www.Breaking News English.com
Ready-to-Use English Lessons by Sean Banville



# Level 3
# Scientists find way to mass produce blood

### 27th March, 2017

http://www.breakingnewsenglish.com/1703/170327-blood.html

## Contents



## Please try Levels 0, 1 and 2 (they are easier).

# THE ARTICLE

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

Scientists from Bristol University in the UK say they have found a way to mass produce blood that would be suitable for patients who need it in hospitals. For a number of years, they have been able to produce red blood cells in a laboratory. However, the process to do that was very slow and they could not produce a lot of blood. The new technique means scientists can make an "unlimited supply" of blood. Researcher Dr Jan Frayne said: "Previous approaches to producing red blood cells have relied on various sources of stem cells which can only presently produce very limited quantities." She added: "We have demonstrated a feasible way to sustainably manufacture red cells for clinical use."

Professor David Anstee, another of the researchers, told the BBC that his team has found a way to mass produce blood, but they now need the technology to actually do this on a large scale. He said: "There is a bioengineering challenge. To produce that much [blood] is quite a challenge….The next phase of our work is to look at methods of [producing more]." He told reporters that to begin with, they would produce only rare types of blood, as these can be difficult to find with traditional blood donation sources. He said: "The first therapeutic use of a cultured red cell product is likely to be for patients with rare blood groups, because suitable conventional red blood cell donations can be difficult to source."

Sources: http://www.**bbc.com**/news/health-39354627
http://www.**nature.com**/articles/ncomms14750
http://www.**onmedica.com**/newsArticle.aspx?id=80fff617-337c-475f-a65d-59c76b4cab0d

# WARM-UPS

**1. BLOOD:** Students walk around the class and talk to other students about blood. Change partners often and share your findings.

**2. CHAT:** In pairs / groups, talk about these topics or words from the article. What will the article say about them? What can you say about these words and your life?

scientists / produce / blood / laboratory / technique / sources / stem cells / clinical / researchers / technology / large scale / challenge / rare / donation / patients

Have a chat about the topics you liked. Change topics and partners frequently.

**3. DONATE:** Students A **strongly** believe everyone must donate blood twice a year; Students B **strongly** believe otherwise. Change partners again and talk about your conversations.

**4. BLOOD TYPES:** What personalities do you think people with these blood types have? Complete this table with your partner(s). Change partners often and share what you wrote.

| Blood Type | Positive | Negative |
|---|---|---|
| O negative | | |
| O positive | | |
| A | | |
| B | | |
| AB | | |
| Hot | | |

**5. HOSPITAL:** Spend one minute writing down all of the different words you associate with the word "hospital". Share your words with your partner(s) and talk about them. Together, put the words into different categories.

**6. MASS PRODUCE:** Rank these with your partner. Put the best things for scientists to mass produce at the top. Change partners often and share your rankings.

- blood
- hair
- teeth
- young-looking skin
- eyes
- hearts
- brains
- knee caps

# BEFORE READING / LISTENING

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

## 1. TRUE / FALSE: Read the headline. Guess if a-h below are true (T) or false (F).

a. The new mass produced blood is not suitable for hospital patients. **T / F**
b. Scientists have never been able to make blood before now. **T / F**
c. Scientists can now make as much blood as they want. **T / F**
d. The new method of producing blood is not sustainable. **T / F**
e. A professor said he needed no technology to mass produce blood. **T / F**
f. The professor said mass producing blood is a challenge. **T / F**
g. The professor said he would produce only rare blood types to begin with. **T / F**
h. It is difficult to find blood for people with rare blood types. **T / F**

## 2. SYNONYM MATCH:

Match the following synonyms. The words in **bold** are from the news article.

| | |
|---|---|
| **1. found** | a. size |
| **2. a number of** | b. currently |
| **3. technique** | c. make |
| **4. presently** | d. tough |
| **5. manufacture** | e. several |
| **6. scale** | f. traditional |
| **7. phase** | g. discovered |
| **8. difficult** | h. uncommon |
| **9. rare** | i. step |
| **10. conventional** | j. method |

## 3. PHRASE MATCH: (Sometimes more than one choice is possible.)

| | |
|---|---|
| 1. produce blood that would be suitable for | a. scale |
| 2. produce red blood cells in a | b. supply of blood |
| 3. make an unlimited | c. rare blood groups |
| 4. stem | d. patients |
| 5. manufacture red cells for clinical | e. to find |
| 6. the technology to actually do this on a large | f. challenge |
| 7. To produce that much blood is quite a | g. donation sources |
| 8. these can be difficult | h. use |
| 9. traditional blood | i. cells |
| 10. likely to be for patients with | j. laboratory |

# GAP FILL

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

Scientists from Bristol University in the UK say they have found a way to mass produce blood that would be (1) _____ for patients who need it in hospitals. For a (2) _____ of years, they have been able to produce red blood cells in a laboratory. However, the (3) _____ to do that was very slow and they could not produce a lot of blood. The new (4) _____ means scientists can make an "unlimited (5) _____ " of blood. Researcher Dr Jan Frayne said: "Previous approaches to producing red blood cells have (6) _____ on various sources of stem cells which can only (7) _____ produce very limited quantities." She added: "We have demonstrated a feasible way to sustainably manufacture red cells for clinical (8) _____."

*relied*

*suitable*

*process*

*use*

*technique*

*presently*

*number*

*supply*

Professor David Anstee, (9) _____ of the researchers, told the BBC that his team has found a (10) _____ to mass produce blood, but they now need the technology to (11) _____ do this on a large scale. He said: "There is a bioengineering (12) _____. To produce that much [blood] is quite a challenge….The next (13) _____ of our work is to look at methods of [producing more]." He told reporters that to begin with, they would produce (14) _____ rare types of blood, as these can be difficult to find with traditional blood (15) _____ sources. He said: "The first therapeutic use of a cultured red cell product is likely to be for patients with rare blood groups, because (16) _____ conventional red blood cell donations can be difficult to source."

*challenge*

*way*

*only*

*suitable*

*another*

*donation*

*actually*

*phase*

# LISTENING – Guess the answers. Listen to check.

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

1) Scientists from Bristol University in the UK say they have _____
   a. fund a way
   b. fond a way
   c. found a way
   d. founded a way
2) mass produce blood that would be suitable for patients _____
   a. whom needs it
   b. who need this
   c. who need it
   d. whom need it
3) they have been able to produce red blood cells _____
   a. inner lavatory
   b. in a laboratory
   c. in a lab oratory
   d. inner laboratory
4) stem cells which can only presently produce very _____
   a. limit it quantities
   b. limited quantities
   c. limit tied quantities
   d. limit and quantities
5) demonstrated a feasible way to sustainably manufacture red cells _____
   a. for clinical use
   b. for clinic all use
   c. for clean call use
   d. for cleaner call use
6) they now need the technology to actually do this _____
   a. on a large scale
   b. on a largely scale
   c. on a large scales
   d. in a large scale
7) To produce that much blood is _____
   a. quite a challenge
   b. quiet a challenge
   c. quit a challenge
   d. quote a challenge
8) He told reporters that to begin with, they would produce only _____
   a. rare types for blood
   b. rarely types of blood
   c. rare type of blood
   d. rare types of blood
9) use of a cultured red cell product is likely to be for patients with rare _____
   a. bloody groups
   b. blooded groups
   c. blood groups
   d. bloods groups
10) because suitable conventional red blood cell donations can be _____
   a. difficulties to source
   b. difficult too source
   c. difficult to sauce
   d. difficult to source

# LISTENING – Listen and fill in the gaps

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

Scientists from Bristol University in the UK (1) _____ found a way to mass produce blood that would (2) _____ patients who need it in hospitals. For a number of years, they have been able to produce red blood (3) _____ laboratory. However, the process to do that was very slow and they could not produce a lot of blood. The new technique means scientists (4) _____ "unlimited supply" of blood. Researcher Dr Jan Frayne said: "Previous approaches to producing red blood cells (5) _____ various sources of stem cells which can only presently produce very limited quantities." She added: "We have demonstrated a feasible way to sustainably manufacture red cells (6) _____."

Professor David Anstee, (7) _____ researchers, told the BBC that his team has found a way to mass produce blood, but they now need the technology to actually (8) _____ large scale. He said: "There is a bioengineering challenge. To produce that much [blood] is quite a challenge….The next (9) _____ work is to look at methods of [producing more]." He told reporters (10) _____ with, they would produce only rare types of blood, as these can be difficult to find with traditional (11) _____ sources. He said: "The first therapeutic use of a cultured red cell product is likely to be for patients with rare blood groups, because suitable conventional red blood cell donations can be (12) _____."

# COMPREHENSION QUESTIONS

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

1. What is the name of the university that carried out this research?

2. What was wrong with the old process of making blood?

3. How much blood can scientists make using the new technique?

4. Who is Jan Frayne?

5. What kind of use will scientists manufacture red cells for?

6. Which news agency did Professor David Anstee talk to?

7. What does the professor need to make blood on a large scale?

8. What did the professor say was a challenge?

9. What kind of blood will the scientists make to begin with?

10. What did the professor say about rare blood groups?

# MULTIPLE CHOICE - QUIZ

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

1) What is the name of the university that carried out this research?
a) Tokyo
b) New York
c) Bristol
d) Melbourne

2) What was wrong with the old process of making blood?
a) it was slow
b) it made mistakes
c) it didn't work
d) it broke down

3) How much blood can scientists make using the new technique?
a) litres
b) quite a lot
c) not much
d) unlimited amounts

4) Who is Jan Frayne?
a) a BBC journalist
b) a researcher
c) a blood donor
d) a technology company CEO

5) What kind of use will scientists manufacture red cells for?
a) no use
b) laboratory use
c) clinical use
d) good use

6) Which news agency did Professor David Anstee talk to?
a) CBC
b) BBC
c) ABC
d) NBC

7) What does the professor need to make blood on a large scale?
a) blood donors
b) test tubes
c) money
d) technology

8) What did the professor say was a challenge?
a) talking to reporters
b) making a lot of blood
c) donating blood
d) engineering

9) What kind of blood will the scientists make to begin with?
a) rare blood
b) type 0
c) blue blood
d) thick blood

10) What did the professor say about rare blood groups?
a) a lot
b) nothing
c) they are like sauce
d) they are difficult to find

# ROLE PLAY

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

**Role A – Blood**

You think blood is the most important thing for scientists to mass produce. Tell the others three reasons why. Tell them why scientists shouldn't mass produce their things. Also, tell the others which is the least important of these (and why): hair, teeth or eyes.

**Role B – Hair**

You think hair is the most important thing for scientists to mass produce. Tell the others three reasons why. Tell them why scientists shouldn't mass produce their things. Also, tell the others which is the least important of these (and why): blood, teeth or eyes.

**Role C – Teeth**

You think teeth are the most important things for scientists to mass produce. Tell the others three reasons why. Tell them why scientists shouldn't mass produce their things. Also, tell the others which is the least important of these (and why): hair, blood or eyes.

**Role D – Eyes**

You think eyes are the most important things for scientists to mass produce. Tell the others three reasons why. Tell them why scientists shouldn't mass produce their things. Also, tell the others which is the least important of these (and why): hair, teeth or blood.

# AFTER READING / LISTENING

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

**1. WORD SEARCH:** Look in your dictionary / computer to find collocates, other meanings, information, synonyms … for the words 'blood' and 'type'.

| **blood** | **type** |
|---|---|
| | |

- Share your findings with your partners.
- Make questions using the words you found.
- Ask your partner / group your questions.

**2. ARTICLE QUESTIONS:** Look back at the article and write down some questions you would like to ask the class about the text.

- Share your questions with other classmates / groups.
- Ask your partner / group your questions.

**3. GAP FILL:** In pairs / groups, compare your answers to this exercise. Check your answers. Talk about the words from the activity. Were they new, interesting, worth learning…?

**4. VOCABULARY:** Circle any words you do not understand. In groups, pool unknown words and use dictionaries to find their meanings.

**5. TEST EACH OTHER:** Look at the words below. With your partner, try to recall how they were used in the text:

| | |
|---|---|
| • found<br>• hospitals<br>• slow<br>• supply<br>• various<br>• clinical | • team<br>• actually<br>• quite<br>• look<br>• begin<br>• likely |

# BLOOD SURVEY

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

Write five GOOD questions about blood 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.

# BLOOD DISCUSSION

STUDENT A's QUESTIONS (Do not show these to student B)

1. What did you think when you read the headline?
2. What images are in your mind when you hear the word 'blood'?
3. What do you know about blood?
4. What do you think of the idea of scientists making blood?
5. What does blood do?
6. What do you think of the sight of blood?
7. Why do scientists need to make blood?
8. What is your blood type?
9. What would it be like to be a scientist on this project?
10. What do you think of these scientists?

*Scientists find way to mass produce blood – 27th March, 2017*
Thousands more free lessons at www.BreakingNewsEnglish.com

---

# BLOOD DISCUSSION

STUDENT B's QUESTIONS (Do not show these to student A)

11. Did you like reading this article? Why/not?
12. What do you think of when you hear the word 'donation'?
13. What do you think about what you read?
14. How do you think the scientists will find the technology?
15. What is a 'bioengineering challenge'?
16. What do you know about different blood types?
17. Does our blood type tell us about our personality?
18. Should we all donate blood?
19. What three adjectives best describe blood?
20. What questions would you like to ask the researchers?

# DISCUSSION (Write your own questions)

STUDENT A's QUESTIONS (Do not show these to student B)

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____



---

# DISCUSSION (Write your own questions)

STUDENT B's QUESTIONS (Do not show these to student A)

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

# LANGUAGE - CLOZE

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

Scientists from Bristol University in the UK say they have (1) _____ a way to mass produce blood that would be (2) _____ for patients who need it in hospitals. For a (3) _____ of years, they have been able to produce red blood cells in a laboratory. However, the process to do that was very slow and they could not produce a lot of blood. The new technique (4) _____ scientists can make an "unlimited supply" of blood. Researcher Dr Jan Frayne said: "Previous approaches (5) _____ producing red blood cells have relied on various sources of stem cells which can only presently produce very limited quantities." She added: "We have demonstrated a feasible way to sustainably manufacture red cells for clinical (6) _____."

Professor David Anstee, (7) _____ of the researchers, told the BBC that his team has found a way to mass produce blood, but they now need the technology to actually do (8) _____ on a large scale. He said: "There is a bioengineering challenge. To produce that much [blood] is (9) _____ a challenge….The next phase of our work is to look at methods of [producing more]." He told reporters that to begin (10) _____, they would produce only rare types of blood, as these can be difficult to find with traditional blood donation sources. He said: "The first therapeutic use of a cultured red cell product is (11) _____ to be for patients with rare blood groups, because suitable conventional red blood cell donations can be difficult to (12) _____."

**Put the correct words from the table below in the above article.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | (a) | found | (b) | finding | (c) | fund | (d) | fond |
| 2. | (a) | suits | (b) | suit | (c) | suitable | (d) | suiting |
| 3. | (a) | many | (b) | numeral | (c) | number | (d) | numeracy |
| 4. | (a) | meanies | (b) | meaning | (c) | meanings | (d) | means |
| 5. | (a) | by | (b) | at | (c) | to | (d) | on |
| 6. | (a) | used | (b) | use | (c) | using | (d) | user |
| 7. | (a) | others | (b) | another | (c) | the others | (d) | other |
| 8. | (a) | them | (b) | this | (c) | these | (d) | those |
| 9. | (a) | quote | (b) | quit | (c) | quite | (d) | quiet |
| 10. | (a) | by | (b) | for | (c) | of | (d) | with |
| 11. | (a) | like | (b) | liking | (c) | liken | (d) | likely |
| 12. | (a) | sass | (b) | sauce | (c) | soars | (d) | source |

# SPELLING

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

## Paragraph 1

1. bliaseut for patients
2. the prsoecs to do that
3. uopervsi approaches
4. osriauv sources
5. produce very iiemdlt quantities
6. tfcurmaaneu red cells

## Paragraph 2

7. they now need the yctgeoohnl
8. on a large lcsea
9. quite a nllcgheea
10. look at dtsoehm of producing more
11. blood aonoitdn
12. a cultured red cell product is kiyell

# PUT THE TEXT BACK TOGETHER

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

**Number these lines in the correct order.**

( ) on various sources of stem cells which can only presently produce very limited quantities." She added:

( ) not produce a lot of blood. The new technique means scientists can make an "unlimited

( ) Professor David Anstee, another of the researchers, told the BBC that his team has found a way to mass

( ) scale. He said: "There is a bioengineering challenge. To produce that much [blood] is quite a

( ) to be for patients with rare blood groups, because suitable conventional red blood cell donations can be difficult to source."

( ) challenge….The next phase of our work is to look at methods of [producing more]." He told

( ) produce blood, but they now need the technology to actually do this on a large

( ) reporters that to begin with, they would produce only rare types of blood, as these can be difficult to

( ) supply" of blood. Researcher Dr Jan Frayne said: "Previous approaches to producing red blood cells have relied

( ) suitable for patients who need it in hospitals. For a number of years, they have been

( ***1*** ) Scientists from Bristol University in the UK say they have found a way to mass produce blood that would be

( ) "We have demonstrated a feasible way to sustainably manufacture red cells for clinical use."

( ) find with traditional blood donation sources. He said: "The first therapeutic use of a cultured red cell product is likely

( ) able to produce red blood cells in a laboratory. However, the process to do that was very slow and they could

# PUT THE WORDS IN THE RIGHT ORDER

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

1. produce a blood way They to have mass found .

2. who patients for Suitable hospitals in it need .

3. red cells a Produce blood in laboratory .

4. However process that slow the do very , to was .

5. could They blood of lot a produce not .

6. do the this technology They to now actually need .

7. challenge blood To is produce quite that a much .

8. produce would They blood of types rare only .

9. with to rare be blood for groups patients Likely .

10. blood red conventional Suitable donations cell .

# CIRCLE THE CORRECT WORD (20 PAIRS)

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

Scientists from Bristol University *in / at* the UK say they have found a way to mass produce blood that would be *suits / suitable* for patients who need it in hospitals. For a *number / numbers* of years, they have been *ability / able* to produce red blood cells in a *laboratory / lavatory*. However, the process to do that was very *slow / slowed* and they could not produce a lot of blood. The new *technical / technique* means scientists can make an "unlimited *demand / supply*" of blood. Researcher Dr Jan Frayne said: "Previous approaches to *producing / production* red blood cells have relied on various sources of stem cells which can only presently produce very limited quantities." She added: "We have demonstrated a feasible way to sustainably manufacture red cells for clinical *abuse / use*."

Professor David Anstee, *other / another* of the researchers, told the BBC that his team has found a *weigh / way* to mass produce blood, but they now need the technology to *actually / actual* do this on a large scale. He said: "There is a bioengineering challenge. To produce *that / those* much blood is quite a challenge….The next *phrase / phase* of our work is to look at methods of producing more." He told reporters that to begin with, they would produce only *rare / rarely* types of blood, as these can be difficult to find with traditional blood donation *sources / sauces*. He said: "The first therapeutic use of a cultured red cell product is *likely / liking* to be for patients with rare blood groups, *because / so* suitable conventional red blood cell donations can be *difficult / difficulty* to source."

**Talk about the connection between each pair of words in italics, and why the correct word is correct.**

# INSERT THE VOWELS (a, e, i, o, u)

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

Sc__nt_sts fr_m Br_st_l _n_v_rs_ty _n th_ _K s_y th_y h_v_ f__nd _ w_y t_ m_ss pr_d_c_ bl__d th_t w__ld b_ s__t_bl_ f_r p_t__nts wh_ n__d _t _n h_sp_t_ls. F_r _ n_mb_r _f y__rs, th_y h_v_ b__n _bl_ t_ pr_d_c_ r_d bl__d c_lls _n _ l_b_r_t_ry. H_w_v_r, th_ pr_c_ss t_ d_ th_t w_s v_ry sl_w _nd th_y c__ld n_t pr_d_c_ _ l_t _f bl__d. Th_ n_w t_chn_q__ m__ns sc__nt_sts c_n m_k_ _n "_nl_m_t_d s_pply" _f bl__d. R_s__rch_r Dr J_n Fr_yn_ s__d: "Pr_v___s _ppr__ch_s t_ pr_d_c_ng r_d bl__d c_lls h_v_ r_l__d _n v_r___s s__rc_s _f st_m c_lls wh_ch c_n _nly pr_s_ntly pr_d_c_ v_ry l_m_t_d q__nt_t__s." Sh_ _dd_d: "W_ h_v_ d_m_nstr_t_d _ f__s_bl_ w_y t_ s_st__n_bly m_n_f_ct_r_ r_d c_lls f_r cl_n_c_l _s_."

Pr_f_ss_r D_v_d _nst__, _n_th_r _f th_ r_s__rch_rs, t_ld th_ BBC th_t h_s t__m h_s f__nd _ w_y t_ m_ss pr_d_c_ bl__d, b_t th_y n_w n__d th_ t_chn_l_gy t_ _ct__lly d_ th_s _n _ l_rg_ sc_l_. H_ s__d: "Th_r_ _s _ b___ng_n__r_ng ch_ll_ng_. T_ pr_d_c_ th_t m_ch [bl__d] _s q__t_ _ ch_ll_ng_….Th_ n_xt ph_s_ _f __r w_rk _s t_ l__k _t m_th_ds _f [pr_d_c_ng m_r_]." H_ t_ld r_p_rt_rs th_t t_ b_g_n w_th, th_y w__ld pr_d_c_ _nly r_r_ typ_s _f bl__d, _s th_s_ c_n b_ d_ff_c_lt t_ f_nd w_th tr_d_t__n_l bl__d d_n_t__n s__rc_s. H_ s__d: "Th_ f_rst th_r_p__t_c _s_ _f _ c_lt_r_d r_d c_ll pr_d_ct _s l_k_ly t_ b_ f_r p_t__nts w_th r_r_ bl__d gr__ps, b_c__s_ s__t_bl_ c_nv_nt__n_l r_d bl__d c_ll d_n_t__ns c_n b_ d_ff_c_lt t_ s__rc_."

# PUNCTUATE THE TEXT AND ADD CAPITALS

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

scientists from bristol university in the uk say they have found a way to mass produce blood that would be suitable for patients who need it in hospitals for a number of years they have been able to produce red blood cells in a laboratory however the process to do that was very slow and they could not produce a lot of blood the new technique means scientists can make an "unlimited supply" of blood researcher dr jan frayne said "previous approaches to producing red blood cells have relied on various sources of stem cells which can only presently produce very limited quantities" she added "we have demonstrated a feasible way to sustainably manufacture red cells for clinical use"

professor david anstee another of the researchers told the bbc that his team has found a way to mass produce blood but they now need the technology to actually do this on a large scale he said "there is a bioengineering challenge to produce that much [blood] is quite a challenge…the next phase of our work is to look at methods of [producing more]" he told reporters that to begin with they would produce only rare types of blood as these can be difficult to find with traditional blood donation sources he said "the first therapeutic use of a cultured red cell product is likely to be for patients with rare blood groups because suitable conventional red blood cell donations can be difficult to source"

# PUT A SLASH ( / ) WHERE THE SPACES ARE

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

ScientistsfromBristolUniversityintheUKsaytheyhavefoundawaytom assproducebloodthatwouldbesuitableforpatientswhoneeditinhospit als.Foranumberofyears,theyhavebeenabletoproduceredbloodcellsi nalaboratory.However,theprocesstodothatwasveryslowandtheycou ldnotproducealotofblood.Thenewtechniquemeansscientistscanmak ean"unlimitedsupply"ofblood.ResearcherDrJanFraynesaid:"Previou sapproachestoproducingredbloodcellshavereliedonvarioussourceso fstemcellswhichcanonlypresentlyproduceverylimitedquantities."Sh eadded:"Wehavedemonstratedafeasiblewaytosustainablymanufact ureredcellsforclinicaluse."ProfessorDavidAnstee,anotheroftheresea rchers,toldtheBBCthathisteamhasfoundawaytomassproduceblood, buttheynowneedthetechnologytoactuallydothisonalargescale.Hesai d:"Thereisabioengineeringchallenge.Toproducethatmuch[blood]isq uiteachallenge….Thenextphaseofourworkistolookatmethodsof[pro ducingmore]."Hetoldreportersthattobeginwith,theywouldproduceo nlyraretypesofblood,asthesecanbedifficulttofindwithtraditionalbloo ddonationsources.Hesaid:"Thefirsttherapeuticuseofaculturedredcel lproductislikelytobeforpatientswithrarebloodgroups,becausesuitabl econventionalredbloodcelldonationscanbedifficulttosource."

# FREE WRITING

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

Write about **blood** for 10 minutes. Comment on your partner's paper.

# ACADEMIC WRITING

From http://www.BreakingNewsEnglish.com/1703/170327-blood.html

Scientists should not be making blood. It's unnatural. Discuss.

# HOMEWORK

**1. VOCABULARY EXTENSION:** Choose several of the words from the text. Use a dictionary or Google's search field (or another search engine) to build up more associations / collocations of each word.

**2. INTERNET:** Search the Internet and find out more about this news story. Share what you discover with your partner(s) in the next lesson.

**3. BLOOD:** Make a poster about blood. Show your work to your classmates in the next lesson. Did you all have similar things?

**4. MASS PRODUCTION:** Write a magazine article about the mass production of blood. Include imaginary interviews with people who are for and against it.

Read what you wrote to your classmates in the next lesson. Write down any new words and expressions you hear from your partner(s).

**5. WHAT HAPPENED NEXT?** Write a newspaper article about the next stage in this news story. Read what you wrote to your classmates in the next lesson. Give each other feedback on your articles.

**6. LETTER:** Write a letter to an expert on blood. Ask him/her three questions about it. Give him/her three of your opinions on the mass production of blood. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.

# ANSWERS

## TRUE / FALSE (p.4)

a F b F c T d F e F f T g T h T

## SYNONYM MATCH (p.4)

| | | | |
|---|---|---|---|
| **1.** | **found** | a. | discovered |
| **2.** | **a number of** | b. | several |
| **3.** | **technique** | c. | method |
| **4.** | **presently** | d. | currently |
| **5.** | **manufacture** | e. | make |
| **6.** | **scale** | f. | size |
| **7.** | **phase** | g. | step |
| **8.** | **difficult** | h. | tough |
| **9.** | **rare** | i. | uncommon |
| **10.** | **conventional** | j. | traditional |

## COMPREHENSION QUESTIONS (p.8)

1. Bristol
2. It was too slow
3. Unlimited amounts
4. A researcher
5. Clinical use
6. The BBC
7. Technology
8. Making lots of blood
9. Blood from rare blood groups
10. They are difficult to find / source

## MULTIPLE CHOICE - QUIZ (p.9)

1. c 2. a 3. d 4. b 5. c 6. d 7. b 8. d 9. a 10. d

## ALL OTHER EXERCISES

Please check for yourself by looking at the Article on page 2.
(It's good for your English ;-)