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Level 6 – 20th April, 2021

Scientists create human-monkey chimera

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https://breakingnewsenglish.com/2104/210420-chimera.html

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Please try Levels 4 and 5 (they are easier).

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THE ARTICLE

From https://breakingnewsenglish.com/2104/210420-chimera.html

In this rapidly changing world, we are seeing more examples of science fiction becoming science fact. A team of American and Chinese scientists has created the world's first part-human, part-monkey embryo. This fusion of genetic tissue is called a chimera. The scientists say it potentially paves the way for lifesaving medical advances. Bio-scientist Henry Greely explained the importance of this scientific breakthrough. He said: "The long-term goal of this research team is to grow human organs in pigs - kidneys, livers, hearts, etc." He added: "They want to do that to make more human organs for transplants. Tens of thousands of people on a transplant list die every year waiting for a transplant."

The groundbreaking research involved injecting 25 human cells into the embryos of long-tailed macaque monkeys. The human cells developed inside 132 of the embryos. The scientists studied the development of the embryos for 19 days. Many people are disturbed by the research and believe it belongs to the realm of horror movies. Professor Greely said he appreciated that there are many ethical concerns around the creation and use of chimera. He said: "Every time a person gets an organ transplant, the result is an intra-species chimera - an organism made up of cells from two members of the same species....When a human gets a pig heart valve, she becomes an inter-species chimera."

Sources:

https://www.**salon.com**/2021/04/16/the-bioethics-of-the-first-human-monkey-hybrid-embryo/https://www.**webmd.com**/a-to-z-guides/news/20210416/scientists-create-monkey-human-embryos

https://www.yahoo.com/news/scientists-created-hybrid-human-monkey-133712492.html

WARM-UPS

- **1. HUMANS:** Students walk around the class and talk to other students about humans. 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?

rapidly changing world / science fiction / part-human / monkey / chimera / liver / list / groundbreaking / embryo / cells / development / ethical / organ / transplant / species

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

- **3. CHIMERA:** Students A **strongly** believe it's OK for scientists to create a chimera; Students B **strongly** believe the opposite. Change partners again and talk about your conversations.
- **4. ORGANS:** What do you know about these body organs? How could doctors help if they failed? Complete this table with your partner(s). Change partners often and share what you wrote.

	What I Know	What Doctors Could Do
The heart		
The kidneys		
The liver		
The lungs		
The brain		
The skin		

- **5. SCIENCE FICTION:** Spend one minute writing down all of the different words you associate with the word "science fiction". Share your words with your partner(s) and talk about them. Together, put the words into different categories.
- **6. TRANSPLANT:** Rank these with your partner. Put the most beneficial transplants at the top. Change partners often and share your rankings.

Heart

Kidney

Hair

• Eye

• Face

Liver

• Skin

Brain

VOCABULARY MATCHING

Paragraph 1

- embryo a. Any of the materials of which animals or plants are made.
- 2. fusion b. Create the circumstances to enable something to happen or be done.
- 3. genetic c. An unborn offspring in the process of development inside the mother's body.
- 4. tissue d. Remove living tissue or an organ and implant it in another part of the body or in another body.
- 5. pave the way e. The process or result of joining two or more things together to form a single entity.
- 6. breakthrough f. Relating to DNA.
- 7. transplant g. A sudden, dramatic, and important discovery or development.

Paragraph 2

- 8. injecting h. A device for controlling the flow of liquid or air through a tube or pipe.
- 9. disturbed i. Putting or forcing (a liquid, especially a drug or vaccine) into a person or animal's body with a syringe or similar device.
- 10. realm j. Caused to feel anxious.
- 11. appreciated k. Morally good or correct.
- 12. ethical l. Understand a situation fully.
- 13. intra- m. An area of activity or interest.
- 14. valve n. (A prefix added before adjectives) on the inside; within.

BEFORE READING / LISTENING

From https://breakingnewsenglish.com/2104/210420-chimera.html

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

- a. The article says science fact is becoming science fiction. T / F
- b. The scientists are from the USA and China. T / F
- c. The goal of the research is to grow human organs in pigs. T / F
- d. The article says millions die while waiting for an organ transplant. T / F
- e. Scientists injected 132 human cells in 25 monkey embryos. T / F
- f. The scientists observed the embryos' development for over 3 weeks. **T/F**
- g. The article says this story will be made into a horror story. **T / F**
- h. If a human has a pig heart valve, that human becomes a chimera. **T/F**

2. SYNONYM MATCH:

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

- 1. rapidly
- 2. fusion
- 3. pave the way
- 4. breakthrough
- 5. die
- 6. groundbreaking
- 7. development
- 8. appreciated
- 9. ethical
- 10. organism

- a. pass away
- b. get ready
- c. development
- d. moral
- e. blending
- f. progress
- g. acknowledged
- h. quickly
- i. life form
- i. innovative

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

- 1. In this rapidly
- 2. science fiction becoming science
- 3. This fusion of genetic tissue
- 4. lifesaving medical
- 5. people on a transplant
- 6. groundbreaking
- 7. people are disturbed
- 8. it belongs to the realm
- 9. there are many ethical
- 10. a pig heart

- a. research
- b. of horror movies
- c. list
- d. valve
- e. is called a chimera
- f. changing world
- q. concerns
- h. advances
- i. fact
- j. by the research

GAP FILL

In this (1) changing world, we are seeing	embryo
more examples of science fiction becoming science	grow
(2) A team of American and Chinese	rapidly
scientists has created the world's first part-human, part-monkey (3) This fusion of genetic tissue is called a	die
chimera. The scientists say it potentially (4)	breakthrough
the way for lifesaving medical advances. Bio-scientist Henry	fact
Greely explained the importance of this scientific	livers
(5) He said: "The long-term goal of this research team is to (6) human organs in pigs	paves
- kidneys, (7), hearts, etc." He added: "They	
want to do that to make more human organs for transplants.	
Tens of thousands of people on a transplant list	
(8) every year waiting for a transplant."	
The groundbreaking research involved (9) 25	realm
human cells into the embryos of long-(10)	transplant
macaque monkeys. The human cells developed inside 132 of the	valve
embryos. The scientists studied the development of the embryos	
for 19 days. Many people are (11) by the	injecting
research and believe it belongs to the (12) of	disturbed
horror movies. Professor Greely said he appreciated that there	organism
are many (13) concerns around the creation	tailed
and use of chimera. He said: "Every time a person gets an organ	ethical
(14), the result is an intra-species chimera -	cemear
an (15) made up of cells from two members	
of the same speciesWhen a human gets a pig heart	
(16), she becomes an inter-species chimera."	

LISTENING — Guess the answers. Listen to check.

1)	we are seeing more examples of science fiction a. becoming science fact b. becoming science factoid
2)	c. becoming science factual d. becoming science in fact created the world's first part-human,
	a. part-monkey embryonicb. part-monkey embroilc. part-monkey Yen biod. part-monkey embryo
3)	called a chimera. The scientists say it potentially a. shaves the way b. shapes the way c. paves the way d. pates the way
4)	The long-term goal of this research team is to a. grow human organism b. grow human nor gains c. grow human organs d. grow human organic
5)	more human organs for transplants. Tens of thousands of people on
	a. a transplant wristb. a transplant listc. a transplant cystd. a transplant fist
6)	The groundbreaking research involved injecting a. 25 humanly cells b. 25 human cells c. 25 humane cells d. 25 humanize cells
7)	disturbed by the research and believe it belongs to the realm a. of horror movies b. of oral movies c. of aura movies d. of aurora movies
8)	Professor Greely said he appreciated that there are a. many ethically concerns b. many ethical concern c. many ethically concern d. many ethical concerns
9)	Every time a person gets an organ transplant, the result is an a. intern-species chimera b. intro-species chimera c. intra-species chimera d. inter-species chimera
10)) When a human gets a pig heart valve, she becomes an
	a. intra-species chimera
	b. intern-species chimerac. intro-species chimera
	d. inter-species chimera

LISTENING – Listen and fill in the gaps

In this rapidly changing world, we are (1)	of science
fiction becoming science fact. A team of American and	Chinese scientists has
created the world's first part-human, (2)	This
fusion of genetic tissue is called a chimera. The scier	ntists say it potentially
paves the (3) medical advance	es. Bio-scientist Henry
Greely explained the importance of this scientific be	reakthrough. He said:
"The (4) of this research te	am is to grow human
organs in pigs - (5), etc." He	added: "They want to
do that to make more human organs for transplants.	Tens of thousands of
people on a (6) every year wa	aiting for a transplant."
The groundbreaking (7) 25	human cells into the
embryos of long-tailed macaque monkeys. The human	cells developed inside
132 of the embryos. The (8)	_ development of the
embryos for 19 days. Many people (9)	the research
and believe it belongs to the realm of horror movies.	Professor Greely said
he appreciated that there (10)	_ concerns around the
creation and use of chimera. He said: "Eve	ery time a person
(11) transplant, the result	is an intra-species
chimera - an organism made up of cells from two i	members of the same
speciesWhen a human gets a (12)	, she becomes
an inter-species chimera."	

COMPREHENSION QUESTIONS

1.	What does the article says science fiction is increasingly becoming?
2.	What does the article say is fused to create a chimera?
3.	What is the job of Henry Greely?
4.	Where does the team hope to grow human organs?
5.	How many people die while on transplant waiting lists?
6.	What was injected into monkey embryos?
7.	For how long did scientists study the development of the embryos?
8.	What do many people think this research belongs to?
9.	What kind of chimera is a person who gets an organ transplant?
10.	What kind of chimera is a person who has a big heart valve?

MULTIPLE CHOICE - QUIZ

- 1) What does the article says science fiction is increasingly becoming?
- a) manga
- b) science fact
- c) fairy tales
- d) poems
- 2) What does the article say is fused to create a chimera?
- a) electricity
- b) skin
- c) blood
- d) genetic tissue
- 3) What is the job of Henry Greely?
- a) bio-scientist
- b) journalist
- c) pig farmer
- d) monkey expert
- 4) Where does the team hope to grow human organs?
- a) in a lab
- b) in the basement
- c) in pigs
- d) in the desert
- 5) How many people die while on transplant waiting lists?
- a) thousands
- b) tens of thousands
- c) hundreds of thousands
- d) millions

- 6) What was injected into monkey embryos?
- a) human cells
- b) DNA
- c) a vaccine
- d) a placebo
- 7) For how long did scientists study the development of the embryos?
- a) 14 days
- b) 18 days
- c) 19 days
- d) 21 days
- 8) What do many people think this research belongs to?
- a) the realm of horror movies
- b) the domain of nightmares
- c) the land of fairy tales
- d) the future
- 9) What kind of chimera is a person who gets an organ transplant?
- a) an intra-species chimera
- b) an inter-species chimera
- c) a utero-species chimera
- d) an intro-species chimera
- 10) What kind of chimera is a person who has a big heart valve?
- a) a utero-species chimera
- b) an intra-species chimera
- c) an intro-species chimera
- d) an inter-species chimera

ROLE PLAY

From https://breakingnewsenglish.com/2104/210420-chimera.html

Role A – Heart

You think a heart transplant is the most beneficial. Tell the others three reasons why. Tell them why their transplants aren't as beneficial. Also, tell the others which is the least beneficial of these (and why): hair transplant, skin transplant or brain transplant.

Role B – Hair

You think hair transplant is the most beneficial. Tell the others three reasons why. Tell them why their transplants aren't as beneficial. Also, tell the others which is the least beneficial of these (and why): heart transplant, skin transplant or brain transplant.

Role C - Skin

You think a skin transplant is the most beneficial. Tell the others three reasons why. Tell them why their transplants aren't as beneficial. Also, tell the others which is the least beneficial of these (and why): hair transplant, heart transplant or brain transplant.

Role D - Brain

You think a brain transplant is the most beneficial. Tell the others three reasons why. Tell them why their transplants aren't as beneficial. Also, tell the others which is the least beneficial of these (and why): hair transplant, skin transplant or heart transplant.

AFTER READING / LISTENING

From https://breakingnewsenglish.com/2104/210420-chimera.html

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

human	monkey

- 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:

 rapidly 	• 25
• part	• 132
• tissue	• 19
• way	• many
livers	• result
• year	• valve

CHIMERA SURVEY

From https://breakingnewsenglish.com/2104/210420-chimera.html

Write five GOOD questions about chimera 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.

CHIMERA 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 'human'?
- 3. What do you think of science fiction?
- 4. What is in our world that looks like science fiction?
- 5. What do you think of scientists creating chimeras?
- 6. What examples are there of our world changing rapidly?
- 7. What are the dangers of creating chimeras?
- 8. What are the similarities between a chimera and Frankenstein?
- 9. What do you think of growing human organs in pigs?
- 10. Should there be limits as to what scientists can create?

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CHIMERA 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 'monkey'?
- 13. What do you think about what you read?
- 14. What do you think of scientists modifying embryos?
- 15. Do you think this research belongs in the realm of horror movies?
- 16. What are the ethical concerns around this research?
- 17. What do you think of the risk of creating a new, half-human species?
- 18. Would you accept a transplant from an organ grown in a pig?
- 19. What three adjectives best describe this story?
- 20. What questions would you like to ask the scientists?

DISCUSSION (Write your own questions)

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

•	
·	
·	
	reakingnewsenglish.com 2021
DISCU	JSSION (Write your own questions) B's QUESTIONS (Do not show these to student A)
ISCU	JSSION (Write your own questions)
ISCU TUDENT	JSSION (Write your own questions)
DISCU TUDENT	JSSION (Write your own questions)
DISCU TUDENT	JSSION (Write your own questions)
DISCUTUDENT	JSSION (Write your own questions)
DISCU	JSSION (Write your own questions)

LANGUAGE - CLOZE

In this (1) changing world, we are seeing more examples of science fiction becoming science (2) A team of American and Chinese scientists has created the world's first part-human, part-monkey embryo. This (3) of genetic tissue is called a chimera. The scientists say it potentially (4) the way for lifesaving medical advances. Bio-scientist Henry Greely explained the importance of this scientific breakthrough. He said: "The long-term goal of this research team is to grow human (5) in pigs - kidneys, livers, hearts, etc." He added: "They want to do that to make more human organs for transplants. Tens of thousands of people on a transplant (6) die every year waiting for a transplant."								
long- emb peop	-tailed ryos. Die are	dbreaking resead I macaque mo The scientists s e disturbed (9) pvies. Professor	nkeys tudied	s. The (8) d the developo the research	ce ment o and b	lls developed of the embryos selieve it belon	inside for 1 gs to	e 132 of the 9 days. Many the realm of
		(10) the cr						
		gan transplant,					•	•
(11) _		of cells from tw	o me	mbers of the	same	speciesWhe	en a l	human gets a
pig h	eart ((12), she be	ecome	es an inter-sp	ecies (chimera."		
Du+	the c	orrect words f	rom	the table bel	ow in	the above ar	+icle	
1.	(a)	rapidly	(b)	rapid	(c)	rapids	(d)	rapidity
2.	(a)	factual	(b)	in fact	(c)	fact	(d)	factoid
3.	(a)	fission	(b)	vision	(c)	fusion	(d)	version
4.	(a)	concretes	(b)	asphalts	(c)	tiles	(d)	paves
5.	(a)	mouthpieces	(b)	pianos	(c)	organs	(d)	publications
6.	(a)	wrist	(b)	list	(c)	writs	(d)	tryst
7.	(a)	injected	(b)	injecting	(c)	injector	(d)	injects
8.	(a)	humanly	(b)	human	(c)	humane	(d)	humanoid
9.	(a)	at	(b)	of	(c)	by	(d)	to
10.	(a)	regard	(b)	somehow	(c)	of	(d)	around
11.	(a)	along	(b)	down	(c)	round	(d)	up
12.	(a)	viva	(b)	evaluate	(c)	value	(d)	valve

SPELLING

From https://breakingnewsenglish.com/2104/210420-chimera.html

Paragraph 1

- 1. part-human, part-monkey <u>bmyore</u>
- 2. This fusion of tnecgie tissue
- 3. it atenyloitlp paves the way
- 4. the importance of this scientific htkgbearuroh
- 5. ksnyied, livers, hearts, etc.
- 6. waiting for a spnrnattal

Paragraph 2

- 7. <u>raoggdbiknrneu</u> research
- 8. people are <u>itedbsudr</u> by the research
- 9. Professor Greely said he <u>tadapcipere</u> that
- 10. there are many <u>htlecai</u> concerns
- 11. two members of the same <u>iecpess</u>
- 12. When a human gets a pig heart <u>velva</u>

PUT THE TEXT BACK TOGETHER

From https://breakingnewsenglish.com/2104/210420-chimera.html

Number these lines in the correct order.

()	members of the same speciesWhen a human gets a pig heart valve, she becomes an inter-species chimera."
()	studied the development of the embryos for 19 days. Many people are disturbed by the research and believe it
()	breakthrough. He said: "The long-term goal of this research team is to grow human organs in pigs - kidneys,
()	transplant, the result is an intra-species chimera - an organism made up of cells from two
()	The groundbreaking research involved injecting 25 human cells into the embryos of long-
()	tailed macaque monkeys. The human cells developed inside 132 of the embryos. The scientists
()	concerns around the creation and use of chimera. He said: "Every time a person gets an organ
()	monkey embryo. This fusion of genetic tissue is called a chimera. The scientists say it potentially paves
()	of thousands of people on a transplant list die every year waiting for a transplant."
()	belongs to the realm of horror movies. Professor Greely said he appreciated that there are many ethical
()	the way for lifesaving medical advances. Bio-scientist Henry Greely explained the importance of this scientific
()	livers, hearts, etc." He added: "They want to do that to make more human organs for transplants. Tens
()	fact. A team of American and Chinese scientists has created the world's first part-human, part-
(1)	In this rapidly changing world, we are seeing more examples of science fiction becoming science

PUT THE WORDS IN THE RIGHT ORDER

From https://breakingnewsenglish.com/2104/210420-chimera.html

- 1. science of becoming examples science fact . More fiction
- 2. is tissue a This called chimera . of fusion
- 3. paves advances . for the way medical It lifesaving
- 4. human They want make to organs for transplants .
- 5. for waiting every People die transplant . year a
- 6. The human 25 research groundbreaking cells . involved injecting
- 7. 132 developed the Human of inside embryos . cells
- 8. people disturbed are research . by the Many
- 9. are there He many that concerns . ethical appreciated
- 10. from Organisms the same of made cells species .

CIRCLE THE CORRECT WORD (20 PAIRS)

From https://breakingnewsenglish.com/2104/210420-chimera.html

In this *rapidly / rapid* changing world, we are seeing more examples of science fiction becoming science *factual / fact*. A team of American and Chinese scientists has created the world's first part-human, part-monkey embryo. This *fission / fusion* of genetic tissue is called a chimera. The scientists say it *potent / potentially* paves the way for lifesaving medical *advances / forwards*. Bio-scientist Henry Greely explained the importance *of / at* this scientific breakthrough. He said: "The long-term goal *off / of* this research team is to grow human organs in pigs - kidneys, livers, hearts, etc." He added: "They want to do *what / that* to make more human organs for transplants. Tens of thousands of people *on / in* a transplant list die every year *waiting / wanting* for a transplant."

The groundbreaking research *incited / involved* injecting 25 human cells into the embryos of long-tailed macaque monkeys. The *human / humane* cells developed inside 132 of the embryos. The scientists *studiously / studied* the development of the embryos for 19 days. Many people are disturbed *of / by* the research and believe it belongs *at / to* the realm of horror movies. Professor Greely said he appreciated that there are many *ethic / ethical* concerns around the creation and *use / used* of chimera. He said: "Every time a person *gets / getting* an organ transplant, the result is an intraspecies chimera - an organism made *down / up* of cells from two members of the same species....When a human gets a pig heart *value / valve*, she becomes an inter-species chimera."

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 https://breakingnewsenglish.com/2104/210420-chimera.html

_n th_s r_p_dly ch_ng_ng w_rld, w_ _r_ s___ng m_r_ _x_mpl_s _f sc__nc_ f_ct__n b_c_m_ng sc__nc_ f_ct. _ $t__m _f _m_r_c_n _nd \ Ch_n_s_ \ sc__nt_sts \ h_s \ cr__t_d$ th_ w_rld's f_rst p_rt-h_m_n, p_rt-m_nk_y _mbry_. Th_s f_s_n _f g_n_t_c t_ss__ _s c_ll_d _ ch_m_r_. Th_ sc__nt_sts s_y _t p_t_nt__lly p_v_s th_ w_y f_r I_f_s_v_ng m_d_c_l _dv_nc_s. B__-sc__nt_st H_nry Gr__ly _xpl__n_d th_ _mp_rt_nc_ _f th_s sc__nt_f_c br__kthr__gh. H_ s__d: "Th_ l_ng-t_rm g__l _f th_s r_s__rch t__m _s t_ gr_w h_m_n _rg_ns _n p_gs k_dn_ys, l_v_rs, h__rts, _tc." H_ _dd_d: "Th_y w_nt t_ d_ th_t t_ m_k_ m_r_ h_m_n _rg_ns f_r tr_nspl_nts. T_ns _f th__s_nds _f p__pl_ _n _ tr_nspl_nt l_st d__ _v_ry y__r w__t_ng f_r _ tr_nspl_nt." Th_ gr__ndbr__k_ng r_s__rch _nv_lv_d _nj_ct_ng 25 h_m_n c_lls _nt_ th_ _mbry_s _f l_ng-t__l_d m_c_q__ m_nk_ys. Th_ h_m_n c_lls d_v_l_p_d _ns_d_ 132 _f th_ _mbry_s. Th_ sc__nt_sts st_d__d th_ d_v_l_pm_nt _f th_ _mbry_s f_r 19 d_ys. M_ny p__pl_ _r_ d_st_rb_d by th_ r_s__rch _nd b_l__v_ _t b_l_ngs t_ th_ r__lm _f h_rr_r m_v__s. Pr_f_ss_r Gr__ly s__d h_ $\verb| _ppr_c| = t_d + th_t + th_r_ = r_m_ny = th_c_l + c_nc_rns$ $_{r}$ _nd th_ cr__t_n _nd _s_ _f ch_m_r_. H_ s__d: "_v_ry t_m_ _ p_rs_n g_ts _n _rg_n tr_nspl_nt, th_ r_s_lt _s _n _ntr_-sp_c__s ch_m_r_ - _n _rg_n_sm m_d_ _p _f c_lls fr_m tw_ m_mb_rs _f th_ s_m_ sp_c_s....Wh_n _ h_m_n g_ts _ p_g h__rt v_lv_, sh_ b_c_m_s _n _nt_r-sp_c__s ch_m_r_."

PUNCTUATE THE TEXT AND ADD CAPITALS

From https://breakingnewsenglish.com/2104/210420-chimera.html

in this rapidly changing world we are seeing more examples of science fiction

becoming science fact a team of american and chinese scientists has created

the worlds first parthuman partmonkey embryo this fusion of genetic tissue

is called a chimera the scientists say it potentially paves the way for

lifesaving medical advances bioscientist henry greely explained the

importance of this scientific breakthrough he said the longterm goal of this

research team is to grow human organs in pigs kidneys livers hearts etc he

added they want to do that to make more human organs for transplants tens

of thousands of people on a transplant list die every year waiting for a

transplant

the groundbreaking research involved injecting 25 human cells into the

embryos of longtailed macaque monkeys the human cells developed inside

132 of the embryos the scientists studied the development of the embryos

for 19 days many people are disturbed by the research and believe it

belongs to the realm of horror movies professor greely said he appreciated

that there are many ethical concerns around the creation and use of chimera

he said every time a person gets an organ transplant the result is an

intraspecies chimera an organism made up of cells from two members of

the same species when a human gets a pig heart valve she becomes an

interspecies chimera

Level 6 Scientists create human-monkey chimera – 20th April, 2021

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PUT A SLASH (/) WHERE THE SPACES ARE

From https://breakingnewsenglish.com/2104/210420-chimera.html

Inthisrapidlychangingworld, weareseeingmoreexamples of science fic tionbecomingsciencefact.AteamofAmericanandChinesescientistsha screatedtheworld'sfirstpart-human,part-monkeyembryo.Thisfusio nofgenetictissueiscalledachimera. The scientists sayit potentially pave sthewayforlifesavingmedicaladvances.Bio-scientistHenryGreelyex plainedtheimportanceofthisscientificbreakthrough. Hesaid: "Thelon g-termgoalofthisresearchteamistogrowhumanorgansinpigs-kidne ys, livers, hearts, etc. "Headded: "Theywanttodothattomakemorehu manorgansfortransplants. Tensofthousands of people on a transplant li stdieeveryyearwaitingforatransplant."Thegroundbreakingresearchi nvolvedinjecting25humancellsintotheembryosoflong-tailedmacagu emonkeys.Thehumancellsdevelopedinside132oftheembryos.Thesci entistsstudiedthedevelopmentoftheembryosfor19days.Manypeople aredisturbedbytheresearchandbelieveitbelongstotherealmofhorror movies. Professor Greely said he appreciated that there are many ethicalconcernsaroundthecreationanduseofchimera. Hesaid: "Everytimeap ersongetsanorgantransplant, the result is an intra-species chimera-a norganismmadeupofcellsfromtwomembersofthesamespecies....Wh enahumangetsapigheartvalve, shebecomes an inter-species chime ra."

FREE WRITING

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

ACADEMIC WRITING

Scientists should not be mixing the genes of two species to create chimera. 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. CHIMERA:** Make a poster about chimera. Show your work to your classmates in the next lesson. Did you all have similar things?
- **4. INTRA-SPECIES:** Write a magazine article about chimera and banning intra-species experiments. Include imaginary interviews with people who are for and against this.

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 chimera. Ask him/her three questions about chimera. Give him/her three of your ideas. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.

ANSWERS

VOCABULARY (p.4)

1. С 2. е 3. f 4. а 5. b 6. 7. d 12. 8. i 9. j 10. m 11. l k 13. n 14. h

TRUE / FALSE (p.5)

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

SYNONYM MATCH (p.5)

1.	h	2.	е	3.	b	4.	С	5.	a
6.	j	7.	f	8.	g	9.	d	10.	i

COMPREHENSION QUESTIONS (p.9)

WORDS IN THE RIGHT ORDER (p.19)

10. Organisms made of cells from the same species.

1.	Science fact	1.	More examples of science fiction becoming science fact.
2.	Genetic tissue	2.	This fusion of tissue is called a chimera.
3.	Bio-scientist	3.	It paves the way for lifesaving medical advances.
4.	In pigs	4.	They want to make human organs for transplants.
5.	Tens of thousands	5.	People die every year waiting for a transplant.
6.	Human cells	6.	The groundbreaking research involved injecting 25 human cells.
7.	19 days	7.	Human cells developed inside 132 of the embryos.
8.	The realm of horror movies	8.	Many people are disturbed by the research.
9.	An intra-species chimera	9.	He appreciated that there are many ethical concerns.

MULTIPLE CHOICE - QUIZ (p.10)

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

ALL OTHER EXERCISES

10. An inter-species chimera

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