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# Level 4 Scientists turn CO2 emissions into stone

#### 12th June, 2016

http://www.breakingnewsenglish.com/1606/160612-co2-emissions-4.html

### Contents

| The Reading          | 2 |
|----------------------|---|
| Phrase Matching      | 3 |
| Listening Gap Fill   | 4 |
| No Spaces            | 5 |
| Survey               | 6 |
| Writing and Speaking | 7 |
| Writing              | 8 |
|                      |   |

#### Please try Levels 5 and 6. They are (a little) harder.



### THE READING

From http://www.breakingnewsenglish.com/1606/160612-co2-emissions-4.html

Scientists have found a simple way to deal with carbon dioxide emissions – turn them back into stone. They pumped 220 tons of CO2 underground into volcanic rock. It reacted with the rock and changed into a substance like limestone. The team were surprised at how fast this happened. Dr Juerg Matter said: "Of our 220 tons of injected CO2, 95 per cent was converted to limestone in less than two years....It was a huge surprise...and we thought, 'Wow!'"

The scientists hope their research will go large scale to help the problem of CO2 in the atmosphere and a warming planet. It could be a key method in carbon capture and storage (CCS). Earlier CCS techniques also involved injecting CO2 underground, but it often leaked back into the atmosphere. Dr Matter enthusiastically said: "We need to deal with rising carbon emissions and this is the ultimate permanent storage – turn them back to stone."

Sources: http://www.**bbc.com**/news/science-environment-36494501 http://www.**theguardian.com**/environment/2016/jun/09/co2-turned-into-stone-in-iceland-inclimate-change-breakthrough http://www.**sciencealert.com**/scientists-have-figured-out-how-to-turn-co2-into-solid-rock-withinmonths

## **PHRASE MATCHING**

From http://www.breakingnewsenglish.com/1606/160612-co2-emissions-4.html

#### **PARAGRAPH ONE:**

| 1. | Scientists have found a   |
|----|---------------------------|
| 2. | deal                      |
| 3. | They pumped 220 tons      |
| 4. | volcanic                  |
| 5. | a substance               |
| 6. | surprised at how          |
| 7. | converted to limestone in |
| 8. | It was a huge             |

#### **PARAGRAPH TWO:**

- 1. a warming
- 2. It could be a key
- 3. carbon capture
- 4. earlier CCS
- 5. injecting
- 6. leaked back
- 7. rising
- 8. the ultimate permanent

- a. less than two years
- b. surprise
- c. rock
- d. fast this happened
- e. simple way
- f. like limestone
- g. with carbon dioxide
- h. of CO2 underground

- a. into the atmosphere
- b. and storage
- c. storage
- d. method
- e. carbon emissions
- f. planet
- g. CO2 underground
- h. techniques

### LISTEN AND FILL IN THE GAPS

From http://www.breakingnewsenglish.com/1606/160612-co2-emissions-4.html

| Scientists have found a (1)                 | with carbon dioxide              |
|---|----------------------------------|
| emissions – turn them (2)                   | They pumped 220 tons             |
| of CO2 underground (3)                      | It reacted with the rock         |
| and changed (4)                             | like limestone. The team were    |
| surprised at how fast this happened. Dr Jue | rg Matter said: "Of our 220 tons |
| of injected CO2, 95 per cent (5)            | limestone in less                |
| than two yearsIt was (6)                    | and we thought,                  |
| 'Wow!'"                                     |                                  |

The scientists hope their research (7) \_\_\_\_\_\_\_\_\_ to help the problem of CO2 in the atmosphere and (8) \_\_\_\_\_\_\_\_. It could be a key method in carbon (9) \_\_\_\_\_\_\_\_ (CCS). Earlier CCS techniques also (10) \_\_\_\_\_\_\_ CO2 underground, but it often leaked back into the atmosphere. Dr Matter enthusiastically said: "We need to (11) \_\_\_\_\_\_\_ carbon emissions and this is the ultimate (12) \_\_\_\_\_\_\_ – turn them back to stone."

# PUT A SLASH ( / )WHERE THE SPACES ARE

From http://www.breakingnewsenglish.com/1606/160612-co2-emissions-4.html

Scientistshavefoundasimplewaytodealwithcarbondioxideemissions -turnthembackintostone.Theypumped220tonsofCO2undergroun dintovol can icrock. It reacted with the rock and changed into a substancelikelimestone.Theteamweresurprisedathowfastthishappened.DrJue rgMattersaid:"Ofour220tonsofinjectedCO2,95percentwasconverte dtolimestoneinlessthantwoyears....Itwasahugesurprise...andwetho ught, 'Wow!"Thescientistshopetheirresearchwillgolargescaletohelpt heproblemofCO2intheatmosphereandawarmingplanet.Itcouldbeak eymethodincarboncaptureandstorage(CCS).EarlierCCStechniques alsoinvolvedinjectingCO2underground, butitoftenleakedbackintoth eatmosphere.DrMatterenthusiasticallysaid:"Weneedtodealwithrisin gcarbonemissionsandthisistheultimatepermanentstorage-turnthe mbacktostone."

# **CO2 SURVEY**

From http://www.breakingnewsenglish.com/1606/160612-co2-emissions-4.html

Write five GOOD questions about CO2 in the table. Do this in pairs. Each student must write the questions on his / her own paper.

When you have finished, interview other students. Write down their answers.

|      | STUDENT 1 | STUDENT 2 | STUDENT 3 |
|------|-----------|-----------|-----------|
| Q.1. |           |           |           |
|      |           |           |           |
| Q.2. |           |           |           |
|      |           |           |           |
| Q.3. |           |           |           |
|      |           |           |           |
| Q.4. |           |           |           |
|      |           |           |           |
| Q.5. |           |           |           |
|      |           |           |           |

- Now return to your original partner and share and talk about what you found out. Change partners often.
- Make mini-presentations to other groups on your findings.

### WRITE QUESTIONS & ASK YOUR PARTNER(S)

Student A: Do not show these to your speaking partner(s).

| a)  |  |  |
|-----|--|--|
| b)  |  |  |
| c)  |  |  |
| d)  |  |  |
| e)  |  |  |
| f)  |  |  |
| • / |  |  |

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### WRITE QUESTIONS & ASK YOUR PARTNER(S)

Student B: Do not show these to your speaking partner(s).

| a) | <br> | <br> |
|----|------|------|
| b) |      |      |
| c) |      |      |
| d) |      |      |
| e) |      |      |
| f) |      |      |

### WRITING

From http://www.breakingnewsenglish.com/1606/160612-co2-emissions-4.html

Write about **CO2** for 10 minutes. Read and talk about your partner's paper.