

GEOGRAPHY

The Greenhouse Effect

It is not necessary to carry out all the activities contained in this unit.

Please see *Teachers' notes* for explanations, additional activities, and tips and suggestions.

Theme	The Greenhouse Effect	
All students: Activities that are suitable for Learning Support, Language Support and the Mainstream Subject Class include:	Keywords	3
	Vocabulary File	4-6
	Activating Students' Existing Knowledge	7
	Completing Sentences	13
	Multiple Choice	14
	Planning and writing text	15-16
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Learning support and Language support: Activities suitable for students receiving Learning or Language Support include:	Working with words	8
	Picture Sentences	9
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	Geography Keywords	11
	Unscramble the letters	12
	Alphaboxes	19
	Play Snap	21-23
Language support: Additional activities for Language Support:	Grammar points	17-18
Levels for Language Support	A1 – B1 The language level of each activity is indicated in an information box.	
Learning focus	Using Geography textbooks and accessing curriculum content and learning activities.	
Acknowledgement	The <i>English Language Support Programme</i> acknowledges the permission of Gill and Macmillan to reproduce excerpts from <i>The Human Planet</i> by Patrick E.F. O' Dwyer.	

Note: The categorisation of activities is indicative only and should not prevent teachers from using any activities that are considered suitable for a particular group of students.

Making the best use of these units

Learning Record

A copy of the Learning Record should be distributed to each learning support and language support student.

Students should:

1. Write the subject and topic on the record.
2. Tick off/date the different statements as they complete activities.
3. Keep the record in their files along with the work produced for this unit.
4. Use this material to support mainstream subject learning.

Introduction of a topic or activity should ensure that students understand **what** they are doing and **why**. Many students will have some difficulty in understanding both the language in the activity and the instructions/purpose for carrying out the activity.

You can create your **personal teaching resource** by printing these units in full and filing them by subject in a large ring binder.

Encourage students to:

- Bring the relevant **subject textbooks** to learning/language support class. It does not matter if they have different textbooks as the activities in these units refer to vocabulary and other items that will be found in all subject textbooks. These units are based on curriculum materials.
- Take some **responsibility for their own learning** programmes by:



Developing a **personal dictionary** for different subjects, topics, and other categories of language, on an on-going basis. This prompt is a reminder.

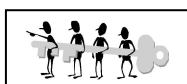


Have you ticked this activity on your Learning Record?

Recording what they have learnt on the **Learning Record**, which should be distributed at the start of each unit.



Keeping their own **files** with good examples of the work produced for different subjects and topics. This file will be an invaluable **learning resource** in supporting mainstream learning.



Indicates that answers may be found at the end of the unit.

Don't forget that many of the activities in these units are also suitable as **homework** tasks or for **self-study**.

Keywords

The list of keywords for this unit is as follows:

Nouns

activities
amount
animals
area
atmosphere
balance
blanket
carbon dioxide
change
climate
coal
crop failure
drought
earth
effects
existence
famine
features
floods
forest
fossil fuels
gas/gases
global warming
greenhouse
greenhouse effect
heat
increase
living things
oil
overheating
oxygen
people
rain
rainfall
rainwater

region
sky/skies
sun
surface
temperature
trees
weather
wind
wood

Verbs

to absorb
to affect
to allow
to build up
to burn
to cause
to change
to create
to cut/to cut down
to disappear
to dissolve
to escape
to form
to heat
to increase
to interfere
to need something
to overheat
to produce
to protect
to receive
to trap
to upset

Adjectives

atmospheric
balanced
changed
dry
few
global
huge
important
increased
large
most
natural
outer
tropical
true
upper
vast
vital
warm

Adverbs

directly
especially
gradually
most
normally
rapidly
slowly

Other

in the past

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Vocabulary file 1

Word	Meaning	Note or example*
activities		
blanket		
carbon dioxide		
effects		
fossil fuels		
global warming		

* You may wish to write a sentence or phrase, make a note of the page in your textbook where this word appears or, if English is not your first language, provide a translation into your language.



Get your teacher to check this and then file it in your resource folder so you can use it in the future.

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Vocabulary file 2

Word	Meaning	Note or example
greenhouse effect		
overheating		
rainfall		
to absorb		
to affect		
to cut down		



Get your teacher to check this and then file it in your resource folder so you can use it in the future.

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Vocabulary file 3

Word	Meaning	Note or example
to escape		
to heat		
to produce		
to balance		
global		
warm		



Get your teacher to check this and then file it in your resource folder so you can use it in the future.

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Language Level: all
Type of activity: whole class
Suggested time: 10 minutes

Activating students' existing knowledge

Use a spidergram to activate students' ideas and knowledge on the key points in this chapter. See **Teachers' Notes** for suggestions.

Possible key terms for the spidergram:

global warming

greenhouses

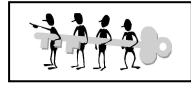
drought

- Invite newcomer students to provide key words in their own languages.
- Encourage dictionary use.
- Encourage all students to organise their vocabulary into relevant categories (e.g. meaning, nouns, keywords, verbs etc.).



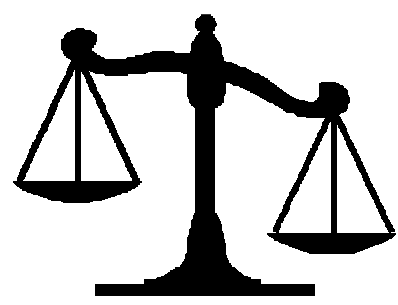
All students should record vocabulary and terms from the spidergram in their personal dictionaries.

Language Level: A1
Type of activity: pairs or individual
Suggested time: 30 minutes

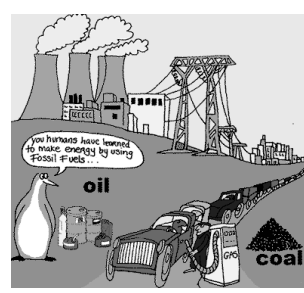


Working with words

1. Tick the correct answer



- a) this is coal
- b) this is a scales
- c) this is a forest
- d) this is a famine



- a) these are fossil fuels
- b) this is a school bag
- c) these are floods
- d) this is a teacher

2. Find these words in your textbook.

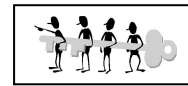
Write your own explanation for these words. Check the meanings of the words that you do not know. Then write an example or translate the words into your own language.

Word	Page in textbook	Explanation	Note or example
animals			
area			
atmosphere			
drought			



Check that these key words are in your personal dictionary.

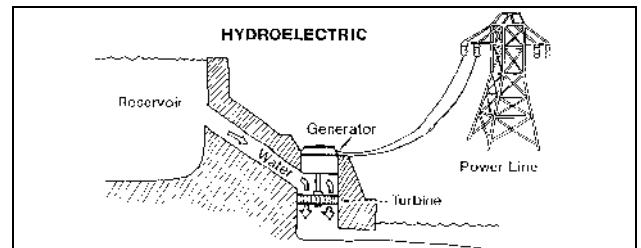
Language Level: A1
Type of activity: pairs or individual
Suggested time: 20 minutes



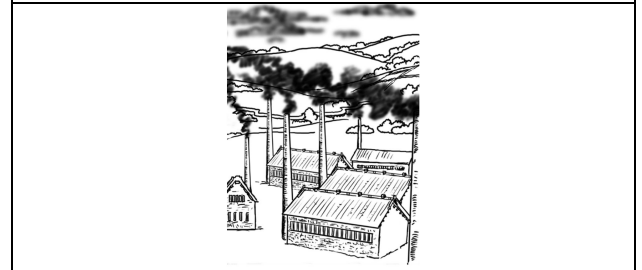
Picture Sentences

1. Tick the correct answer

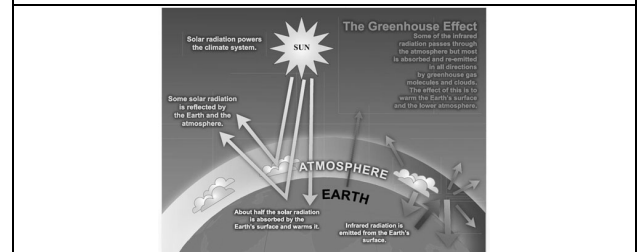
- a) This is a blanket.
- b) These are energy sources.
- c) This is a crop failure.



- a) This is pollution.
- b) This is a lake.
- c) This is an animal.



- a) These are people.
- b) This is a waterfall.
- c) This is the Greenhouse effect.



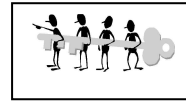
2. Put these words in the correct order to form sentences.

absorb trees carbon dioxide

increasing effect greenhouse the is

problem another ozone is damage

Language Level: A1 / A2
Type of activity: pairs or individual
Suggested time: 20 minutes



Odd One Out

1. Circle the word which does not fit with the other words in each line.

Example: *apple* *orange* *banana* **taxi**

boy gases fuel coal

tropical car global climate

earth floods girl animals

sky sun moon house

2. Find these words in your textbook. Then put them in short sentences in your own words. Use a dictionary if necessary.

to absorb _____

to disappear _____

to increase _____

to protect _____

to overheat _____



Check that these key words are in your personal dictionary.

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Language Level: A2 / B1
Type of activity: individual
Suggested time: 20 minutes



Geography Keywords

1. Fill in the missing letters of the keywords listed below.
On the line beside each word, write whether the word is a noun, an adjective or a verb.

g_ob_l _____

t_opic_l _____

f_re_t _____

g_se_ _____

2. Write as many words as possible related to **the Greenhouse Effect**.
You have 3 minutes!

Language Level: A1 / A2
Type of activity: pairs or individual
Suggested time: 20 minutes



Unscramble the letters

1. A type of fossil fuel CLOA
Answer _____

2. People are cutting down trees in the... FRSOET
Answer _____

3. Carbon dioxide traps heat in the... ATOMPSHREE
Answer _____

4. The overheating is called... GBOLLA WRMAIGN

Answer _____



Solve the secret code

English=	R	V	D	E	F	A	N	M	O	S	T	H
Code=	B	X	Y	F	G	Q	R	O	L	E	A	W

example: (code) EAWYFRA = STUDENT (English)

FQBAW =

Look at each word as you write the answer.

Is your spelling correct?

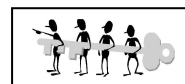
Can you pronounce the word?

Do you know what the word means?

Have you got this word in your personal dictionary?

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Language Level: A2 / B1
Type of activity: pairs or individual
Suggested time: 30 minutes



Completing sentences

Fill in the blanks in these sentences. Use words from the Word Box below.

The overheating of the earth's atmosphere is called _____ warming and is causing _____ to change rapidly. This is caused by the greenhouse effect. The earth's surface is heated by the sun. The earth's surface heats the _____. In the past the balance of _____ in the atmosphere allowed most of this heat to escape into outer space so that the earth's atmosphere did not overheat.

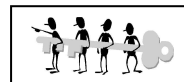
What are the causes of global warming?

People are burning _____ fuels, such as coal, gas and oil, and wood. This produces huge amounts of carbon dioxide which is trapping heat, much like a blanket, in the upper atmosphere.

Word Box

fossil	global	climate
gases	atmosphere	

Language Level: A2 / B1
Type of activity: individual
Suggested time: 30 minutes



Multiple choice

Read the text below and choose the best answers.

Trees absorb carbon dioxide which people and animals produce. Trees also 'breathe out' oxygen which all living things need. These processes are vital for a balanced existence. However, people are cutting down vast areas of tropical forests, and so upset this balance. Now people's activities are interfering with this balance, and the atmosphere is now trapping this heat and so is overheating. What are the effects of these actions on climates?

The increase in temperature of the earth's atmosphere is causing: the climates in some areas to change. This is especially true in areas which normally receive little but vital rainfall. When this rain does not fall it causes drought, crop failure and famine.

1. What do trees absorb?

- | | |
|------------|-------------------|
| a) milk | b) carbon dioxide |
| c) nothing | d) bread |

2. What do trees breathe out?

- | | |
|-------------------|------------|
| a) carbon dioxide | b) oxygen |
| c) hydrogen | d) nothing |

3. What are people cutting down?

- | | |
|---------------------|------------|
| a) tropical forests | b) nothing |
| c) fuels | d) gases |

4. Is this interfering with the earth's atmosphere?

- | | |
|--------|-------|
| a) Yes | b) No |
|--------|-------|

5. Does the rain cause drought and famine when it does not fall?

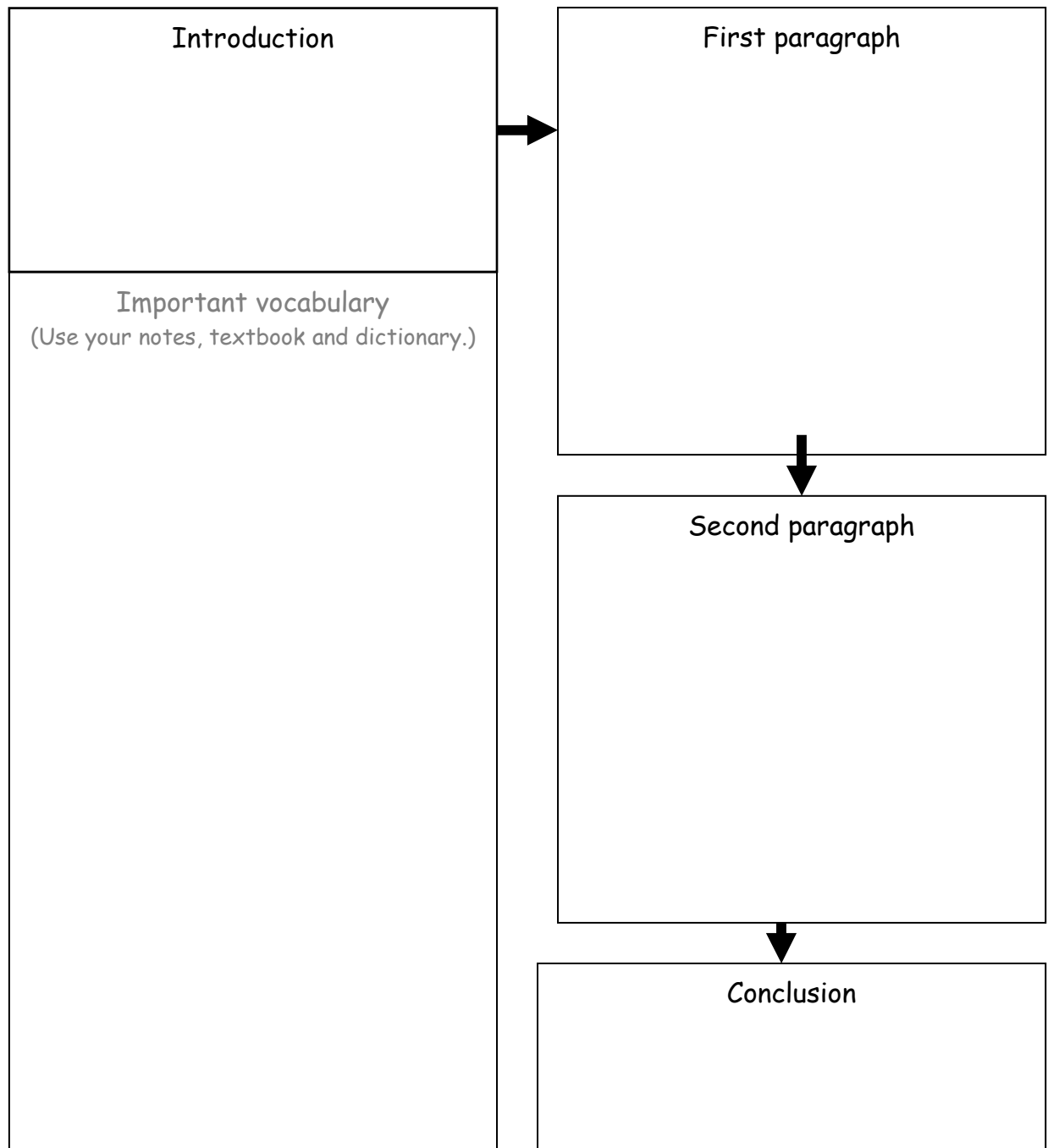
- | | |
|--------|-------|
| a) Yes | b) No |
|--------|-------|

Language Level: A2 / B1
Type of activity: pairs / small groups
Suggested time: 40 minutes

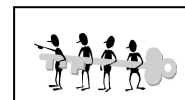
Writing text

You are going to write a piece of text on the topic '**How we contribute to global warming**'. Read the title carefully. Make sure your text focuses on the title. Use your keyword list and textbook to help you.

First plan what you are going to write by making notes on this chart:



Language Level: all
Type of activity: individual and whole class
Suggested time: 40 minutes



Grammar points

Adverbs

We can use adverbs to describe how something happens

Which of these two adverbs **rapidly/slowly** belongs to which sentence:

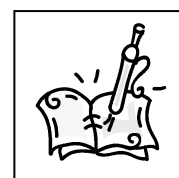
Gas burns _____.

Trees grow _____.

Adverbs are often associated with particular verbs. For example, we say:
to shout loudly, we don't often say *to shout softly*.

1. Can you find an adverb in column B, which suits a verb in column A?
 Check your dictionary if you don't understand some words.

A verbs	B adverbs
eat	carefully
walk	happily
work	slowly
play	fast
climb	deeply
breathe	quickly
laugh	loudly
listen	impatiently
run	attentively
wait	hard



Note: Many adverbs end in *ly*. What are the two exceptions in the list above?
 Can you think of any other exceptions?

2. Write five sentences using 5 of the verb/adverb combinations from the box above.

Language Level: A2/ B1
Type of activity: individual/pair
Suggested time: 45 minutes



Grammar Points

The present continuous tense

We have two ways of talking about what happens in the present.

The **present simple** tense is used to talk about things we do again and again.

For example: *John walks to school every day.*

The **present continuous** tense is used to talk about things that are happening now.

For example: *John is walking around the room.*

1. Read this text and circle all the verbs that are in the **present continuous tense**.

The deserts of the world are growing bigger. Every year the area of desert advances. Africa is suffering from this problem but there are deserts on every continent. Farmers are watering their land in order to grow crops. Experts say that the greenhouse effect is causing changes to climate. Temperature is rising. The ice is melting at the north and south poles.

2. Write five sentences describing what is happening in your classroom now. Use the **present continuous** tense.



Alphaboxes

Using your textbook, find **one** word beginning with each of the letters of the alphabet. Write the word in the relevant box. You could also write the word in your own language.

a	b	c
d	e	f
g	h	i
j	k	l
m	n	o
p	q	r
s	t	u
v	w	xyz

Do you understand all these words?



Get your teacher to check this, then file it in your folder so you can use it in the future.



Word search

Find the words from the list below.

X J U D I A V G A S E S S I G F S M
 Y C R J P J L Y U K F P
 D N I H N K S A I Q X
 Y G L O B A L M J T Y B Z
 N V U T J I I Q Y T T X K
 O S Z N V M I P Z G O C S N U L E A R T H B G S
 D G C F A T M O S P H E R E U V V B N N Y C Q B P T
 C W G K N C C T G Y W F F A C I L V N L S F W M A S
 P X D Z Q C U W A R M I N G A C P N G V V I I Z Q P
 I J N F L N Y C A U S I N G Q E X T T R O P I C A L
 Q H K T P R M W F N N Q H R L C L I M A T E S E I
 L W L U R Q O H D A F L O V E R H E A T I N G H T
 T U Y V B N Y F B I V D M X B A E Q A H D C S M D
 G D I Z O X C U T T I N G N G H V M E L P I H R O R
 J V I H F U E L S A U T X J V Z C R S V M F O S S I L
 A G F Z I U Y A L J L W H D Z T T R A P P I N G G O R L
 L L N P W F L O O D I N G B D G B D R V F M W Q V X N H B
 J P B Y D D M D B Q Z O G X W L T T E S
 X G Q N K X J B K B F B

ATMOSPHERE	GASES
CAUSING	GLOBAL
CLIMATES	OVERHEATING
CUTTING	TRAPPING
EARTH	TROPICAL
FLOODING	WARMING
FOSSIL	
FUELS	

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Play Snap

Make Snap cards with 2 sets of the same keywords. See *Notes for teachers* for ideas about how to use the cards.



climate	climate
fossil	fossil
fuel	fuel

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atmosphere	atmosphere
greenhouse	greenhouse
oil	oil

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gases	gases
forest	forest
global	global

Answer key

Working with words, page 8

1. b,a

Picture Sentences, page 9

1.b,a,c

Trees absorb carbon dioxide.

The Greenhouse Effect is increasing.

Ozone damage is another problem.

Odd one out, page 10

Boy, car, girl, house

Geography Keywords, page 11

Global, adjective, tropical, adjective, forest, noun, gases, noun

Unscramble the letters, page 12

Coal, forest, atmosphere, global warming

Secret code: earth

Completing text, page 13

The overheating of the earth's atmosphere is called **global** warming and is causing **climate** to change rapidly. This is caused by the greenhouse effect. The earth's surface is heated by the sun. The earth's surface heats the **atmosphere**. In the past the balance of **gases** in the atmosphere allowed most of this heat to escape into outer space so that the earth's atmosphere did not overheat.

What are the causes of global warming?

People are burning **fossil** fuels, such as coal, gas and oil, and wood. This produces huge amounts of carbon dioxide which is trapping heat, much like a blanket, in the upper atmosphere.

Multiple choice, page 14

1b,2b,3a,4a,5a

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Grammar points, page 17

The following are suggested answers only other answers are also possible, check with your teacher.

Eat quickly, walk slowly, work hard, play happily, climb carefully, breathe deeply, laugh loudly, listen attentively, run fast, wait impatiently.

Another common exception is the adverb *well*, from the adjective *good*.

Grammar points, page 18

The present continuous tense

The deserts of the world are growing bigger. Every year the area of desert advances. Africa is suffering from this problem but there are deserts on every continent. Farmers are watering their land in order to grow crops. Experts say that the greenhouse effect is causing changes to climate. Temperature is rising. The ice is melting at the north and south poles.

Word Search, page 20.

```
X J U D I A V G A S E S           S I G F S M
Y           C R J P J L Y           U K F P
D           N I H N K S A I           Q X
Y           G L O B A L M J       T Y       B Z
N           V U T J I I Q Y       T T       X K
O S Z N V M I P Z G O C S N U L E A R T H B G S
D G C F A T M O S P H E R E U V V B N N Y C Q B P T
C W G K N C C T G Y W F F A C I L V N L S F W M A S
P X D Z Q C U W A R M I N G A C P N G V V I I Z Q P
I J N F L N Y G A U S I N G Q E X T T R O P I C A L
Q H K T P R M W F N N Q H R L G L I M A T E S E I
L W L U R Q O H D A F L O V E R H E A T I N G H T
T U Y V B N Y F B I V D M X B A E Q A H D C S M D
G D I Z O X G U T T I N G N G H V M E L P I H R O R
J V I H F U E L S A U T X J V Z C R S V M F O S S I L
A G F Z I U Y A L J L W H D Z T T R A P P I N G G O R L
L L N P W F L O O B I N G B D G B D R V F M W Q V X N H B
           J P B Y D       D M D B Q       Z O G X W       L T T E S
           X G Q           N K X           J B K           B F B
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