid iron exists in the earth. Although it is the innermost layer, it melts at a temperature of about 5,000 degrees Celsius. In 1906, Lehmann discovered the inner core in New Zealand. An earthquake sends vibrations through the inside of the earth. She also noticed that the vibrations were moving across the inner core.

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 year the inner core was discovered MINUS 1920.

The SECOND number of the lock is

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 is the average thickness of the continental crust?

- A. 21 miles
- B. 31 miles
- C. 41 miles
- D. Over 50 miles

How many parts is the earth's core divided into?

- A. 2
- B. 4

What is the inner core known as?

- A. Sima
- B. Mansa
- C. Sial
- D. Magma

What is the outer core layer?

- A. Crust
- B. Mantle
- C. Inner core
- D. Outer core

- A. Semi-solid rocks
- B. Minerals
- C. Melted iron
- 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 you how to do it. The first box is for the first box.

STATION

3

YELLOW

A 75

B 25

C 50

D 100

- C. The mantle is the thickest layer of the earth.
- D. The magnetic field creates a protective barrier around the earth.
- E. The earth's core is divided into two parts.
- F. Earthquakes and volcanoes are a result of tectonic plates shifting, creating faults.
- G. The exosphere is where the cruise ships, and the mantle is below.
- H. The crust is the earth's outermost layer because it is exposed to the atmosphere.

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 for you.

STATION

2

ORANGE

A

B

C

D

E

F

G

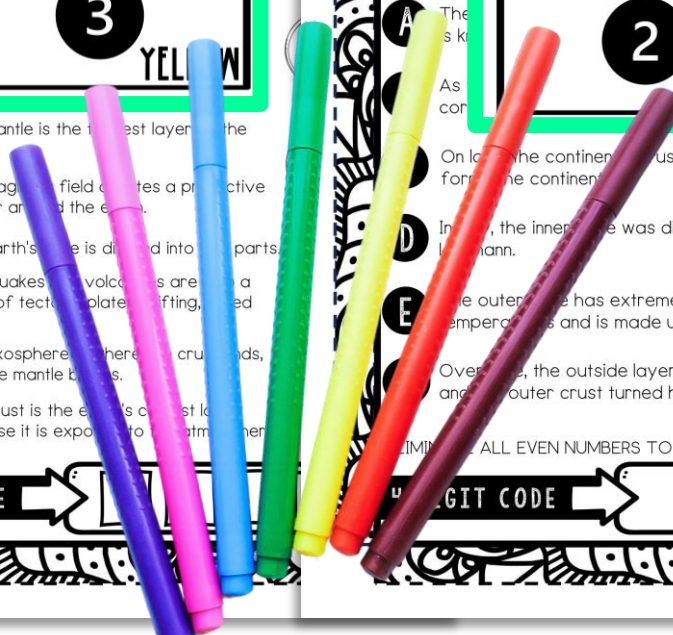
H

I

J

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 question. If the statement is false, cross it out. When you are finished add the TOTAL of ALL TRUE statements. A code has been provided for you. If the total is 75, write the 7 in the first box, the 5 in the second box and so on.

A 75 A. Transform boundaries are where tectonic plates slide past each other.

B 25 B. Below the asthenosphere is the lithosphere.

C 50 C. The mantle is the thinnest layer of the earth.

D 100 D. The magnetic field creates a protective barrier around the earth.

E. The earth's core is divided into the inner core and the outer core.

F. Earthquakes and volcanoes are a direct result of tectonic plates shifting, moving, and colliding.

G. The exosphere is where the crust and the mantle begins.

H. The crust is the earth's coldest layer because it is exposed to the atmosphere.

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

