

Sadiq Public School



Distance Learning for P6

August-September 2020



Sadiq Public School

Do the right, fear no man

Distance Learning

Dear students and parents,

Assalam o aleikum.

Inshallah all of our students and their families are staying home, staying safe, and protecting themselves and their communities in this most unusual situation. We understand as well as anyone how difficult it is to be living in such a situation. If we all follow the government's very simple guidance the situation will improve very soon, as it has in many countries around the world, and our lives can get back to normal.

The Government has announced that Schools will likely be allowed to re-open mid-September, 2020. Let me be clear – Sadiq Public School is planning for a full school year from mid-September 2020, i.e. with the appropriate number of school days to ensure our students complete their normal syllabuses well in time for their annual examinations without compromising too much on the remainder of our unique, holistic curriculum that includes sports, clubs, and community service – and self-discipline (doing the right thing at the right time).

After a considerable amount of thought and planning, after considering the many factors associated with distance learning including health and safety risks to children of being online for too long and unsupervised, costs of technology/devices/software, and the expected/likely outcomes, we have decided to offer a package of distance learning activities for students to do some school work. These activities are NOT intended to replace in-school, teacher-student learning activities and they are NOT compulsory for students to complete. The team of education experts at Sadiq Public School very strongly believe that education, i.e. meaningful learning, happens best when teachers and students interact, face to face, spontaneously.

We also understand that the Sadiq Public School family is very diverse and what will work well for a K2 student living in Bahawalpur probably will not for a K2 student living in Quetta or a P6 student living in Karachi. This is a self-contained, age-specific package of learning material prepared by SPS teachers for SPS students. You will not need to use the internet and you will not need textbooks or any other material except a normal, lined school notes book (a separate one for each subject) which you will bring back to school when lessons resume. We decided to create an e-booklet so it can be published and distributed to students and parents without needing to be printed and sent by post/courier out of concern for our environment. (There is an interesting hypothesis that the coronavirus outbreak is due to deforestation.)

Everyone's health is the top concern right now. Learning some mathematics right now is less important than protecting your health and your family's health. Not just your physical health, but also your mental health. We understand that these last few and next few months have been and will be difficult. It is very normal for everyone to be feeling worried and anxious. In such times, it is important to recognise your anxiety, understand what is causing it, and learn how to manage it by being kind to yourself, patient with others, eating well, sleeping well, doing some physical activity (there's a whole section about this later in the booklet), and trying to maintain a positive outlook. The virus outbreak will pass. We will all return to our normal lives. Inshallah!

Be happy. Not because everything is good, but because you can see some good in everything.

Yours Sincerely,

Mr Peter Giddens
Principal

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How to achieve academic success at Sadiq Public School

Our approach to teaching and learning is based on the knowledge that learning only occurs when cognitive effort is generated to the extent that information is made into a long-term memory that can be readily recalled. We use traditional teaching methods informed by current research in education and pedagogical practices.

The Sadiq Public School approach is based on:

1. Teachers impart knowledge and skills using a variety of media – talking/lecturing, written notes and diagrams on a whiteboard, demonstrations, initiating practical activities for students to experience what is being learnt.
2. All lessons are taught on the assumption that as the course unfolds, students are creating their own class notes.
3. Students use one standard textbook for each subject; the book recommended by the School. Students possess and use one lined or gridded copy book per subject, into which class notes are created. (Thinner books with less pages are preferable, to minimise the weight being carried from lesson to lesson. If students require, additional copy books should be used – but always a separate book for separate subjects.
4. A student's class notes are created from a combination of teacher-guided media and student-created media.
5. The class notes should replicate/mirror the course outline and the textbook chapter headings so that students can clearly see that their class notes match the course and the examination.
6. Teachers will show students how to use note-taking/making techniques such as underlining, using different colours, diagrams, lists, boxes, etc.
7. In general, the first half of the copy book is for class notes and the second half, indicated with some form of marker is for practice activities, e.g. homework tasks, the questions at the end of a textbook chapter, etc.
8. Students MUST keep a complete and neatly presented set of class notes. If a student misses a lesson, it is his/her responsibility to add in missed work. This may be done by copying another student's copy book.
9. Frequently, teachers will check students' copy books for completion, neatness, accuracy, etc.,

and to write personalised / individualised feedback to students.

10. Occasional paper handouts may be trimmed and pasted neatly into a copy book, but this should be kept to a minimum because the act of writing/drawing the class notes into the copy book is the student's first step in learning the material being taught by the teacher. Pasting handouts into copy books teaches students how to use a glue stick and scissors; it does not teach a student anything about the material on the handout.

Writing class notes is the basis of our teaching and learning – but of course this is supported by other experiences such as demonstrations, practical activities, etc.

Examination preparation

In the weeks before examinations, students would typically use the class notes and text book to create a set of study notes by re-writing, often in short-hand/note form, using diagrams and mnemonics etc. Doing this reinforces and consolidates the student's class notes. Students would also complete the questions at the end of each chapter on their own. They would attend lessons and, under the teacher's supervision, complete individual exam questions from past papers, in such a way that the teacher 'unpacks' a question, clarifies the demands of the question, and students and teacher collectively create 'perfect' exam answers – all of which models how a student would take an examination, i.e. read the question, unpack the requirements of the question, clarify key terms/vocabulary in the question, pause, think, plan an answer, and then write an answer.

If you can, now is a good time to buy and prepare your notes books for each subject, ready for when you return to school.

You can use these notes books to write your answers/essays/responses to the activities in this booklet.

1. English Language

1. Read a short story or a book (your choice) and then
 - a. Write a one-paragraph summary of each chapter.
 - b. Write a one-page summary of the story/book/novel describing the book's plot, characters, theme and setting.
 - c. Write two pages about your favourite character stating why you like the character the most and the characteristics which have influenced or inspired you.
2. Prepare notes for a debate about whether the government should make cigarette smoking illegal in Pakistan. So there should be arguments for and arguments against.
3. Observe something that occurs naturally – perhaps clouds moving across the sky, perhaps eagles, a cat, the sunrise, the moon and write about how this natural phenomenon affects you and your emotions.
4. Write a fictional story with a moral (message) and the characters will be a mongoose, an eagle, and a squirrel.
5. Some people have been complaining that school has been closed for so long – but one day you will be able to tell stories to people about the time you had the longest summer vacation EVER!! What have been the highlights – what will you remember about this time 20 years from now?
6. Write a travel article for a magazine or newspaper about somewhere you have visited in Pakistan. Travel articles are always informative and positive and enthusiastic, aiming to encourage others to visit the place being written about. They usually include information about how to get there, where to stay, what special things can be done or seen there and usually something interesting about the people there. Here are some possible places: Taxila, Mangala Dam, Tharparkar Desert, Cholistan Desert, Lake Khanpur, Lahore's Shalimar Gardens, the Wagha Border Crossing, Bahawalpur, Karachi, Bumburet Valley, the top of Tirich Mir...

2. Urdu Language

- 1- کرونا وبا کے دوران آپ نے گھر پر اپنا وقت کیسے گزارا؟ اپنی مصروفیات اور معمولات کی تفصیل ایک مضمون کی صورت میں تحریر کریں۔
- 2- "میرے پسندیدہ مشاغل" کے موضوع پر ایک جامع مضمون تحریر کریں۔
- 3- چھٹیوں کے دوران ٹی وی پر دیکھے گئے ڈراموں میں سے کوئی سے دو ڈراموں کا خلاصہ کہانی کی صورت میں تحریر کریں۔
- 4- عید الاضحیٰ پر آپ نے کس جانور کی قربانی کی؟ ہم عید پر قربانی کیوں کرتے ہیں؟ یہ کس پیغمبر کی سنت ہے؟ ان موضوعات پر تفصیل سے ایک نوٹ تحریر کریں۔
- 5- دوسرے شہر میں رہنے والے آپ کے کسی رشتہ دار کو کرونا مرض کی تشخیص ہوئی ہے، اس کی عیادت اور حفاظتی تدابیر جاننے کے لیے خط تحریر کریں۔
- 6- اخبارات و رسائل میں شائع ہونے والی اپنی پانچ بہترین نظمیں اپنی نوٹ بک پر چسپاں کریں۔
- 7- چھٹیوں کے دوران آپ نے کون کون سی کتابوں کا مطالعہ کیا ہے؟ ان کے نام تحریر کریں اور سب سے دلچسپ کتاب کا خلاصہ تحریر کریں۔
- 8- وزیر صحت کے نام خط لکھ کر اپنے شہر کے ہسپتال میں کرونا وارڈ کی حالت بہتر بنانے کی طرف توجہ دلائیں۔
- 9- اردو کے دس اہم شاعروں کے نام تحریر کریں اور ان کی تاریخ پیدائش اور تاریخ وفات بھی لکھیں۔
- 10- اردو کے کوئی سے پانچ قومی اخبارات کے نام لکھیں۔

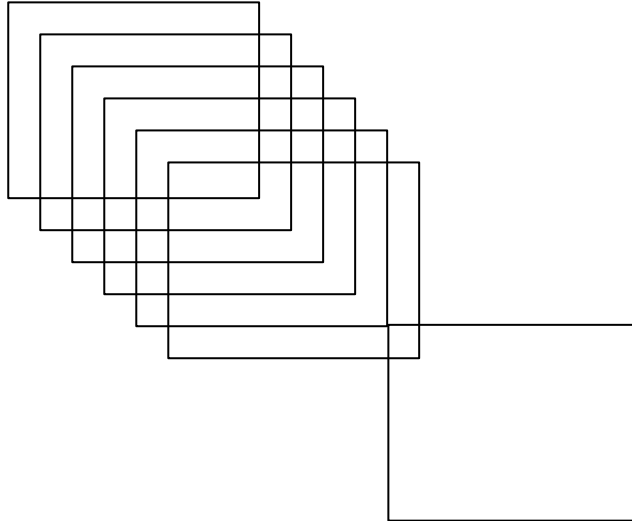
3. Mathematics

Project :

Draw any shapes on a chart paper and divide them in portions. Color the portion to express these fractions,

$\frac{1}{3}, \frac{3}{8}, \frac{4}{11}, \frac{2}{5}, \frac{1}{9}, \frac{3}{7}, \frac{2}{7}, \frac{8}{8}, \frac{7}{9}, \frac{10}{11}$. Draw a separate diagram for each fraction.

1. How many rectangles are there?



2. How old is Lucy?

When Lisa was 6 years old, her sister was half her age. If Lisa is 40 years old today, how old is Lucy?

3. Can you solve this?

$$A + B + C = D$$

$$A \times B \times C = D$$

4. What can you put between 7 and 8 to make the result greater than 7 and less than 8?

5. Find the sum.

1. $0.026 + 0.199 =$ _____ 2. $0.082 + 0.068 =$ _____

3. $0.62 + 0.077 =$ _____ 4. $1.01 + 0.101 =$ _____

5. $0.119 + 0.185 =$ _____ 6. $0.013 + 1.20 =$ _____

1. $6\frac{3}{6} + \frac{6}{11} =$ _____ 2. $3\frac{1}{4} + \frac{1}{4} =$ _____

3. $5\frac{1}{3} + \frac{1}{2} =$ _____ 4. $7\frac{1}{8} + \frac{5}{6} =$ _____

5. $4\frac{5}{12} + \frac{1}{7} =$ _____ 6. $9\frac{5}{12} + \frac{5}{7} =$ _____

6. Find the missing number.

1) $2 + 900 + 4,000 + 50,000 + 10 +$ _____ $= 354,912$

2) $400,000 + 10,000 + 900 +$ _____ $+ 40 + 2 = 412,942$

3) $50 + 70,000 + 700 + 3,000 + 0 +$ _____ $= 473,750$

4) $4 +$ _____ $+ 6,000 + 70,000 + 60 + 200,000 = 276,164$

5) $4 +$ _____ $+ 800 + 0 + 50,000 + 300,000 = 350,864$

6) $0 + 300 + 0 + 4 + 50,000 +$ _____ $= 250,304$

7. Write the 6 digit numbers.

1. _____ $600,000 + 10,000 + 7,000 + 900 + 60$

2. _____ $500,000 + 80,000 + 9,000 + 400 + 90 + 6$

3. _____ $300 + 2 + 0.8 + 0.05 + 0.005$

4. _____ $4,000 + 100 + 90 + 8 + 0.8 + 0.05$

5. _____ $100 + 0.8 + 0.05 + 0.008$

6. _____ $100,000 + 50,000 + 1,000 + 800 + 90 + 5$

8. Find the product.

1. $2\frac{4}{5} \times 1\frac{7}{9} =$ _____

2. $2\frac{1}{10} \times 3\frac{2}{12} =$ _____

3. $2\frac{5}{6} \times 3\frac{5}{10} =$ _____

4. $2\frac{8}{12} \times 3\frac{1}{3} =$ _____

5. $1\frac{2}{6} \times 1\frac{2}{5} =$ _____

6. $3\frac{1}{5} \times 3\frac{1}{2} =$ _____

9. Find the product.

1. $0.8 \times 0.1 =$ _____

2. $0.6 \times 0.06 =$ _____

3. $0.3 \times 0.06 =$ _____

4. $0.7 \times 0.3 =$ _____

5. $0.8 \times 0.07 =$ _____

6. $0.7 \times 0.5 =$ _____

10 Find the product.

1. $85.2 \times 10 =$ _____

2. $59.2 \times 10 =$ _____

3. $74.8 \times 10 =$ _____

4. $0.13 \times 10 =$ _____

5. $6.00 \times 10 =$ _____

6. $9.05 \times 100 =$ _____

11 Find the product.

1. $4 \times 7.1 =$ _____

2. $2 \times 6.2 =$ _____

3. $2 \times 1.7 =$ _____

4. $3 \times 4.0 =$ _____

5. $8 \times 0.09 =$ _____

6. $5 \times 0.66 =$ _____

9. Convert to the unit shown.

1. 31 m = _____ mm
2. 28 m = _____ mm
3. 72 m = _____ cm
4. 27 m = _____ cm
5. 16 cm = _____ mm
6. 59 m = _____ mm
7. 0.94 kg = _____ g
8. 5 kg = _____ g
9. 71 g = _____ kg
10. 9.3 g = _____ kg

12. Find the difference.

$$16 \frac{3}{9} - 10 \frac{2}{5}$$

$$8 \frac{9}{10} - 3 \frac{2}{3}$$

$$7 \frac{5}{12} - 2 \frac{1}{2}$$

13. Find the LCM of 27 and 30.

14. Find the HCF of 85 and 30.

15. Find the quotient.

1) $433 \div 10 =$ _____

2) $234 \div 10 =$ _____

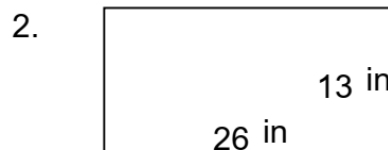
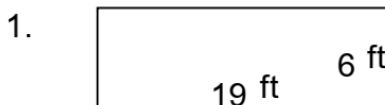
3. $9 \frac{5}{10} \div \frac{6}{10} =$ _____

4. $6 \frac{2}{3} \div \frac{1}{3} =$ _____

5) $1.6 \div 2 =$ _____

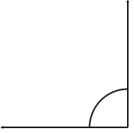
6) $0.6 \div 3 =$ _____

16. Find the area and perimeter of



17. Classify the angles as acute, obtuse and right.

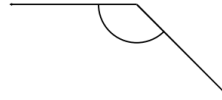
1.



2.



3.

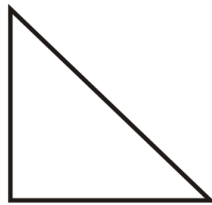


18. Classify the triangles as equilateral, isosceles, scalene or right.

1.



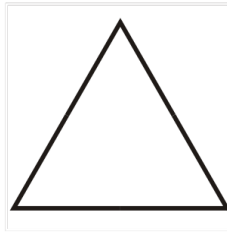
2.



3.



4.



4. Islamiat

1. Write the number of obligatory prayers and the detail of their raka'ats.
2. What is Azan: Who was the first Muazzan in Islam? Write down the translation of Azan.
3. Write and memorize the Tashahud and Dua-e-Qanoot.
4. Memorize the last four surahs of Holy Quran.
5. Describe how have you helped the people during lock down period?
6. What do you know about the generosity of Hazrat Usman (RA), what is the lesson for us in it.
7. Describe the rights of parents and neighbours.
8. How can we save ourselves and our community from the spread of Covid-19.
9. Write the method of Wuzu. Write the translation of any Ayat from the Holy Quran and a Hadith about purity.
10. What is the place of women in Islam?

5. Social Studies

1. Why do we study history?
2. How can we ever be sure that historical events are recorded accurately?
3. Make a list of reasons why early civilizations began in river valleys.
4. Why are there fragments of shells in the Cholistan Desert?
5. Which famous Greek philosopher tutored Alexander the Great?
6. The Silk Road was started in which dynasty.
7. During the second crusade, which city did Saladin recapture?
8. Civilization in Mesopotamia developed between which two rivers?
9. Write the distribution of water on the Earth.
10. Draw a world map (with pencil & paper).
11. How accurate is your map? How does it compare to the 'real map of the world'? Why is it so difficult to draw an accurate map of the world?
12. What did you put in the centre of your world map? Why?
13. What are the main differences between a globe and a map?
14. Why do we need to realize that our Earth is fragile?
15. The Earth's surface is made up of plates. What does this mean/ can you explain this?
16. What causes earthquakes? What evidence is there to support your answer?
17. Explain the big bang theory? Do you believe it? Why? Why not?
18. Draw (with a pencil & paper) a map of Pakistan – and on it, include as many as possible geographical features (in their correct places), e.g. Nanga Parbat, K2, Cholistan Desert, Karachi, Islamabad, Taxila, Indus River, Lake Khanpur, Mangla Dam, Tharparkar Desert...
19. Can you explain the lines of longitude and how they relate to time zones around the world?
20. What causes global warming and how does that cause climate change?

6. Science

Most plants are green. This is because they contain a green pigment (colouring) called chlorophyll. Chlorophyll absorbs (takes in) energy from sunlight. Plants use this energy to make food. All the food that is eaten by animals was originally made by plants. Plants give out oxygen during the daytime. The oxygen in the air, which almost all living things need to stay alive, was all made by plants.

Questions

1. Explain why some parts of the world have many more plants growing in them (for example rainforests) than other parts (for example deserts).
2. How has global warming changed where on Earth plants grow most/best?
3. Explain why animals can only live on Earth because there are plants on Earth.
4. How do you think scientists learnt that oxygen comes from plants?

The structure of a plant

A plant is a living thing. Another word for a living thing is an **organism**.

The parts of an organism are called **organs**. The diagram shows some of the organs in a flowering plant.

Leaves are the food factories of the plant. They absorb energy from sunlight, and use it to make food.

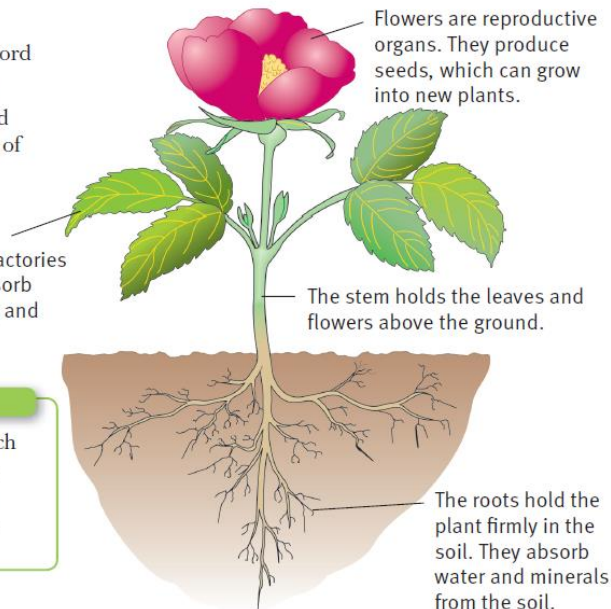
Flowers are reproductive organs. They produce seeds, which can grow into new plants.

The stem holds the leaves and flowers above the ground.

Questions

- 5 Why do you think roots branch out into the soil? You may be able to think of two reasons.
- 6 Suggest why many leaves are very broad and thin.

The roots hold the plant firmly in the soil. They absorb water and minerals from the soil.



Activity: Pressing a plant

Find a complete, small plant.

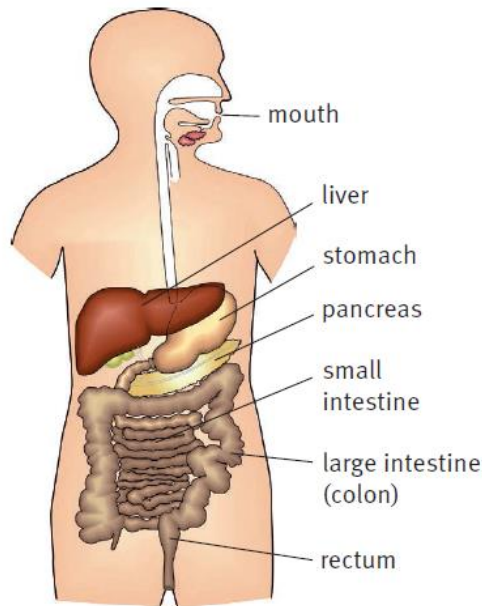
1. Wash the roots of your plant carefully. Try to get rid of all the soil, but don't damage the roots.
2. Carefully place the plant on a sheet of newspaper. Spread it out so that all of its parts are as flat as you can make them.
3. Put another sheet of newspaper over the top of your plant. Put a heavy weight on it to press the plant flat.
4. Leave your plant for at least a week to dry out.
- 5 Put your plant into your notebook and stick it down with some strips of sticky tape. Label the different organs and write down what each of them does.
- 6 Now go and plant 3 more plants – 1 to replace the one you pressed and 2 to help slow the build up of greenhouse gases.

Human organ systems

We have seen that the different parts of plants are called organs. Animals also have organs, for example, an eye is an organ. The heart is an organ, and so is the brain. The organs in a human work together in teams. A group of organs that work together is called an organ system.

The digestive system

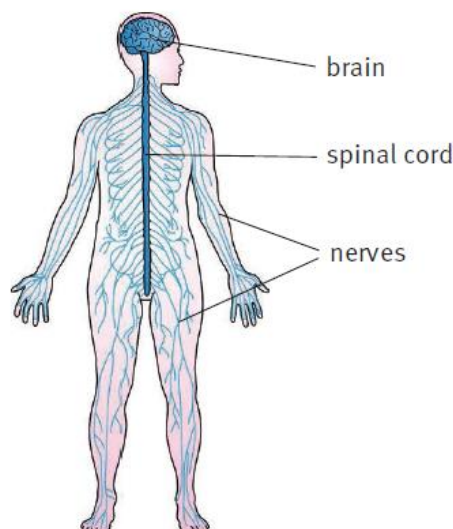
When you eat or drink, food goes into your digestive system. This is a long tube that runs all the way through the body. Food usually takes between one and three days to travel from one end of the tube to the other. Most of the food is broken down into tiny particles inside the digestive system. The breaking down process is called digestion. The tiny particles move out of the digestive system, through its walls and into the blood. The blood carries them to every part of the body.



1. Look at the diagram of the digestive system. Write down, in order, the organs that food passes through as it moves through the digestive system.
2. Some of the food you eat is not broken down into tiny particles in the digestive system. Suggest what happens to the food that is not broken down.

The nervous system

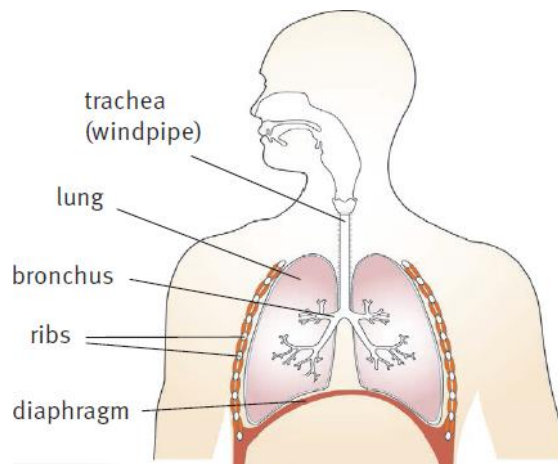
The nervous system helps different parts of the body to communicate with one another. Signals travel along nerves from the brain and spinal cord to all the other body organs. Sense organs are also part of the nervous system. For example, your eyes sense light. Signals travel from your eyes to your brain.



1. Can you describe what might happen in the nervous system when a person hits their thumb with a hammer or if they put their hand on a very hot piece of metal?
2. And so what would happen if the nervous system wasn't working properly and a person put their foot on a hot piece of metal?
3. How do you think scientists learnt that there is a nervous system and what it does?

The respiratory system

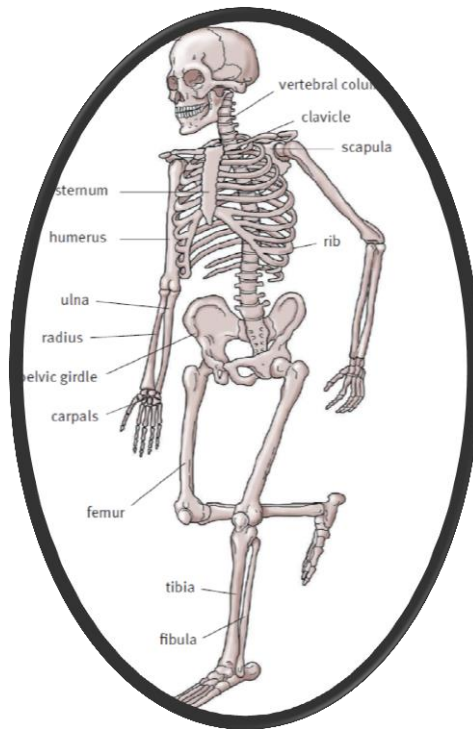
The respiratory system is where oxygen enters your body and carbon dioxide leaves it. All of your cells need oxygen, so that they can respire. This is how they get their energy. When cells respire, they make carbon dioxide, which is a waste product. Air moves down a series of tubes, until it is deep inside the lungs. This is where oxygen moves into your blood. Carbon dioxide moves out of the blood and into the lungs. The air containing this carbon dioxide moves out of the lungs when you breathe out.



1. Describe the function of the lungs – what do they do?
2. Why do all cells in the body need oxygen?
3. How does cigarette smoking and air pollution affect the lungs?
4. Can you explain why when most people breathe in and hold their breath, they float in a swimming pool – and when they breathe out, they sink?
5. Tuberculosis is a disease that mostly affects people's lungs. In the old days it was often called 'consumption' because people who had tuberculosis tend to lose weight quite quickly. Can you explain why tuberculosis would result in weight loss?
6. Tuberculosis is caused by a bacterial infection. What is a bacteria (bacterium)?

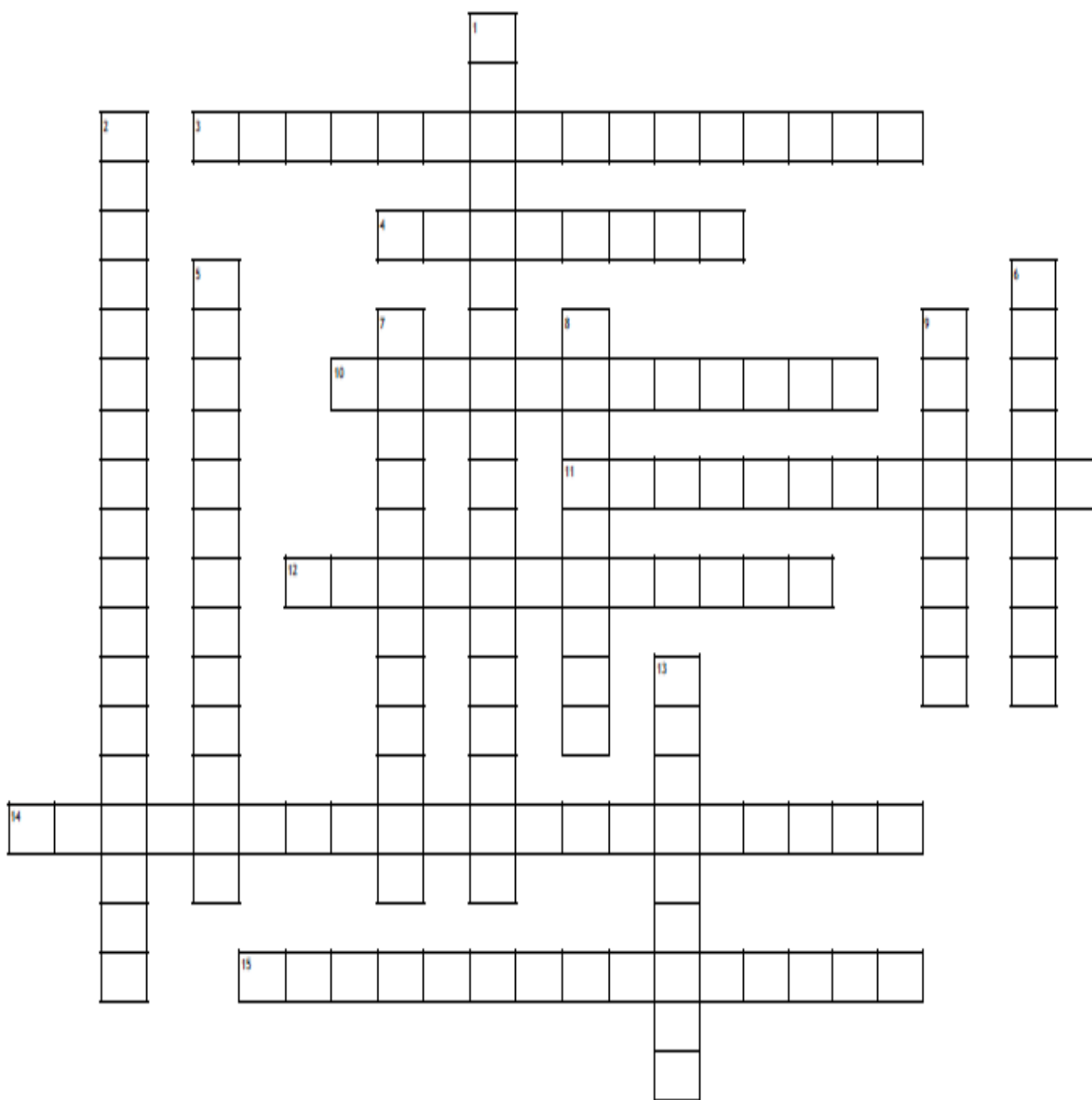
The human skeleton

Your skeleton supports your body and helps it to move. It also protects some of the soft organs inside you. The diagram shows the main bones in the skeleton.



1. List three functions of the skeleton.
2. What would happen if there were no bones in the body?
3. Look at the diagram of the skeleton. How are the bones in the arms, legs, hands, and feet similar?
4. How many ribs does a person have? (Remember that there are the same number on both sides of the body.)
5. As well as supporting the body, some bones protect other organs. Name the bones that protect the: brain, heart, lungs, spinal cord.
6. How does putting a plaster around a broken leg make the bone repair?
7. When a person breaks a bone in their leg, why do they usually have to use crutches for a while?
8. How do you think scientists discovered that there are bones inside the body?
9. How can we be sure that our own body has the same bones that are in this diagram?
10. Write at least 3 of your own questions about the human skeleton – what would you like to know about the skeleton?

Chemistry Vocabulary



Across

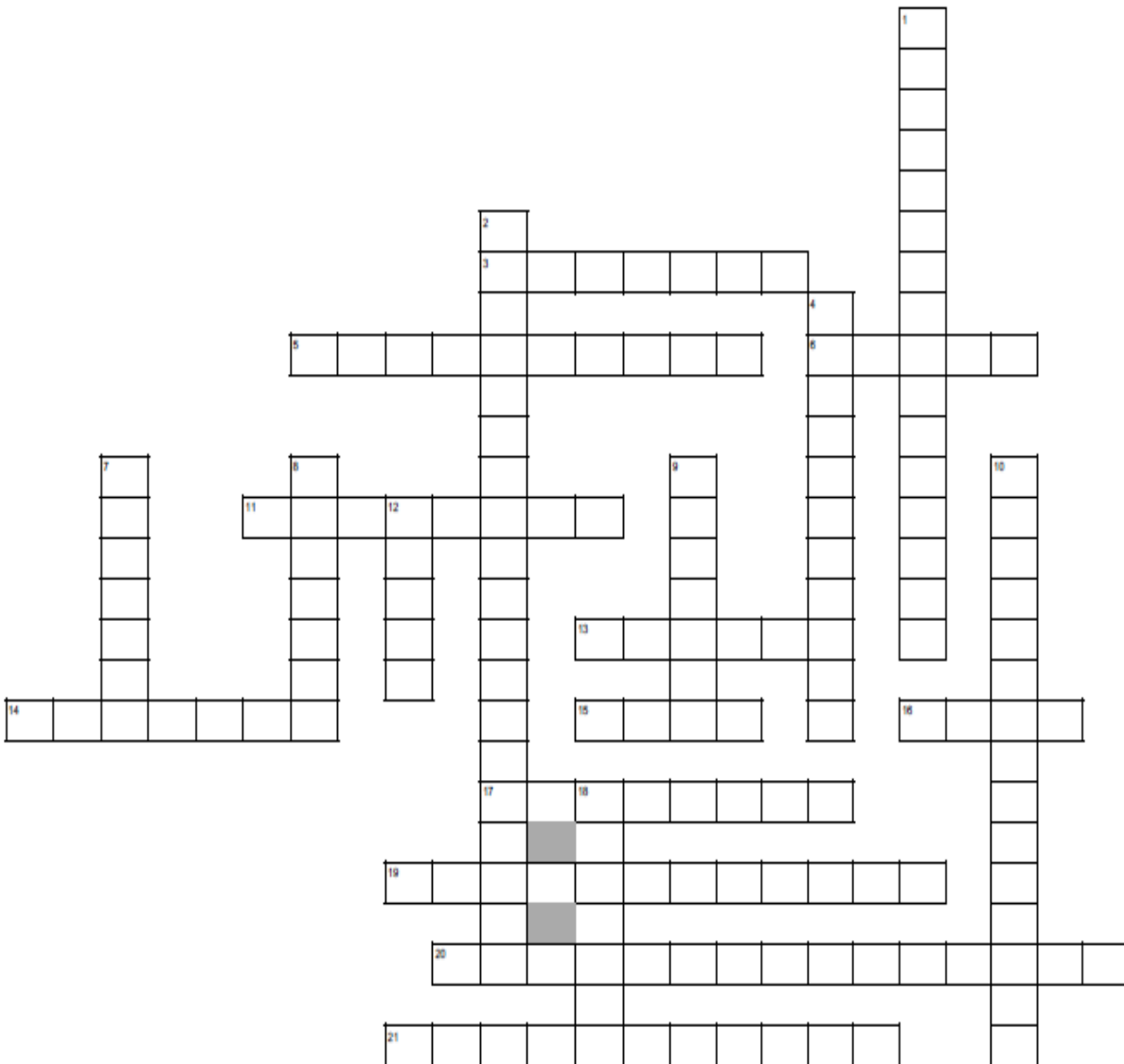
1. More than one substances turning into other substances.
2. Substances that are made.
3. Attraction formed when elements share electrons.
4. Numbers in front of each substance in an equation.
5. Force that holds atoms together in a compound.
6. Mixture in which different materials can easily be distinguished.
7. A formula that shows what elements are in a compound and what it will become.

Down

1. Amount of energy required for a liquid to become a gas.
2. Contains 2 or more gases, liquids, or solids substances blended evenly.
3. Explanation of how particles in matter behave.

4. A type of matter with a fixed composition.
5. Attraction formed when elements share electrons.
6. Substances that react.
7. A neutral molecule that forms as a result of electron sharing.
8. Force of attraction between opposite charges.

Physics Forces



Across

1. The pulling force exerted by each end of an object
2. The ability of a material to return to its original shape after being stretched or compressed
3. The rate at which something moves
4. The overall force acting on an object
5. A body's relative mass or the quantity of matter contained by it
6. The branch of science concerned with the nature and properties of matter and energy
7. Amount of matter present in an object
8. Exert force on something
9. The force exerted on the surface by another when there is no motion between the two surfaces
10. A diagram showing all the forces acting on an object, the force's direction and its magnitude
11. For every action there is an equal and opposite reaction, acceleration: the net result of any and all forces acting on the object (change in velocity). Velocity: how fast and in what direction an object moves
12. The support force exerted upon an object that is in contact with another stable object

Down

1. The greater the mass, the greater the amount of force needed (to accelerate the object)
2. A force trying to cause a stationary object to start moving
3. English Physicist
4. The force that attracts a body toward the center of the earth
5. Standard International (SI) unit of force
6. The branch of science concerned with the nature and properties of matter and energy
7. An object at rest will remain at rest unless acted on by an unbalanced force. An object in motion continues in motion with the same speed and in the same direction unless acted upon by an unbalanced force
8. Strength or energy as an attribute of physical action or movement
9. The resistance of any object to any change in its state of motion

7. Computer Studies

1. What is a computer?
2. List 10 uses of computers.
3. List 5 mis-uses of computers
4. What is a network of computers?
5. Why or in what situations is a network of computers more useful than a single computer?
6. What do the following abbreviations mean?
 - a. CPU
 - b. RAM
 - c. GB
 - d. WWW
7. Give the names of 3 input devices and 3 output devices.
8. Why do computers have fans in them? And how does the fan work?
9. What is software and what is the difference between an operating system and an application?
10. What are pixels and how are they used to make pictures and videos on a computer's monitor?
11. What is cyber-bullying? Why do you think people post humiliating/cruel/nasty/false information about other people on public websites like Youtube and social media such as Facebook? How does cyber-bullying affect the target/victim?
12. Write an essay that describes 3 ways in which computers have made people's lives better – and 3 ways in which people's lives have been made worse by computers.
13. Are computer games good or bad? Explain your answer with at least 3 arguments for and 3 arguments against.
14. Why are the letters on the keyboard laid out in such a strange pattern? And why is the space bar so large? Are keyboards the same in all countries? China? Germany?
15. How can you know if something you see or read on a website is true or not?
16. Would you feel safe traveling in a car that was being driven by a computer and not a person? Why/why not?
17. Describe what happens to all the elements that make up a computer when a computer is 'thrown away'.
18. What do you think will be the next really big, new thing with technology? Time travel? 3-D printing of food? A computer that asks you questions when you are sick, measures your blood pressure and heart rate, tests your blood... and then 3-D prints a pill to make you feel better? Robots to do your homework.
19. Roald Dahl wrote a short story about a computer that wrote books. Do you think computers can write books/stories or create art? Why/why not?
20. If you traveled back in time to when you grandparents were at school, and you tried to explain to someone what a computer is, what would you say – and what questions do you think they would ask you about computers?

8. Critical Thinking

Thinking critically means to question new information before accepting it as true. If you are told something new or read something new, here are some questions that you can ask before accepting the new information as true...

What: -is the source of the information and is it a reputable and reliable source?
- are some alternative explanations/perspectives?

Who: -benefits (or could benefit) from this information?
-else have you heard discuss this?
-is this harmful to?
-would be best to ask for more information about this topic?
-is the person generating this information and what is their expertise in the matter?

Where: -could we search for supporting information or information to refute the information?
-are similar concepts/information available?
-has this information come from to you?

When: -was this information created?
-was the information received (compared to when it was created)?

Why: -is the information relevant to you/others?
-has the information been created and communicated?
-are people influenced by this information?
-is this information needed now?

How: -is this information similar to other information?
-can this information be used?

Read the following 3 news article and apply some critical thinking questions to answer the basic question: should I believe this new information? Which articles do you think are true, not true, not sure and would want more information before deciding? Does the source (where you receive information from) matter in your critical thinking?

Article 1:

The first Arab space mission to Mars has blasted off aboard a rocket from Japan, with its unmanned probe – called Al-Amal, or Hope – successfully separating about an hour after liftoff.

A live feed of the launch showed the rocket carrying the probe lifting off from the Tanegashima Space Centre in southern Japan at 6.58am (9.58pm GMT).

Almost exactly one hour later, the feed showed people applauding in the Japanese control room as the probe successfully detached.

In Dubai, the launch was met with rapturous excitement, with the UAE Mars mission's deputy project manager Sarah al-Amiri declaring it "an indescribable feeling" to see the probe blasting off.

"This is the future of the UAE," Amiri, who is also minister of state for advanced sciences, told Dubai TV from the launch site.

The Emirati project is one of three racing to Mars, including Tianwen-1 from China and Mars 2020 from the United States, taking advantage of a period when the Earth and Mars are nearest.

In October, Mars will be a comparatively short 38.6m miles (62m km) from Earth, according to Nasa.

Hope is expected to reach Mars's orbit by February 2021, marking the 50th anniversary of the unification of the UAE, an alliance of seven emirates.

Unlike the two other Mars ventures scheduled for this year, it will not land on the planet, but instead orbit it for a whole Martian year, or 687 days.

While the objective of the Mars mission is to provide a comprehensive image of the weather dynamics in the red planet's atmosphere, the probe is a foundation for a much bigger goal – building a human settlement on Mars within the next 100 years.

The UAE also wants the project to serve as a source of inspiration for Arab youth, in a region too often wracked by sectarian conflicts and economic crises.

On Twitter, the UAE's government declared the probe launch a "message of pride, hope and peace to the Arab region, in which we renew the golden age of Arab and Islamic discoveries."

Source: *The Guardian* (July 20, 2020), <https://www.theguardian.com/science/2020/jul/20/uae-mission-mars-al-amal-hope-space>

Article 2:

A couple living on the South Island's Otago Peninsula in New Zealand are not giving up hope of finding their beloved dogs – despite having spent \$20,000 (£10,400) and nine months scouring the country for them, to no avail.

Nine-year-old black poodle Dice and three-year-old fox terrier Weed went missing from Alan Funnell and Louisa Andrew's home in October last year.

Since then, Funnell has spent one weekend a month traversing the South Island searching for them.

He and Andrew say they have put up about 400 signs and spent at least NZ\$20,000 in their mission.

"Our dogs to us are like our family, we just know they are out there somewhere," Funnell said. "New Zealand is really not that big a place."

The saga started when Andrew went to feed the couple's chickens and let the dogs out of the car. They ran off, perhaps chasing a rabbit, and did not return.

"We called and called, and they didn't come," said Funnell. "We love our animals. They are great wee dogs. We are not going to give up until we find them."

Members of the public have helped with putting up signs which are now spread throughout country – from the tip of the North Island to the bottom of the South Island.

The couple have raised more than \$10,000 to help with the search from almost 300 donors. "We got a huge amount of support throughout New Zealand and we are lucky to have that," Funnell said.

Funnell thinks the dogs were picked up by tourists after a sighting came through of two dogs being tied to a campervan in the area.

“We have been through a rollercoaster of emotions in the process of it all. We are sure they are alive. We have come to being positive about things,” said Funnell.

“We can feel them out there.”

Source: *The Guardian* (July 20, 2020),
<https://www.theguardian.com/world/2020/jul/20/new-zealand-is-not-that-big-a-place-the-nine-month-20000-search-for-two-lost-dogs>

Article 3: American Airlines To Phase Out Complimentary Cabin Pressurization

FT. WORTH, TX—Explaining that the costs of the service have grown too high in recent years, American Airlines announced Tuesday that it will no longer offer free cabin pressurization to passengers starting March 15. “Unfortunately, to stay competitive as a legacy carrier in today’s air travel market, it no longer makes economic sense for us to provide breathable air at altitude,” said American Airlines CEO Doug Parker, noting that despite the cutbacks, air pressurization would still be available to first- and business-class travelers as well as those willing to pay an additional fee. “While we regret any altitude sickness, blood problems, dimmed vision, or hyperventilation that may result from air pressure less than a third normal levels, we remind our customers that such effects will diminish as soon as the aircraft descends below 10,000 feet.” Parker added that the company is also planning to discontinue

complimentary landing gear on flights under four hours.

Source: *The Onion* (25 February, 2014)
<https://www.theonion.com/american-airlines-to-phase-out-complimentary-cabin-pres-1819576190>

Article 4: Nutritionists Admit You Can Just Eat Hotdogs

And Live Like That For Basically Decades

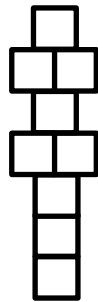
DENVER—Conceding that people can, in fact, survive indefinitely on a daily diet consisting solely of hotdogs, top nutritionists admitted Wednesday that you could just eat hotdogs and live for basically decades. “We put a lot of work into formulating dietary guidelines based on discoveries and advancements in the field of food science, but honestly, if you just ate hotdogs three times a day every day, you’d be okay,” said nutritionist Alison Lawler, noting begrudgingly that a supermarket hotdog contains sufficient proteins, carbohydrates, and minerals to sustain an average human well into their 80s. “You won’t be healthy per se, but you’d last on hot dogs for years and years. You wouldn’t feel great, you’d be a bit weak and tired, but that’s about it. And you’d most likely be reasonably happy, because hot dogs are tasty and satisfying. Now, by no means are we recommending that you stock your pantry full of hot dogs, but we have to admit, that wouldn’t be the end of the world.” At press time, the nutritionists were not available for further comment as they had all gone out for hotdogs.

Source: *The Onion* (20 July, 2020).
<https://www.theonion.com/nutritionists-admit-you-can-just-eat-hot-dogs-and-live-1844383727>

9. Sports

Sadiq Public School's curriculum is more than just academic subjects. This is one of the main ways that Sadiq Public School is so unique. We aim for all students to learn the value of team sports sportsmanship and good health through regular physical activity. You can learn some of these even while at home.

1. Choose 2-3 physical exercises and practice doing these every day. It may be press ups, step ups (walking up and down 3-4 stairs repeatedly), star-jumps, squats... You should do 2-3 of these every day for about 30 minutes every day. Early in the morning is probably better. You are aiming to make it a daily habit that you will still be doing when you're 50 years old. You can challenge yourself to do more each day or more in the 30 minute session. You can challenge your parents (but remember that they're very old and so be gentle with them).
2. Think of a skill-based physical activity that involves some coordination, such as juggling three balls or skipping rope. Now teach yourself how to do this. And when you're proficient, teach someone else. Why? Doing these things occupies your brain which means you're not thinking about other things – so these activities become a good way to relax, distract your brain from things that cause you stress.
3. Ball games are good for reducing stress, and sneakily using up energy and so keeping you for and healthy and helping you to sleep properly. If you have brothers and sisters at home you can ball games like mini-cricket, catching & throwing, bouncing a ball against a wall and catching it (who knows you may be selected as wicket-keeper for the 1st XI).
4. Hop-scotch. You might have to ask your parents how to play this. With chalk, draw a grid of 9 squares on a paved area



Stand at the bottom of the grid. Each square has a number 1-9 in it (I can't draw the number with my computer, but you can with chalk.) Use a small stone and slide it first to the 1st square. Hopping, jump over the square with the stone in it, continue hopping up the grid in the correct order, turn around, hop back to the 2 square, bend down and pick up the stone (you're not to put your other foot on the ground otherwise it's too easy), and then back to the start. If you succeed, now slide the stone to the 2 square and hop away, and back, bend down pick up the stone, hop to the start... etc. If you miss the square with you stone, or you put your non-hopping foot down your turn has ended and the next player starts. Yes, parents can play too, but not your neighbours or your cousins who live in Lahore because they're staying home and staying safe. If you don't like my rules, make your own. But once you make the rules, no cheating.

10. Community service

Community service simply means serving our community – doing something to help the community. In the current situation we can all serve our community by staying at home / staying away from other people and washing our hands frequently with soap because when we do this we stop the virus being passed from one person to another. If we all do this, our whole community will be helped.

You can help the whole world's community by doing what you can to reduce plastic waste. You can do this by refusing plastic bags at shops. Make your own paper bags at home and take these to the shops and so not use plastic bags. Buy less (or even none) products that have plastic packaging. Glass can be recycled and so that's fine.

Bury biodegradable waste in your garden rather than send it by rubbish truck to a dump somewhere. Fruit, vegetable scraps, leftover food etc. will rot in your garden and so quickly convert back into soil and return nutrients to plants. Paper waste will do the same.

Turn off lights and other electricity-users when not needed and do not let water taps run needlessly.

Look for ways to help others. Practise saying, 'can I help you?' with family members and then helping will become part of who you are.

There is an interesting theory that the virus that has caused this current situation was passed to humans because animal habitats, especially forests, are being destroyed. Destroying forests, whether for the timber, for clearing land to use for agriculture, or simply to burn the wood as fuel, is called deforestation and it is the main cause of climate change. The next few pages will help you learn more about deforestation and its very bad effects on the planet and human life.

THERE IS ONLY ONE PLANET EARTH



Deforestation is the removal of forest from land which is then converted to agricultural or urban use. Most deforestation occurs in tropical rainforests such as the Amazon Rainforest.

Between 2000 and 2012, about 890,000 square miles of forests around the world were cut down. Only about 2.4 million square miles of the Earth's original 6 million square miles of forest remains. An area about size of a football field is cleared from the Amazon rainforest every minute for agriculture.

Deforestation is a significant contributor to global warming because it is responsible for about 20% of all greenhouse gas emissions.

According to the UN's Food and Agriculture Organization, almost 80% of all deforestation is driven by agriculture. The UN Framework Convention on Climate Change says the primary cause of deforestation is agriculture.

Subsistence farming is responsible for almost half of all deforestation (48%), with commercial agriculture (32%; logging (14%), and fuel wood (5%) the other causes.

The EU is a major importer of agricultural products, such as palm oil, soy, and cocoa, products commonly associated with agricultural land that was recently forested land. EU countries are keen to reduce the impact of their commercial activities on forests and deforestation. France's government, for example, announced it will 'encourage every actor (producers, businesses, investors, and consumers), to change their practices in order to reduce deforestation.' The French government passed a law stating that palm oil is not considered a biofuel.

In 2008, the EU agreed to stop global forest cover loss by 2030. The UN declared a Sustainable Development Goal of ending deforestation by 2030.

Which countries are worst affected by deforestation?

South & Central America

Large areas of Brazil's share of the Amazon rainforest is being destroyed by illegal logging, exacerbated by government corruption. Deforestation in Peru's share of the Amazon rainforest is due to illegal logging and clearing forests for use as agricultural land. Bolivia's large soya industry and cattle-ranching are the country's main causes of deforestation and the Bolivian government is unlikely to risk the country's food security. Mexico's avocado industry is responsible for the loss of tropical and pine forests.

Asia Pacific

Indonesia's palm oil industry has driven destruction of its rainforest and also its wetlands, with more than 5000 square miles cut down annually to supply palm oil. More than 2000 square miles of Russia's vast forests are lost to wildfires annually. Logging and the palm oil industry account for about 1000 square miles of trees lost in Papua New Guinea annually.

Africa

In Sudan, about 500 square miles of trees are cut down every year to be used as household cooking fuel and heating, and for commercial production of steam-generated electricity. Just 6% of Nigeria's original forests remain because of trees being cut for household cooking fuel and heating.

While these countries are where deforestation is occurring the most, all countries are affected by deforestation because it is a significant factor in global warming and therefore climate change.

Activities

1. Write the following words into your book and then write an explanation of the word.

deforestation
 agricultural
 rainforest
 greenhouse gas
 primary cause
 subsistence farming
 logging
 fuel wood
 palm oil
 sustainable
 corruption
 food security

2. Explain why deforestation is a problem for our environment.

3. Explain which countries / regions are most affected by deforestation.

4. Describe the main causes of deforestation.

5. Research: Explain how cutting a tree down contributes to green house gas emissions and therefore global warming.

6. Create: Write a letter to Bolivia's President asking for Bolivia's government to please stop deforestation.

7. Critical thinking: Describe how might you check this article to be sure it is accurate.

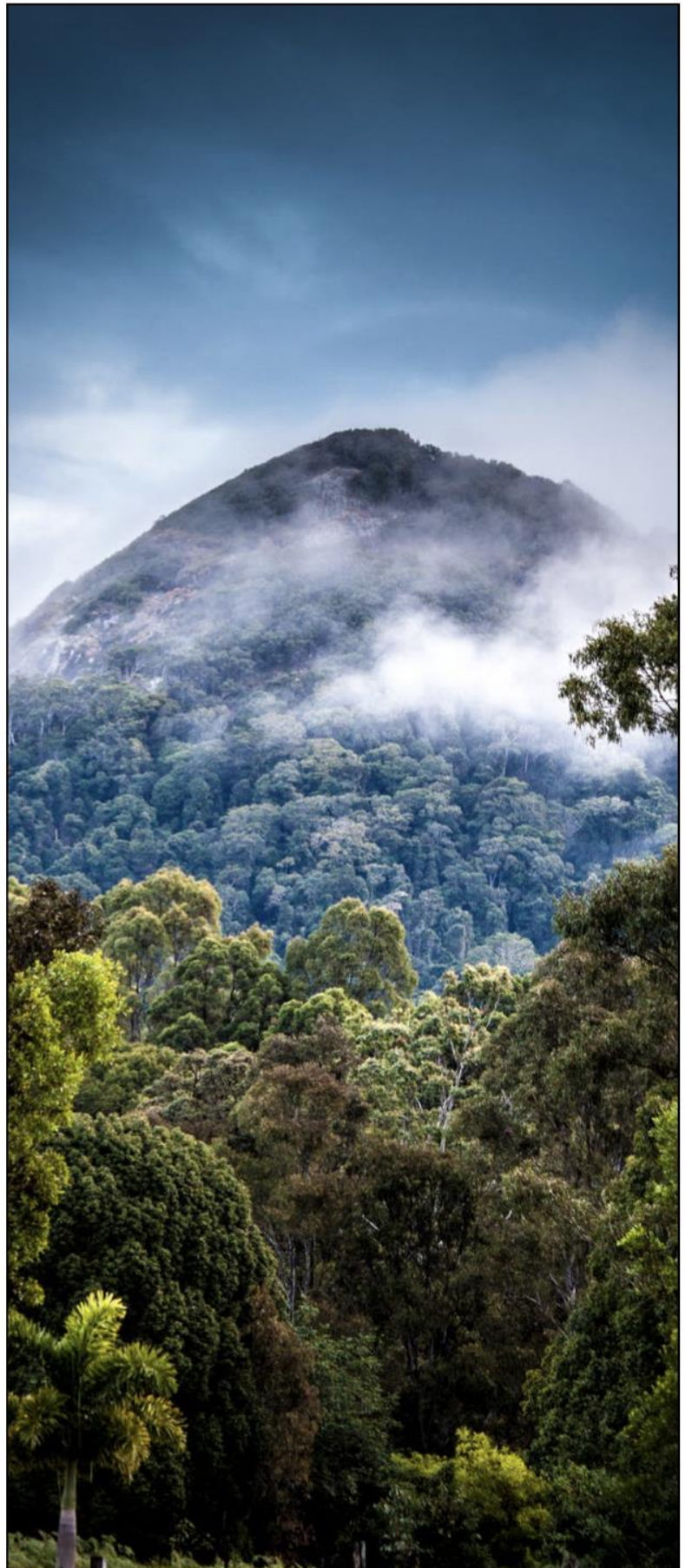
8. Reflect: List at least three things you learnt about deforestation from this material.

9. List 3 questions related to information in this article to which you would like answers. Describe how could you find the answers to your questions and how you can be sure they are accurate.

THERE IS ONLY ONE PLANET EARTH

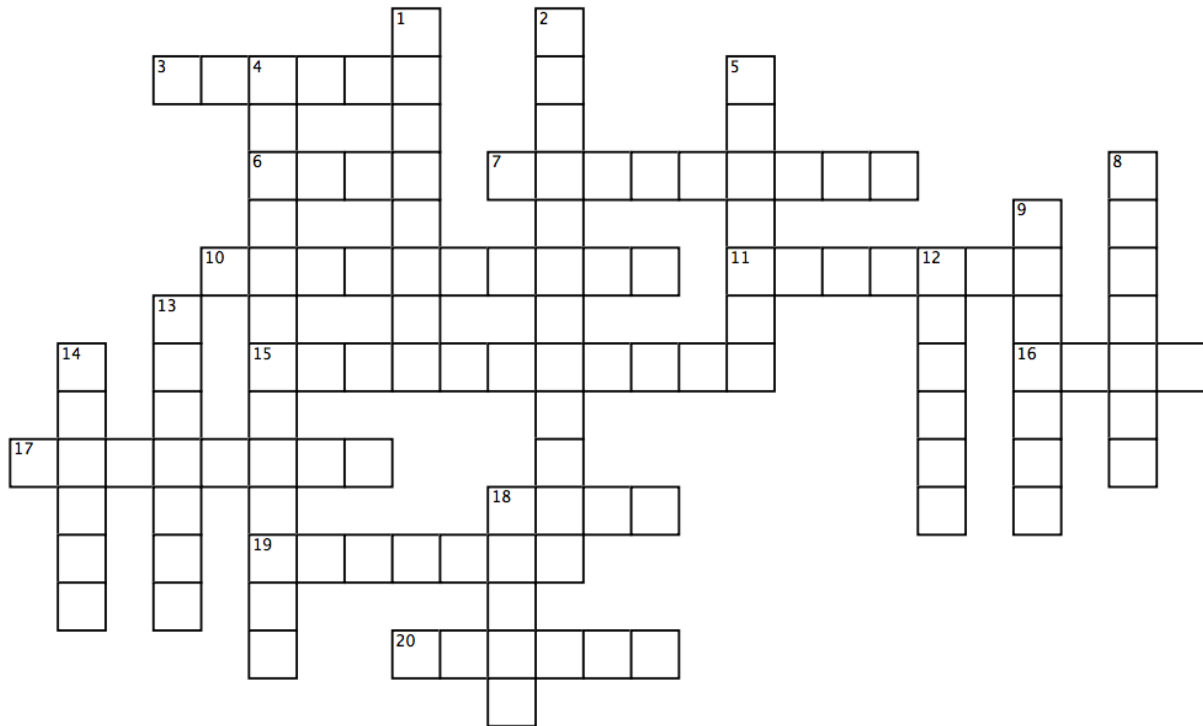
What can I do?

1. Learn more about the forests near where you live. Learn what plants and animals live in the forest. When you know about a forest, you will be more inclined to take care of it.
2. Ask your friends to visit a forest so they can learn about it. Is there anything you and your friends can do? Gathering plastic trash from the forest, for example.
3. Palm oil, soy, beef, and cocoa are the main agricultural products that are responsible for global deforestation. Use the internet to find out what products these ingredients are used to make, for example palm oil is used in the production of some low-quality chocolate and soap. Find out which companies use it and stop buying their products.
4. Write to the companies that use these products and tell them you have stopped buying their products because they are major causes of deforestation.
5. Use your social media accounts to tell your friends about deforestation, what its effects are, what causes it, and what they can do to help.
6. Send emails to government officials and tell them you do not want your country contributing to deforestation by buying these products.
7. Find a local organization that plants trees and help.
8. Grow seedlings and when they are big enough, plant them around your neighborhood. Encourage your teachers to start a program in your school in which students grow seedlings and plant them in an area that needs trees.



Deforestation 1

Answer the crossword using information from the article.



Across

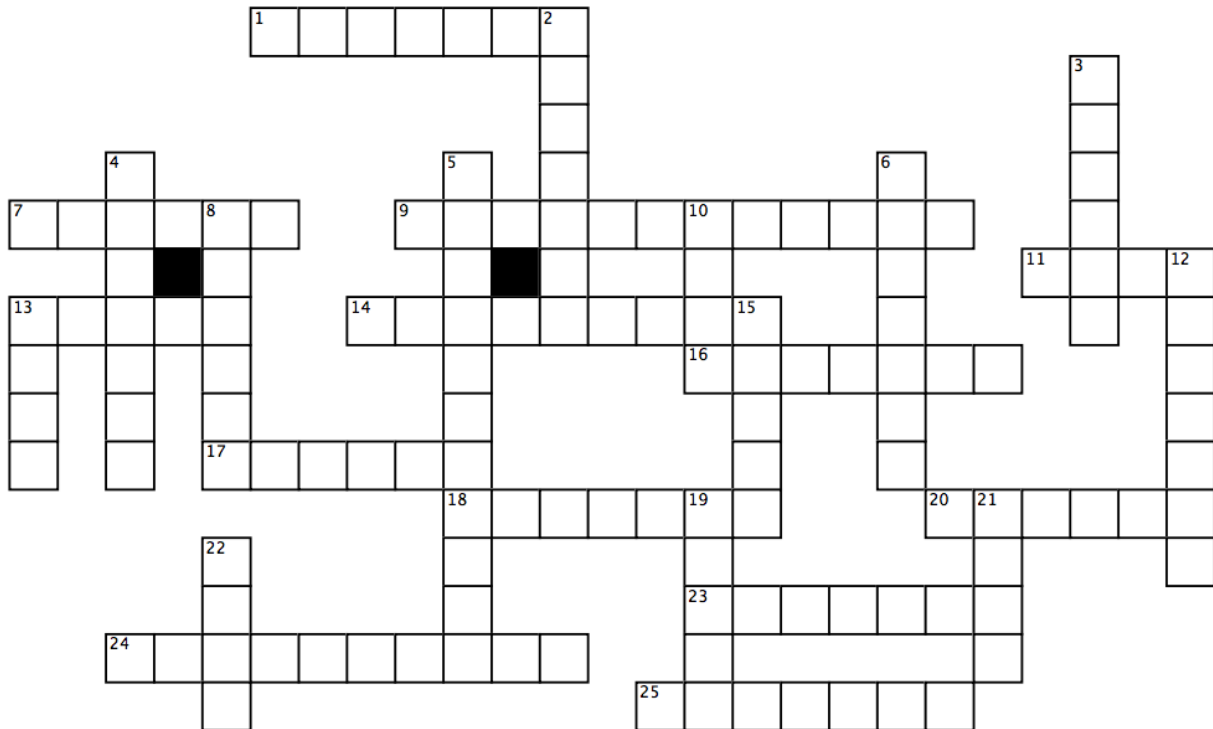
3. France's government announced it will 'encourage every actor (producers, businesses, investors, and consumers), to change their practices in order to _____ deforestation.'
6. In Sudan, trees are cut down to be used as household cooking _____ and heating, and for commercial production of steam-generated electricity.
7. More than 2000 square miles of Russia's vast forests are lost to _____ annually.
10. Deforestation is responsible for about 20% of all _____ gas emissions.
11. Mexico's _____ industry is responsible for the loss of tropical and pine forests.
15. _____ farming is responsible for almost half of all deforestation.
16. The UN declared a Sustainable Development _____ of ending deforestation by 2030.
17. An area about size of a _____ field is cleared from the Amazon rainforest every minute for agriculture.
18. The French government passed a law stating that _____ oil is not considered a biofuel.
19. Deforestation in Peru's share of the Amazon rainforest is due to _____ logging and clearing forests for use as agricultural land.
20. Only about 2.4 million _____ miles of the Earth's original 6 million _____ miles of forest remains.

Down

1. Indonesia's palm oil industry has driven destruction of its rainforest and also its _____.
2. The EU is a major importer of _____ products, such as palm oil, soy, and cocoa.
4. _____ is the removal of forest from land which is then converted to agricultural or urban use.
5. All countries are affected by deforestation because it is a significant factor in global warming and therefore _____ change.
8. The _____ cause of deforestation is agriculture.
9. Large areas of Brazil's share of the Amazon rainforest is being destroyed by illegal _____, exacerbated by government corruption.
12. Most deforestation occurs in tropical rainforests such as the _____ Rainforest.
13. Just 6% of Nigeria's original forests remain because of trees being cut for household cooking fuel and _____.
14. Deforestation is a significant contributor to _____ warming.
18. Logging and the palm oil industry account for about 1000 square miles of trees lost in _____ New Guinea annually.

THERE IS ONLY ONE PLANET EARTH

Deforestation 2



Across

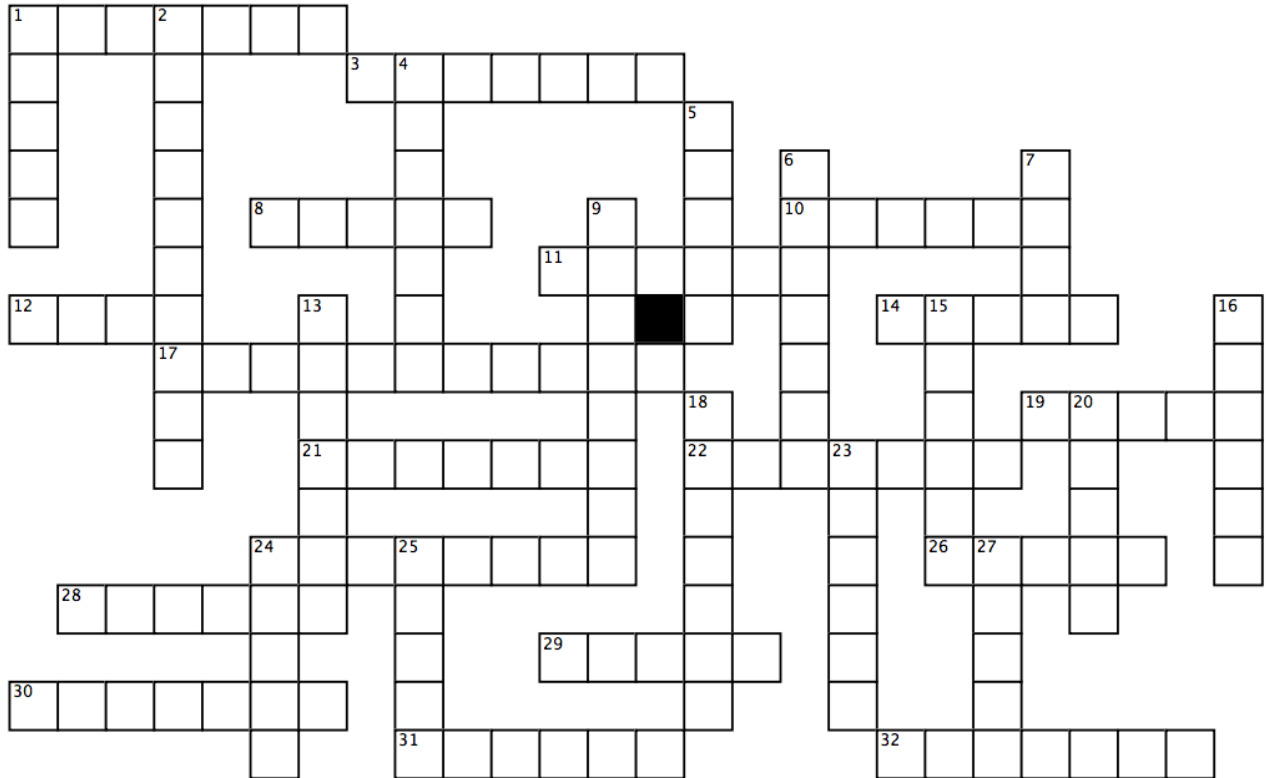
1. 80% of all land _____ and plants live in forests.
7. Forests absorb greenhouse gases that would otherwise fuel _____ warming.
9. Deforestation occurs because people clear forested land to make space for _____ activities such as cattle ranching.
11. Forests keep the _____ moist by blocking the sun and inhibiting evaporation.
13. Cutting down _____ releases carbon dioxide into the atmosphere.
14. Deforestation of tropical rainforests adds more carbon dioxide to the atmosphere than all cars' and trucks' _____.
16. Forests absorb carbon _____ and release oxygen.
17. _____ has the largest area of land deforested.
18. Most deforestation occurs in rainforests which are concentrated in the _____.
20. Deforestation results in more than 1.5 billion tons of _____ dioxide being released into the atmosphere every year.
23. Forests absorb and store carbon, so that when trees are cut down, the carbon is released into the atmosphere contributing to the greenhouse effect which causes global warming which causes _____ change.
24. If the current rate of deforestation continues, 100 years from now there will be no more _____.
25. Deforestation occurs because people take wood for household fuel and _____.

Down

2. Forests are home to millions of plant and animal _____.
3. The _____ rainforest is one of the Earth's most threatened forests.
4. _____ are one the main natural factors that regulate and determine the Earth's climate.
5. _____ is one of the most significant causes of deforestation.
6. Deforestation is the main cause of global _____ and therefore climate change.
8. Deforestation has a double effect: it releases carbon dioxide and there are less trees to _____ carbon dioxide.
10. Forests cover a large proportion of the world's _____ area, but large areas of forest are being lost each year.
12. Deforestation is caused by household fuel burning, agriculture, and unsustainable _____.
13. Deforestation is the loss of _____ cover, due to forests being cleared.
15. Forests are called 'carbon _____' because they trap or hold carbon.
19. Forests play a significant role in the water _____ by releasing water vapor into the atmosphere.
21. Although Brazil has lost the largest _____ of forest, Comoros has lost 50% of its forests.
22. Forests prevent _____ erosion.

THERE IS ONLY ONE PLANET EARTH

Brazil



Across

- Early sailors often called Brazil Terra di Papaga (Land of _____).
- Rio de Janeiro is home to two well known _____, the Ipanema and the Copacabana.
- The predominant religion throughout Brazil is _____ Catholic.
- Brazil has been the world's largest producer of _____ for more than 150 years.
- The Alchemist, by the Brazilian author Paulo _____ de Souza, has sold over 83 million copies, and so is one of the most sold books ever.
- Brazil spans _____ time zones.
- Sao _____ is the most populous city in the southern hemisphere.
- Brazil's Itaipu Dam generates the most _____ - of all the world's hydroelectric plants.
- In the 16th century Brazil's major export was _____, but in the 17th century it was gold.
- Brazil is the largest country in South _____.
- Rio de Janeiro hosted the 2016 _____ Games and 2016 Paralympic Games.
- In September 1822 Brazil declared independence from _____ and declared Prince Pedro de Alcântara the first Emperor of the Brazilian Empire.
- Most Brazilians _____ Portuguese.
- The Iguazu Falls are on the Brazil-Argentina _____.
- The Amazon River _____ includes the vast Amazon rainforest.
- Brasilia was planned and developed in 1956 to move the capital from Rio de _____ to a more central location.
- Deforestation of the _____ rainforest has a double-effect on the greenhouse effect and therefore climate change: living trees store CO₂ and dead trees release CO₂ into the atmosphere.
- In 2014-2016 a severe _____, caused by El Nino, had a significant impact on Sao Paulo and Rio de Janeiro.

Down

- In 1831, Brazil's Emperor, Pedro I abdicated, returned to Portugal, and passed the monarchy to his five year old son, _____ II who was eventually crowned in 1841.
- The Amazon _____ has the greatest biological diversity in the world.
- Brazil is the only country with the _____ and the Tropic of Capricorn running through it.
- The final of the 2014 football _____ Cup was played at the Maracana Stadium in Rio de Janeiro
- Brazil's _____ is eighth-largest by GDP.
- Brazil's currency, the _____, is pegged to the US dollar.
- Brazil's national sport is _____ and the men's national team has won the World Cup 5 times.
- Brazil borders all South American countries except _____ and Chile.
- Brazil remained neutral in World War 2 until 1942, at which time it joined the _____.
- The _____ the Redeemer statue overlooking Rio de Janeiro is 30 metres tall and was built in 1931.
- The Amazon basin includes land in Brazil as well as _____, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela.
- 85% of Brazil's population live in _____ areas.
- The Christ the Redeemer statue overlooking Rio de Janeiro is 30 _____ tall and was built in 1931.
- In 1500 _____ Alvares Cabral claimed the area of Brazil for the Portuguese Empire and it remained a Portuguese colony until 1808.
- Brazil's original official name was _____ da Santa Cruz (Land of the Holy Cross).
- Brazil's capital city is Brasilia, but the largest city is Sao _____.