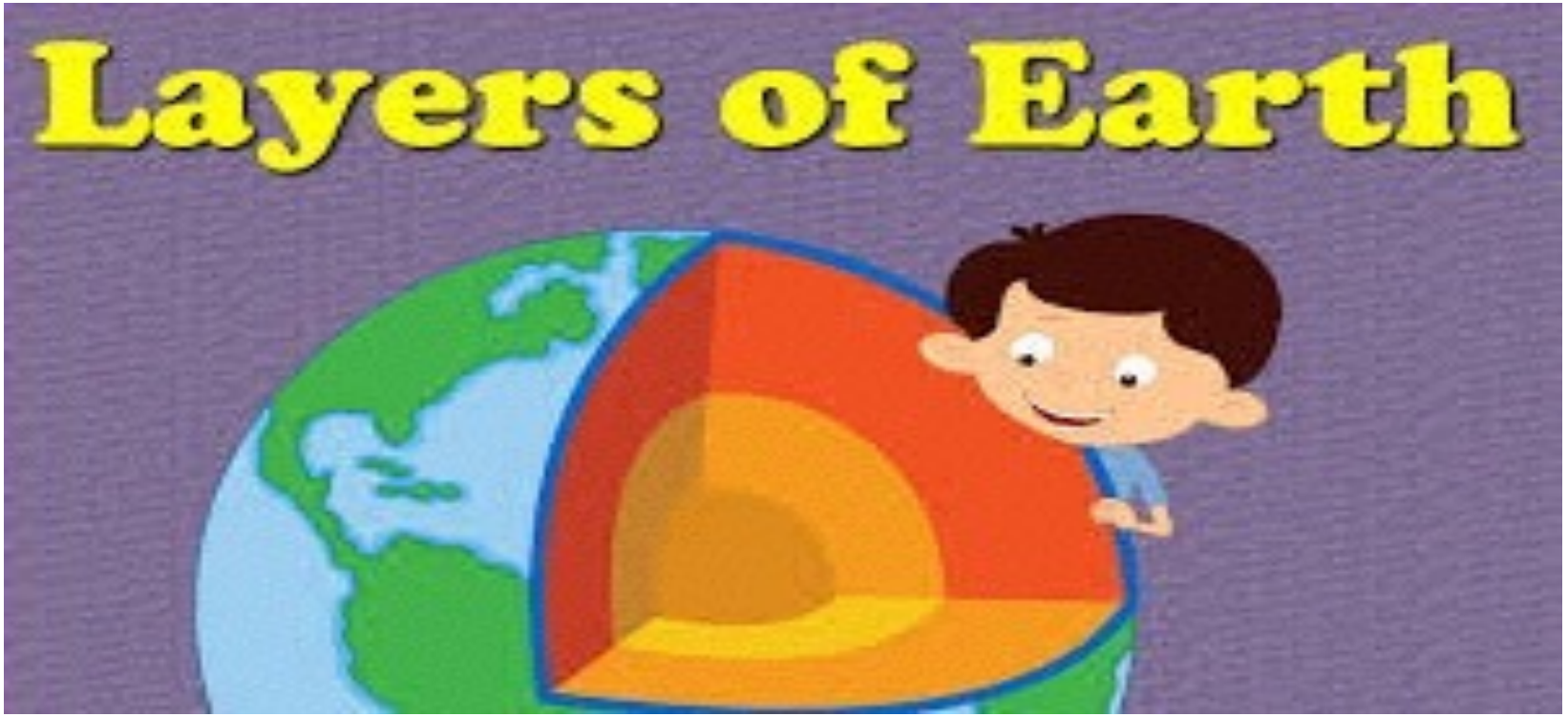
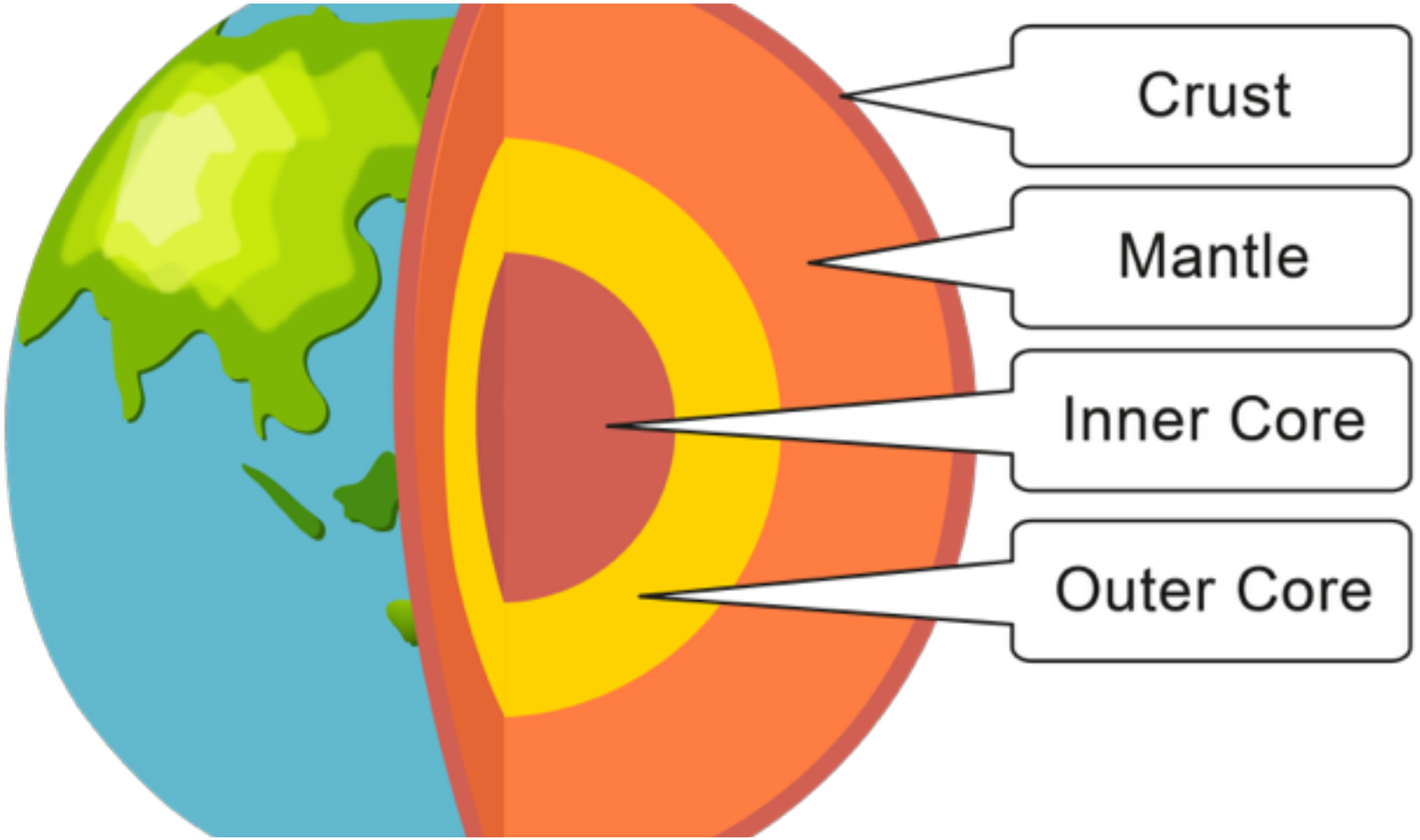
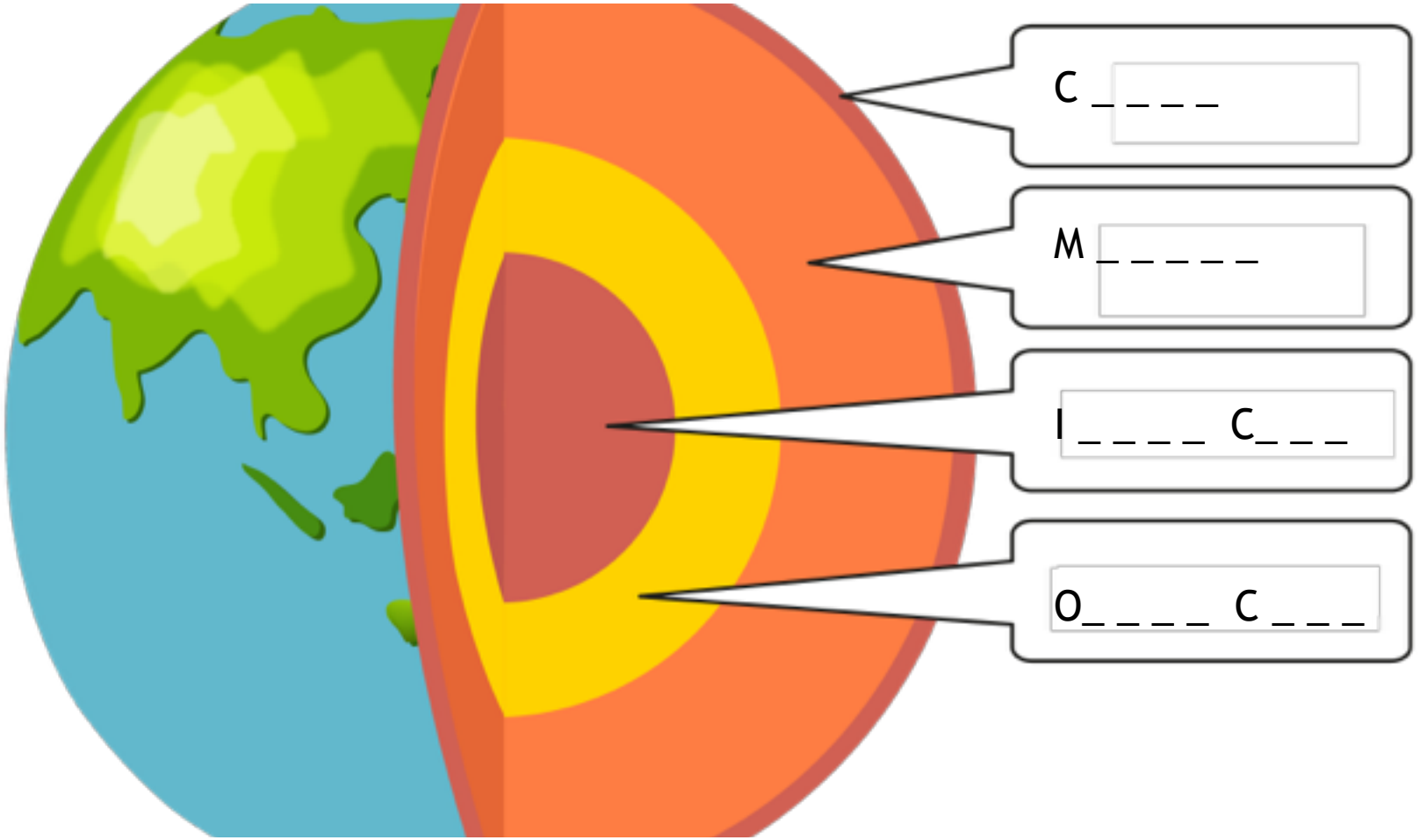


What are the layers of the Earth?

Layers of the Earth



Do you remember the layers?



Match the words to the definitions

LAYERS	**OUTSIDE CENTRE**
CRUST	***COVER***
MANTLE	**STRATA**
INNER CORE	***OUTSIDE LAYER***
OUTER CORE	**CENTRE**

FIND THE PRONUNCIATION

LAYERS	**mæntəl**
CRUST	***leərz***
MANTLE	**ɪnər kɔr**
INNER CORE	***awtər kɔr***
OUTER CORE	**krəst**

Match the words to their translation

- Layers
- Crust
- Mantle
- Inner Core
- Outer Core

Nucleo interno
Mantello
Crosta
Nucleo esterno
Strati

mantle	mæntəl	covering	mantello
crust	*krʌst*	*Outer layer*	*crosta*
solid	ˈsɒlɪd	hard	solido
liquid	*ˈlɪkwɪd*	*fluid*	*liquido*
nickel	ˈnɪkl	Silvery metal	Nickel/nichel
iron	*ˈaɪən*	*metal*	*ferro*
Molten form	ˈməʊltən fɔːm	Made liquid by heat	fuso
lava	*ˈlɑːvə*	*Molten/melted rock*	*lava*
Landform	lændfɔrm	Geographical features	morfologia
inner	*ˈɪnə*	*Inside part*	*interno*

Cut out and match the pronunciation

water	krʌst	liquid	mæntəl
volcanoes	*ˈsɒlɪd*	*nickel*	*ˈwɔːtə*
rock	*ˈlɪkwɪd*	*iron*	*ˈaʊtə*
outer	*ˈlɑːvə*	*molten form*	*vɒlˈkeɪnəʊz*
mantle	*rɒk*	*lava*	*lændfɔrm*
crust	*ˈnɪkl*	*landform*	*ˈɪnə*
solid	*ˈaɪən*	*inner*	*ˈməʊltən fɔːm*

Videos of Layers of the Earth

- https://www.youtube.com/watch?v=24wO1G_7fyc&https://www.youtube.com/watch?v=24w01G_7fyc&t=337s=337s

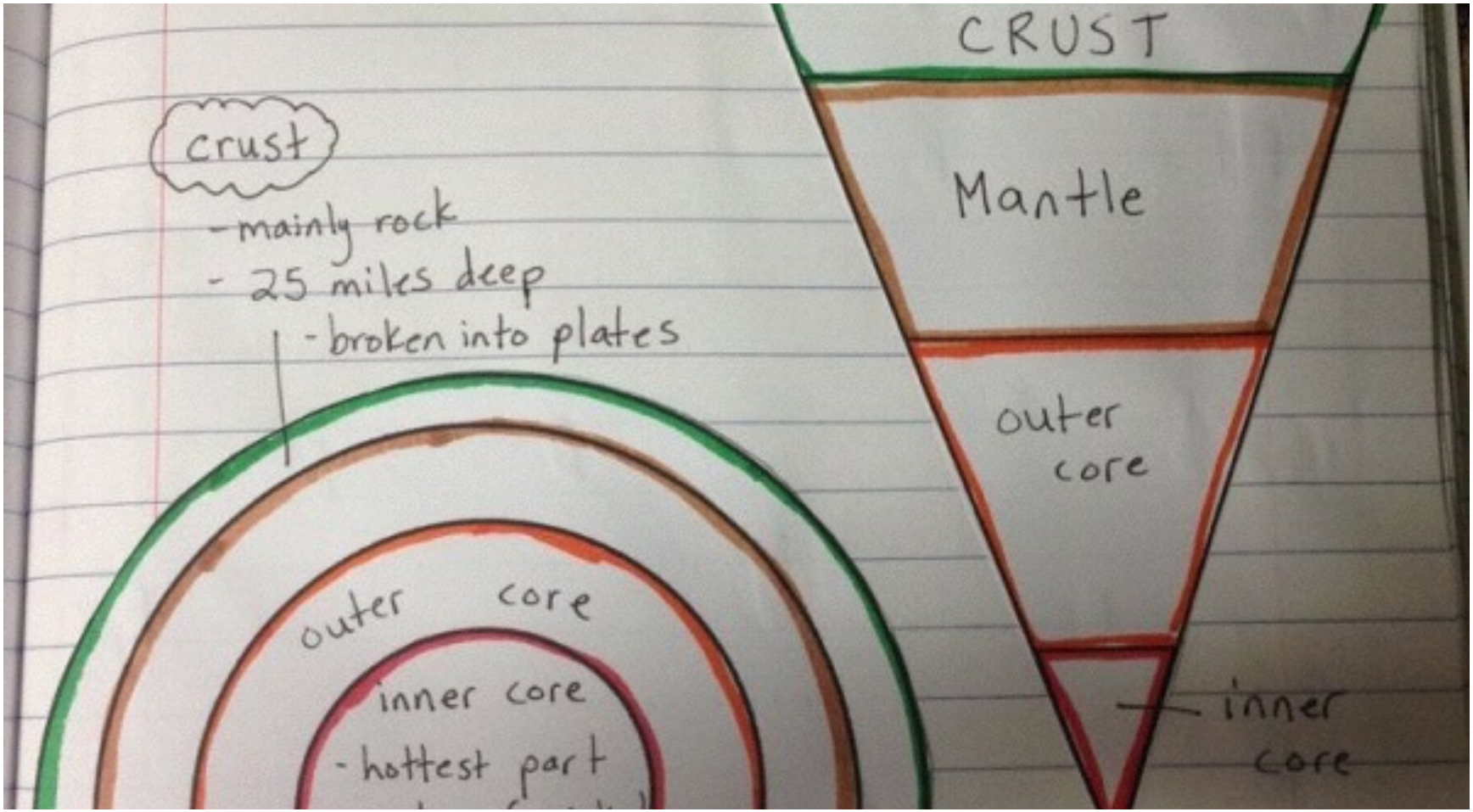
The Layers

The outer cool layer on which we live is called CRUST.

Earth's crust is covered with landforms air and water.

Mantle is the layer below the crust. Mantle is very hot. Mantle consists of rocks in molten form. The core is located just below the mantle. Core is divided into two parts, the Outer core and the Inner core .The outer core is in liquid state. The inner core is in solid state. In the inner core the metals nickel and iron are in solid state. In the outer core the metals nickel and Iron are in molten form. Sometimes, hot melted rock called lava comes out to the surface of the earth. Such places are called volcanoes.

How to illustrate



True or false

- 1. The Earth has 4 main layers T F
- 2. The Inner core is liquid and hot T F
- 3. In the outer core the metals are molten T F
- 4. The mantle is below the core T F
- 5.The Earth’s crust has only landforms T F

Fill in the blanks using the following words:,

(volcanoes, nickel,water, rock, outer, mantle, crust, liquid, solid, iron, molten form, lava, landforms, inner)

The outer cool layer on which we live is called c_____.

Earth's crust is covered with l_____ air and w____.

M_____ is the layer below the crust. Mantle is very hot. Mantle consists of r_____ in molten form. The core is located just below the mantle. Core is divided into two parts, the o_____ core and the i_____ core .The outer core is in l_____ state. The inner core is in s_____ state. In the inner core the metals n_____ and iron are in solid state. In the outer core the metals nickel and I_____ are in m_____ form. Sometimes, hot melted rock called l_____ comes out to the surface of the earth. Such places are called v_____.

THE LAYERS (PRIMARY)

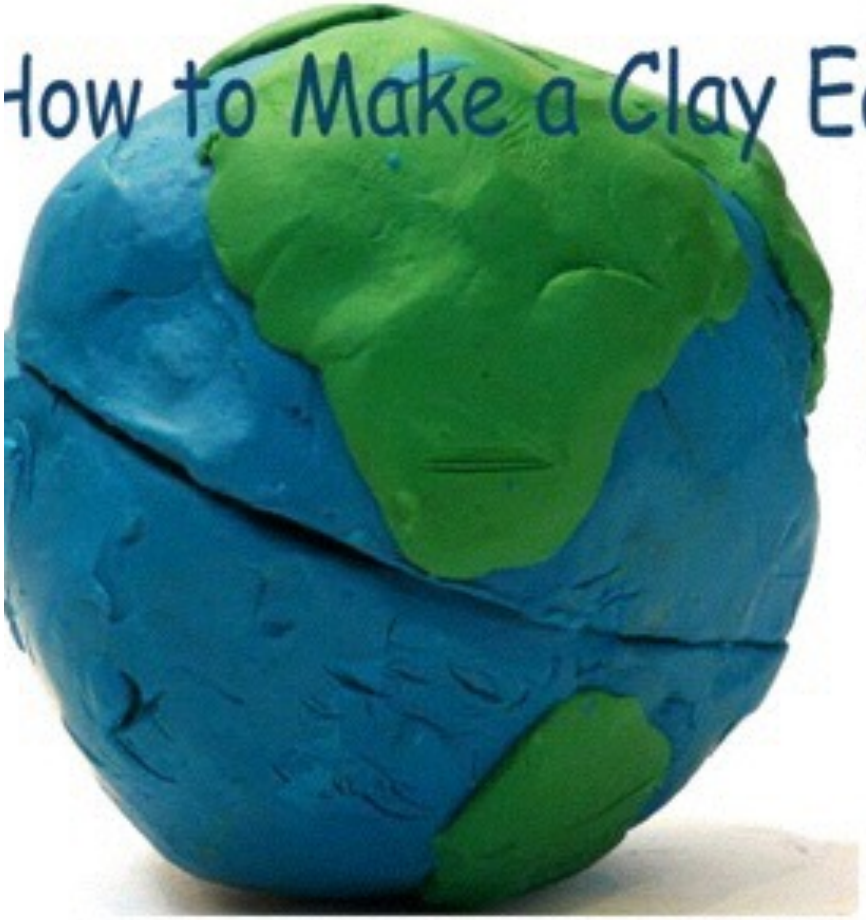
- The outer cool layer is called CRUST.
- Earth's crust is covered with landforms, air and water.
- Mantle is the layer below the crust.
- The Mantle is very hot.
- Mantle consists of rocks in liquid form.
- The core is below the mantle.
- Core is divided into two parts, the Outer core and the Inner core .
- The outer core is in liquid state. The inner core is in solid state.
- In the inner core metals nickel and iron are solid.
- In the outer core the metals nickel and Iron are liquid.
- Lava comes out to the surface of the earth. Such places are called volcanoes.

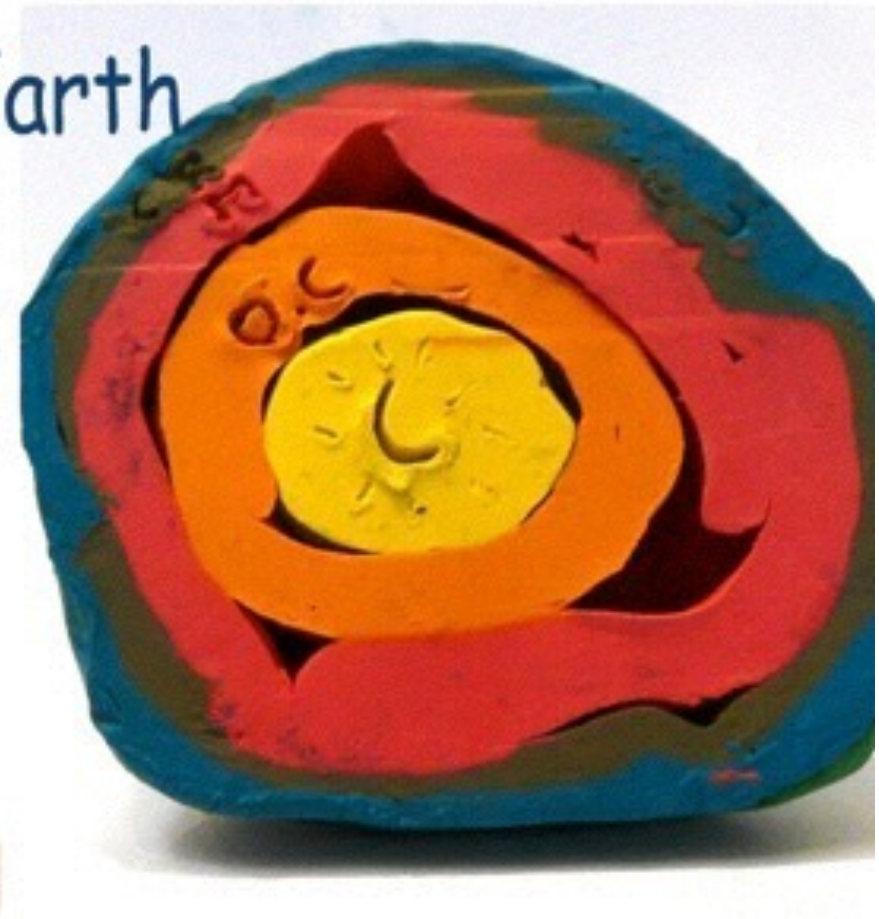
Questions

- 1.What is a crust?
- ……
- 2. What is the Earth's crust covered with?
- ……
- 3. What is below the crust?
- ……
- 4. What is the mantle?
- ……
- 5. What is below the mantle?
- ……
- 6. How many parts does the core have?
- ……
- 7. Which core is solid and which is liquid?
- ……
- 8. Where are nickel and iron solid and liquid?
- ……
- 9. What is lava?
- ……
- 10. Where does lava come out of?
- ……

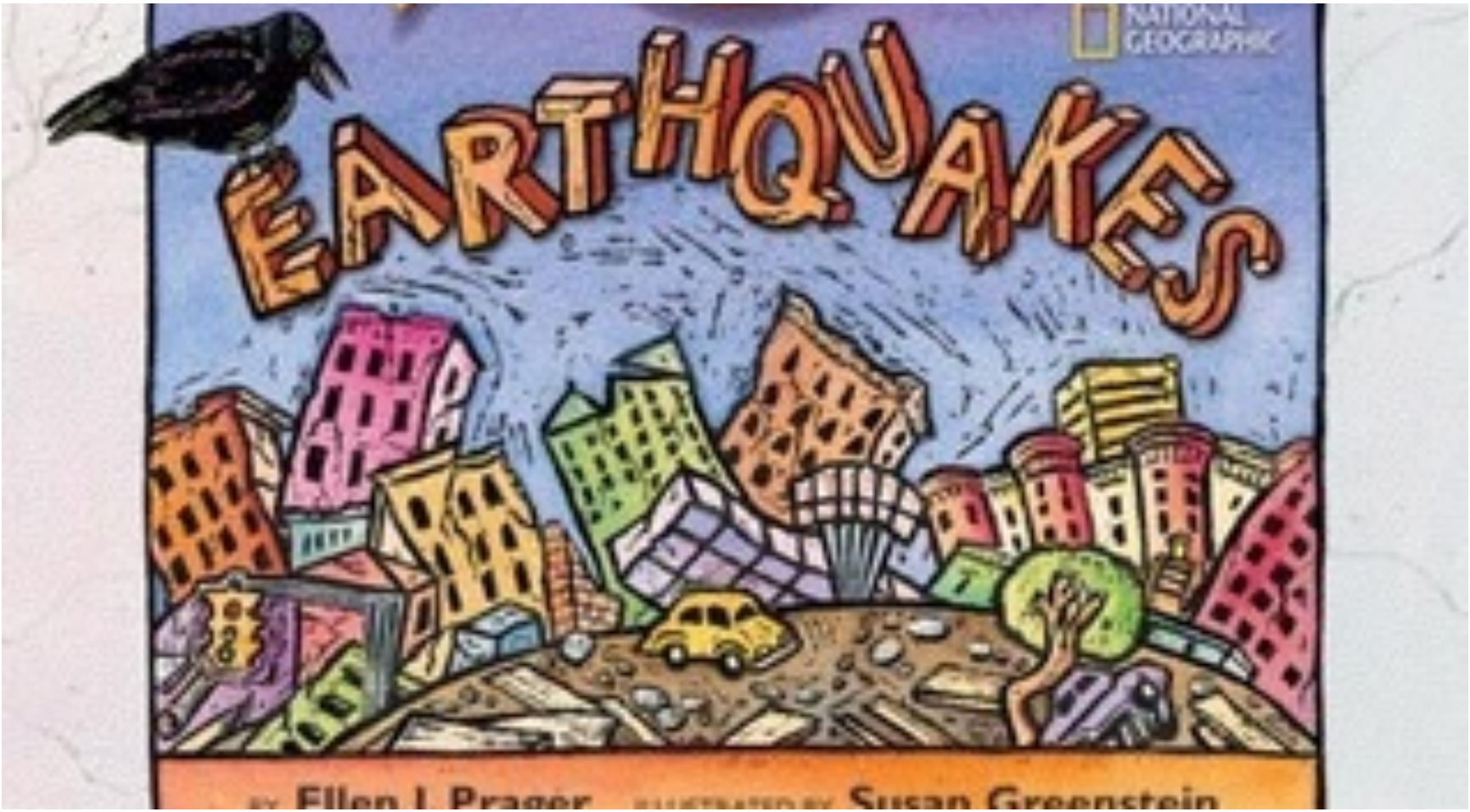
How to create

http://www.navigatingbyjoy.com/2013/04/13/clay-model-of-the-earths-layers





Picture description



What's an Earthquake?

https://www.youtube.com/watch?v=dJpIU1rSOFY

- **The surface of the earth is like a jigsaw puzzle it's not a single piece of land**
- **But approximately 20 pieces of a puzzle that constantly move, but you don't feel it because they move quite slowly. Each one of those puzzle pieces are called TECTONIC PLATES so whenever those plates hit or slide past another plate an earthquake is caused. The surface where these plates slip is called FAULT or the FAULT PLANE.**

So when do you think it happens?

- **Well, it happens all the time. But hey don't be scared. Most of the times we don't feel the QUAKES. They are too small to reach us. But sometimes they are so strong that they can be felt over a thousand miles away. The place where the earthquake originates is called the HYPOCENTRE and the place where it occurs on the surface is EPICENTRE.**

- **There are three types of earthquakes:**
- **1.CONVERGENT BOUNDARY, here one plate is forced over another during an earthquake which causes a 2.THRUST FAULT. Many hills and mountains have been formed due to the convergent boundary.**
- **3.DIVERGENT BOUNDARY, here plates are drifted apart from each other forming a RIFT ZONE. This kind gives birth to new ocean flows.**
- **TRANSFORM FAULT here the plates slip by each other and this is also called STRIKE SLIP.**

- **So earthquakes are nothing but the shaking, rolling or sudden shock of the earth's surface.**
- **The instrument used by scientists to measure the intensity of earthquake is known as a SEISMOGRAPH. A TSUNAMI is caused when earthquakes occur under wate**r

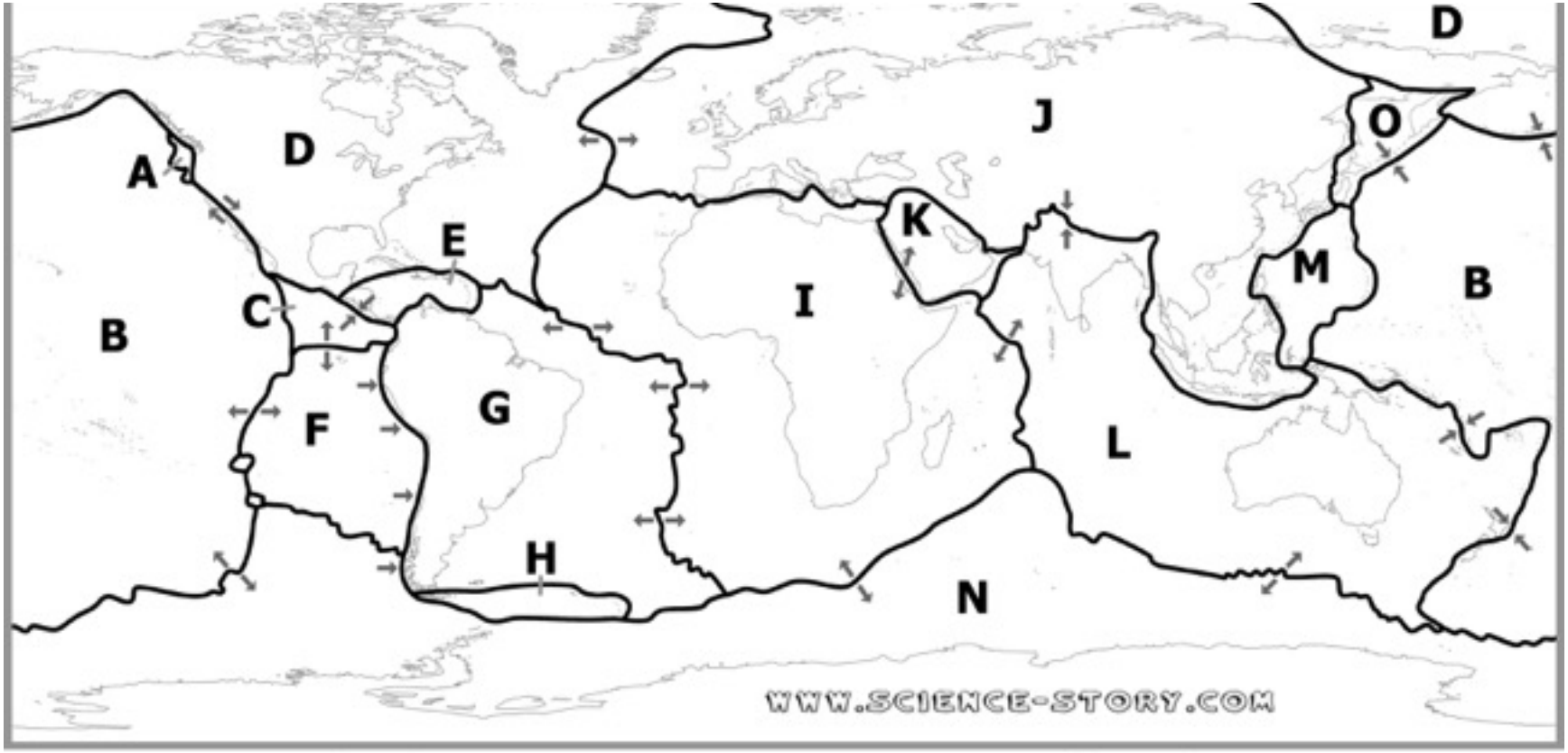
Word search: Earthquake search for the words below.

TECTONIC PLATES	LARGE THIN PLATES ON THE OUTER SURFACE OF THE EARTH
FAULT PLANE	*CRACK / BREAK*
QUAKES	*SHAKES*
HYPOCENTRE	*PLACE THE QUAKE ORIGINATES*
EPICENTRE	*POINT ABOVE TRUE CENTRE*
CONVERGENT BOUNDARY	*ONE PLATE FORCED OVER ANOTHER*
THRUST FAULT	*RESULT OF A CONVERGENT*
DIVERGENT BOUNDARY	*PLATES ARE FORCED APART FROM EACH OTHER*
TRANSFORM FAULT	*PLATES SLIP BY EACH OTHER,*
STRIKE SLIP	*ANOTHER WORD FOR TRANSFORM*
SEISMOGRAPH	*MEASURES AND RECORDS SEISMIC WAVES*
MAGNITUDE	*A NUMBER TO QUANTIFY THE SIZE OF AN EARTHQUAKE*
TSUNAMI	*A SEISMIC SEA WAVE*
SURFACE	*COVER*
RICHTER SCALE	*QUANTIFIES THE SIZE OF AN EARTHQUAKE*

Match the pronunciation

TECTONIC PLATES		rɪktər skel	
FAULT PLANE	*ˈɛpɪsɛntə*	*TRANSFORM FAULT*	*straɪk slɪp*
QUAKES	*kənˈvɜːʤənt ˈbaʊndəri*	*STRIKE SLIP*	*ˈsaɪzməgrɑːf*
HYPOCENTRE	*kweɪks*	*SEISMOGRAPH*	*tɛkˈtɒnɪk pleɪts*
EPICENTRE	*mægnɪtjuːd*	*MAGNITUDE*	*ˈsɜːfɪs*
CONVERGENT BOUNDARY	*fɔːlt pleɪn*	*TSUNAMI*	*θrʌst fɔːlt*
THRUST FAULT	*heposɛntə*	*SURFACE*	*trænsˈfɔːm fɔːlt*
DIVERGENT BOUNDARY	*tsuːˈnɑːmi*	*RICHTER SCALE*	*daɪˈvɜːʤənt ˈbaʊndəri*

Map of Tectonic Plates



Major Plates

I) African Plate
N) Antarctic Plate
J) Eurasian Plate
B) Pacific Plate
L) Indo-Australian Plate
D) North American Plate
G) South American Plate

Minor Plates

K) Arabian Plate
E) Caribbean Plate
C) Cocos Plate
F) Nazca Plate
A) Juan de Fuca Plate
M) Philippine Sea Plate
H) Scotia Plate
O) Okhotsk Plate

Name:_____

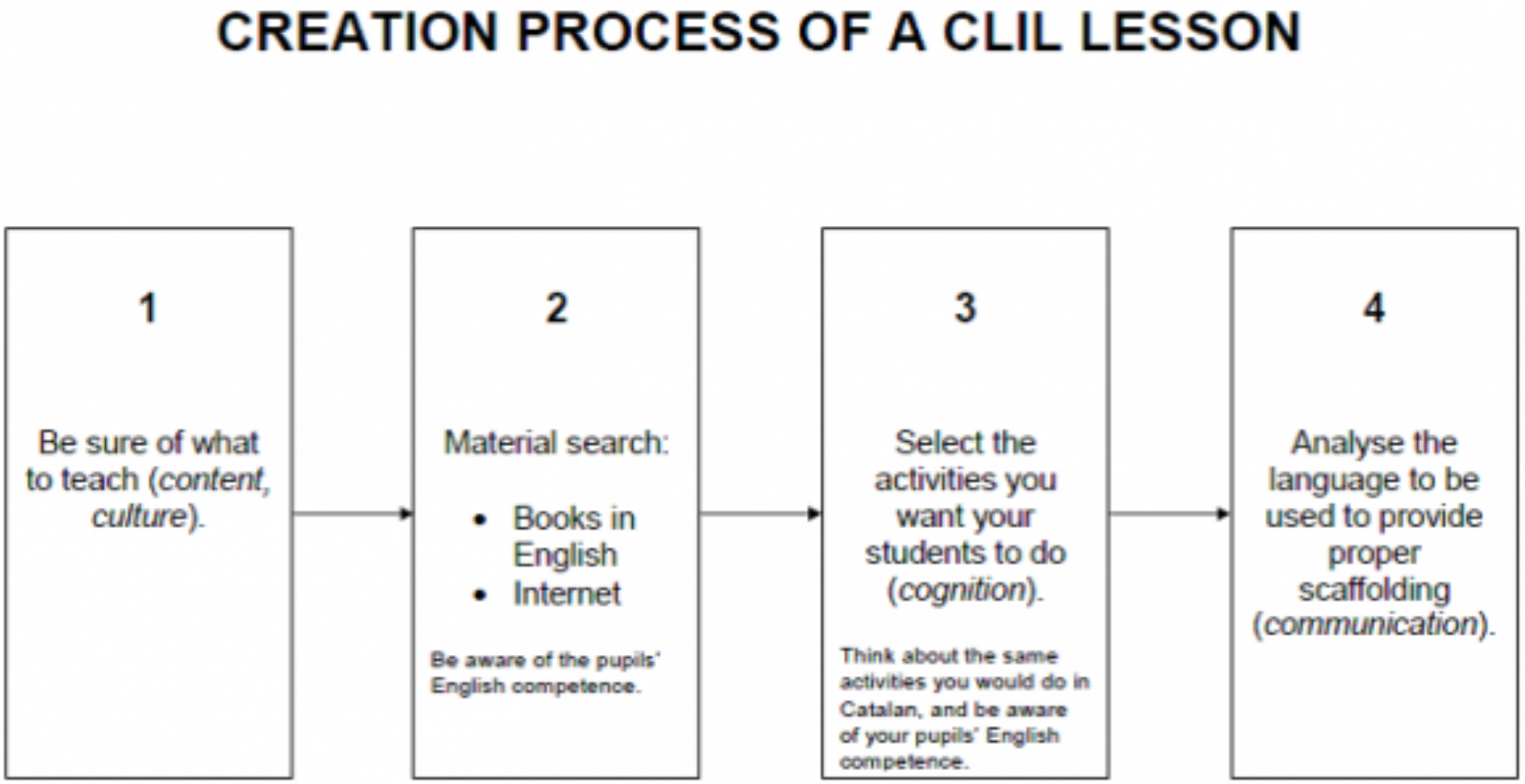
Class:_____

Useful sites for Earthquakes

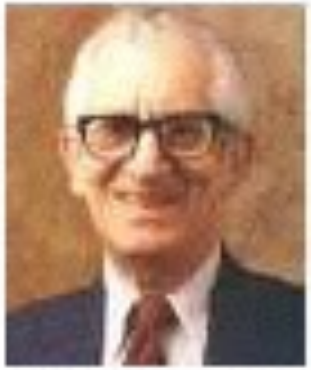
- Layers of the Earth
- https://www.youtube.com/watch?v=24wO1G_7fyc

- Video Tutorials of Earthquake
- https://www.youtube.com/watch?v=dJpIU1rSOFY
- http://www.3dgeography.co.uk/earthquakes
  Worksheets on Earthquakes
- https://www.thoughtco.com/free-earthquake-printables-1832385
- http://busyteacher.org/search.html?q=earthquakes
- http://www.brighthubeducation.com/science-homework-help/53594-earthquake-vocabulary-words/
- http://easyscienceforkids.com/all-about-earthquakes/
  Photos of earthquakes in Italy
- http://www.boredpanda.com/italy-earthquake-before-after/
- Create Models

Where to start?

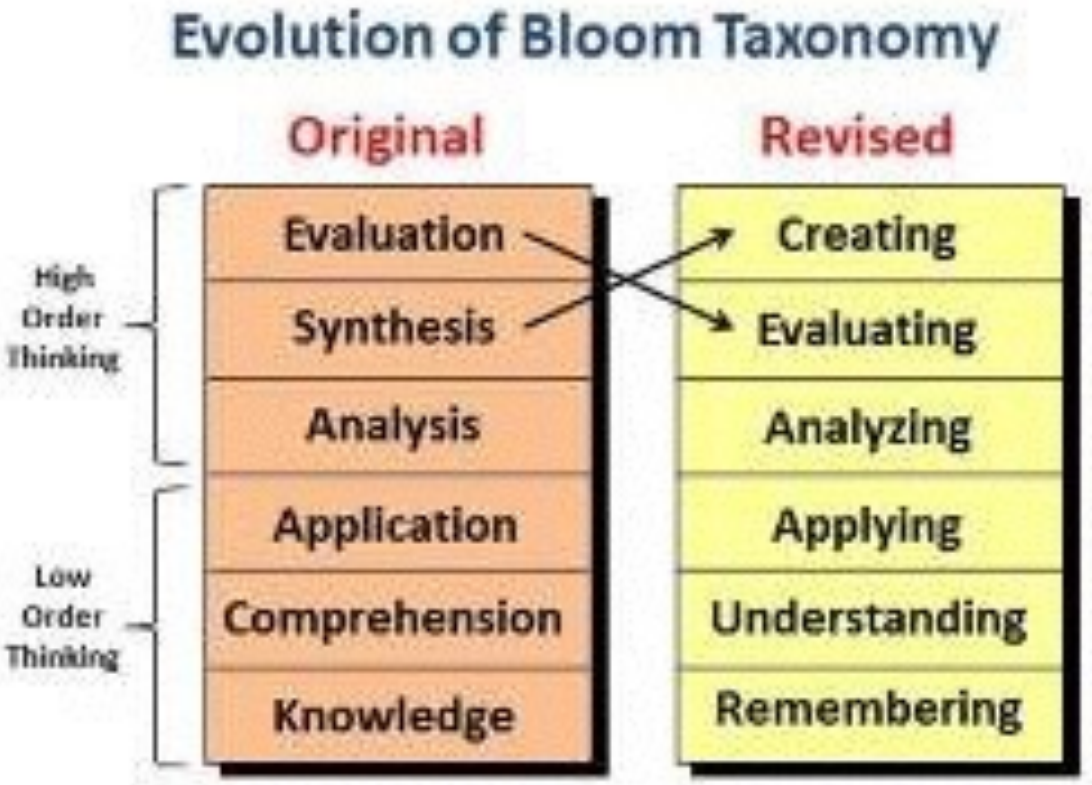


Some interesting facts



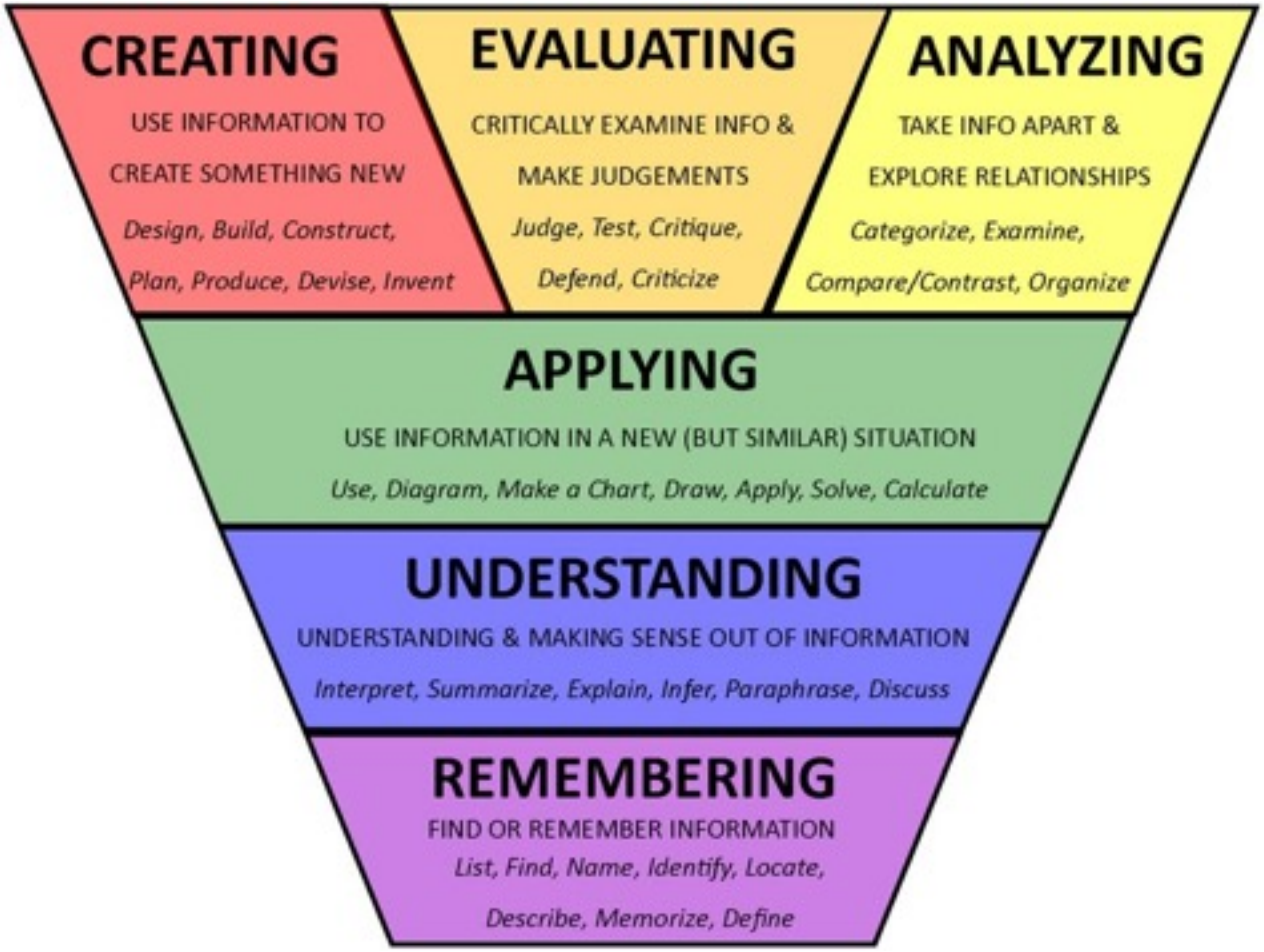
Benjamin S. Bloom
(1913 – 1999)

Drew up levels of thinking behaviors from the simple recall of facts at the lowest level up to evaluation at the highest level

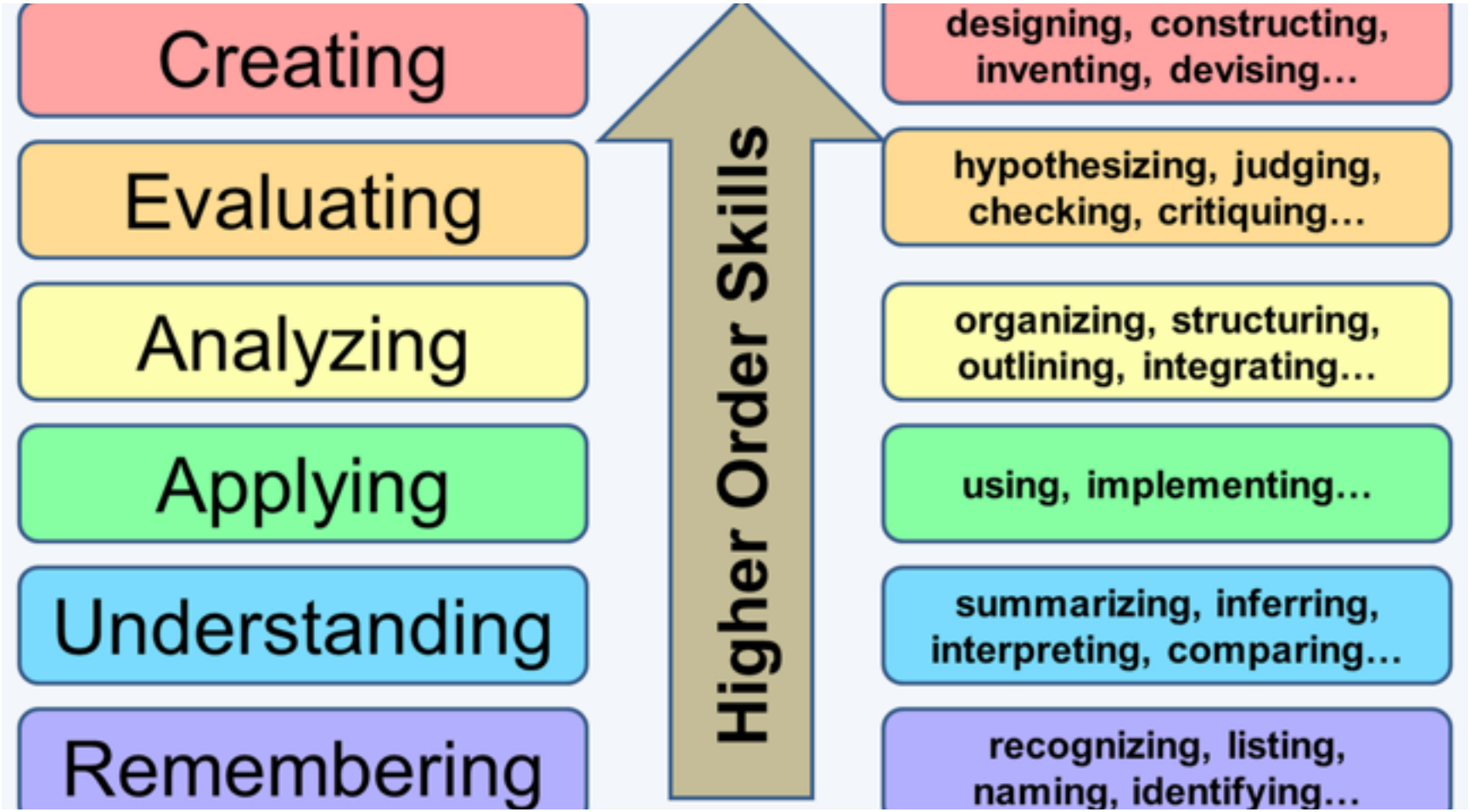


Bloom's Taxonomy

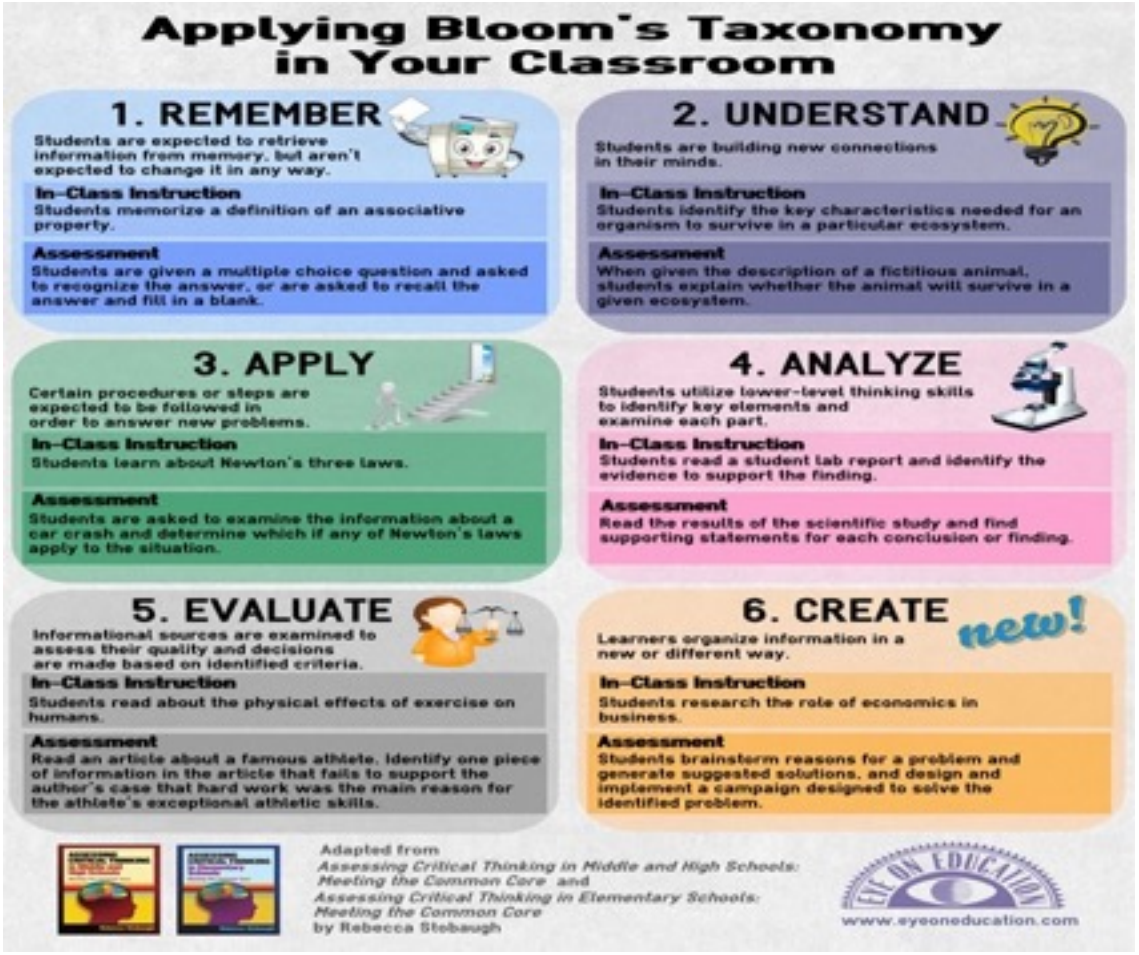
Hots (**H**igh **o**rder **t**hinking **s**kills)
Lots (**L**ower **o**rder **t**hinking **s**kills)



HOTS AND LOTS



Checklist


Applying Bloom's Taxonomy in Your Classroom
1. REMEMBER
Students are expected to retrieve information from memory, but aren't expected to change it in any way.
In-Class Instruction
Students memorize a definition of an associative property.
Assessment
Students are given a multiple choice question and asked to recognize the answer, or are asked to recall the answer and fill in a blank.
2. UNDERSTAND
Students are building new connections in their minds.
In-Class Instruction
Students identify the key characteristics needed for an organism to survive in a particular ecosystem.
Assessment
When given the description of a fictitious animal, students explain whether the animal will survive in a given ecosystem.
3. APPLY
Certain procedures or steps are expected to be followed in order to answer new problems.
In-Class Instruction
Students learn about Newton's three laws.
Assessment
Students are asked to examine the information about a car crash and determine which if any of Newton's laws apply to the situation.
4. ANALYZE
Students utilize lower-level thinking skills to identify key elements and examine each part.
In-Class Instruction
Students read a student lab report and identify the evidence to support the finding.
Assessment
Read the results of the scientific study and find supporting statements for each conclusion or finding.
5. EVALUATE
Informational sources are examined to assess their quality and decisions are made based on identified criteria.
In-Class Instruction
Students read about the physical effects of exercise on humans.
Assessment
Read an article about a famous athlete. Identify one piece of information in the article that fails to support the author's case that hard work was the main reason for the athlete's exceptional athletic skills.
6. CREATE
new!
Learners organize information in a new or different way.
In-Class Instruction
Students research the role of economics in business.
Assessment
Students brainstorm reasons for a problem and generate suggested solutions, and design and implement a campaign designed to solve the identified problem.
Adapted from
Assessing Critical Thinking in Middle and High Schools: Meeting the Common Core and
Assessing Critical Thinking in Elementary Schools: Meeting the Common Core
by Rebecca Stobaugh
EYE ON EDUCATION
www.eyeoneducation.com

LOTS VS. HOTS

1. What did Cinderella want?
2. Do you think the stepsisters loved Cinderella?
3. If the prince broke the glass slipper, how else could he find Cinderella?
4. Who made Cinderella's dress?
5. Why was the glass slipper important?
6. Did Cinderella like the ball?
7. Who wanted to find Cinderella after the ball?
8. Do you think that everyone who marries a prince will be happy? Why or why not?

MACMILLAN

Cinderella Questions

1. What did Cinderella want? Knowledge
2. Do you think the stepsisters loved Cinderella? Comprehension
3. If the prince broke the glass slipper, how else could he find Cinderella? Synthesis
4. Who made Cinderella's dress? Knowledge
5. Why was the glass slipper important? Application
6. Did Cinderella like the ball? Comprehension
7. Who wanted to find Cinderella after the ball?
8. Do you think that everyone who marries a prince will be happy? Why or why not? Knowledge Evaluation

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CONCLUSIONS

Higher level questions are those requiring complex application, analysis, evaluation or creation skills. Questions at higher levels of the taxonomy are usually most appropriate for:

- Encouraging students to think more deeply and critically
- Problem solving
- Encouraging discussions
- Stimulating students to seek information on their own

MACMILLAN

CONCLUSIONS

- Lower level questions are those at the remembering, understanding and lower level application levels of the taxonomy.
- Usually questions at the lower levels are appropriate for:
  - Evaluating students' preparation and comprehension
  - Diagnosing students' strengths and weaknesses
  - Reviewing and/or summarizing content

How to go from lots to hots using questions

Teacher's Planning Kit