

Elements Inside the Human Body

Teachers: Mr. Hastey, Ms. Moore, Ms. Vasquez

Date: September 22nd, 2016 (STEM Thursday)

Subject / grade level: 6th grade Science

Materials:

1. Iodine
2. Helium balloons
3. Aluminum foil
4. Coal (representing carbon)
5. Pennies (representing copper)
6. Zinc plated screws
7. Nickel plated thumb tacks
8. Seashells (representing calcium)
9. Explore student guide
10. Powerpoint guided questions with Circle graph
11. Exit slips
12. Copies of Periodic Table

TEKS:

6.5B) recognize that a limited number of the many known elements comprise the largest portion of solid Earth, living matter, oceans, and the atmosphere

Vocabulary: element, helium, zinc, aluminum, copper, nickel, calcium, carbon, iodine

ENGAGE (Lauren 5 minutes)

Teacher will show video, 'They Might be Giants: Meet the Elements:
<https://www.youtube.com/watch?v=Uy0m7jnyv6U>

Probing/Eliciting Questions:

1. What everyday objects did you recognize in the video?

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2. What terminology did the video use for the combination of two elements?
3. Can elements be alone by themselves or do they have to be combined with something?
4. What four major elements are in our bodies?

EXPLORE (15 minutes)

Discovery center with examples of 8 elements.

1. Students will rotate to four stations (A,B,C,D):
 - a. Station A: 1) Coal 2) Pennies
 - b. Station B: 3) Iodine 4) Helium balloon
 - c. Station C: 5) Aluminum foil 6) Shells
 - d. Station D: 7) Zinc screws 8) Nickel plated Thumbtacks
2. Each station will have two objects that represent elements.
3. Students will draw a picture of the object, write the name of the element, and the symbol for the element on the periodic table.

Probing questions:

1. Where can you find this element on the periodic table?
2. Can you think of other examples of objects that contain this element?
3. What do you think the numbers on the periodic table may mean?

EXPLAIN: Powerpoint w/guided questions (10 minutes)

1. Teacher will show Powerpoint of 'Elements in the Human Body.'
2. Students will complete the following three sentences found in their student guide:

1. _____ and _____ are found in water which makes up 75% of our body by mass.

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2. _____ is important in tissue repair and cell replacement.

3. Calcium is found in _____.

Probing/Eliciting Questions:

1. What parts of the human body contain oxygen?
2. Where can you find calcium in the human body?
3. What element is found in all living things?

ELABORATE: Circle graph (5-10 minutes)

1. What element makes up more than $\frac{1}{2}$ of the human body by mass?
2. What is the second most abundant element found in the human body?

EVALUATE : Exit Slip (5 minutes)

Probing/Eliciting Questions:

1. 3 things I learned today...
2. 2 ways I contributed...
3. 1 questions I still have...

Closure Statement:

Today's lesson objectives were to explore the elements that make up the human body.

Thank you for allowing us to teach you and learn with you today! :)