

# Sadiq Public School



## Distance Learning for P7

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 on September 15<sup>th</sup>, 2020. Let me be clear – Sadiq Public School is planning for a full school year from September 15<sup>th</sup> 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

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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

## Task: Reading

Read any two books which are age appropriate and easily available.

Activities after reading:

### 1. Movie Maker

Write a persuasive note to a film producer explaining why the story would or would not make a great movie.

### 2. Adjectives

Write five adjectives for the book or main character(s), and explain how they best express the book or the character.

### 3. Dear author

After reading the book, write to the author through the publisher (who always forwards them) telling him/her why you liked reading this book (or why not) and suggest ideas for the sequel.

### 4. Comparisons

Watch a film inspired by a story (e.g., *Franny and Alexander* is inspired by *Hamlet*) and compare/contrast the book and the movie.

### 5. Second chance

Talk or write about how it would change the story if a certain character had made a different decision earlier in the story (e.g., what if Alice had not run down the rabbit hole?)

## Task: Writing

1. Read English newspaper daily. If newspaper is not available, watch news channel mainly BBC and Write three news headlines in your own words.

2. Write five difficult words you read or hear from the news, write their meanings and use them in sentences of your own.

3. Write a short story/personal account of how you felt during Covid-19 enforced lockdown, describe your emotions, any new skills you learnt during this time, and how it changed your life, etc.

5. Write a letter to the editor of a newspaper or magazine in order to share your ideas to start a campaign to spread awareness among the masses about social distancing and following all the SOPs issued by WHO regarding Covid-19.

6. Write essays on these topics. (200 to 250 words )

- Think about a time you had to be friends again with someone after an argument.
- My idea of a "Perfect Day."
- Imagine the world after the pandemic is over.

7. Write a fictional story with a moral (message) and the characters will be a mongoose, an eagle, and a squirrel.
8. 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?
9. 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- بچوں کے مختلف رسائل میں سے پانچ بہترین کہانیاں منتخب کریں اور ان کو اپنے الفاظ میں تحریر کریں۔
- 2- عید الاضحیٰ کے حوالے سے اخبارات میں شائع ہونے والے آرٹیکلز کا مطالعہ کریں اور ان سے حاصل ہونے والی معلومات کو اپنے الفاظ میں تحریر کریں۔
- 3- کرونا کی وبا کے لیے حکومت نے جو لائحہ عمل ترتیب دیا ہے اس کی تفصیل لکھیں۔
- 4- چھٹیوں کے دوران آپ کا صبح سے شام تک روزانہ کا کیا معمول رہا۔ تفصیل سے تحریر کریں۔
- 5- کرونا کے بارے میں حفاظتی تدابیر کا خیال رکھتے ہوئے آپ نے گھر میں کون کون سے کھیل کھیلے؟ تفصیل سے بیان کریں۔
- 6- اپنے غیر ملکی دوست کو خط لکھ کر اسے اپنے ملک کی تعلیمی سہولیات کے بارے میں آگاہ کریں اور اس کے ملک کی تعلیمی سہولیات سے موازنہ کریں۔
- 7- اپنی زندگی کے یادگار سفر کے بارے میں تفصیلی مضمون لکھیں۔
- 8- چھٹیوں کے دوران ٹی وی پر پیش کیے جانے والے اپنے پسندیدہ پروگرام کے بارے میں آگاہ کرنے کے لیے ایک مضمون تحریر کریں۔ جس میں اس پروگرام کی ان خوبیوں کا تذکرہ کریں جس وجہ سے یہ پروگرام آپ کو پسند ہے۔
- 9- اسلام ہمیں نادار اور غریب افراد کی مدد کی تلقین کرتا ہے۔ اس وبا کے دوران اگر آپ اور آپ کے والدین نے کسی بے روزگار اور غریب خاندان کی مدد کی ہے تو اسے تفصیل سے بیان کریں۔
- 10- اردو کے دس اہم نثر نگاروں کے نام اور ان کی تاریخ پیدائش اور تاریخ وفات تحریر کریں۔

### 3. Mathematics

#### Integer Story Project

##### Part 1. Ali's Story

Fill in the blanks to the right with integer equations that match with the story. Solve all the equations to see how much Ali is left with at the end of the week.

1. Ali owed his mom Rs.27.

2. So, he decided to get a job in order to pay her back. On his way to the pet store to apply for a job as a dog groomer, he found a dollar bill.

$$\underline{-27}$$

3. It was his lucky day because he also got the job. The manager told him that he would have to buy an apron with the store's name on it. It cost Rs.12.

$$\underline{-27 + 1 = -26}$$

4. On the first day of work, Ali got Rs.4. tip for clipping Fatima's nails.

$$\underline{-12 - 26 = -38}$$

5. However, Fatima left a sizeable, deep scratch in Ali's arm that needed to be stitched by a doctor for Rs50.

6. A couple of days later, Ali's friend came by and returned the Rs10 that he owed Ali.

7. Ali's grandma forgot his birthday last month and sent him a check of Rs.50 today.

8. In the middle of the week, Ali forgot to bring his lunch and had to buy it. Lunch costs Rs5.

9. Late in the week, Ali was not paying attention and stepped on his brother's CD. He had to buy a new one for Rs13.

10. Finally, Ali received his first paycheck for Rs56. "Yippee," thought Ali, "I am finally out of debt and even have some cash in my wallet."

11. Then, he dropped his wallet. The wallet fell into the sewer and disappeared from sight, along with the Rs12 he had in there.

How much did Ali end his week with?

##### Part 2. Your Story

Write your own Integer story



QUESTION:

1. Find each of the following by using prime factorization.

a)  $\sqrt{1764}$                       b)  $\sqrt{576}$                       c)  $\sqrt[3]{3375}$                       d)  $\sqrt[3]{1728}$

2. Given that the prime factorization of 9801 is  $3^4 \times 11^2$ , find  $\sqrt{9801}$  without calculator.

3. Given that the prime factorization of 21952 is  $2^6 \times 7^3$ , find  $\sqrt[3]{21952}$ .

4. Find the highest common factor of each of the following sets of numbers.

a) 12 and 30

b) 84 and 156

c) 15, 60 and 75

5. Find the lowest common multiple of each of the following sets of numbers.

a) 24 and 30

b) 42 and 462

6. Use a number line to illustrate each of the following:

a)  $2\frac{2}{5}, 0, -4, 6, -2.8$

b)  $-0.55, 4, -\frac{1}{10}, 2, -2$

7. Find the value of each of the following:

a)  $3 \times (-9)$

b)  $-7 \times (-5)$

c)  $-21 \div 7$

d)  $-8 \div (-2)$

e)  $(-5)^3$

f)  $-55 + (-10) - 10$

g)  $-3\frac{1}{6} + (-4\frac{2}{3})$

h)  $2\frac{3}{5} \times \frac{15}{26}$

i)  $1\frac{7}{9} \div \frac{4}{3}$

j)  $-2\frac{1}{2} \times 4\frac{2}{5}$

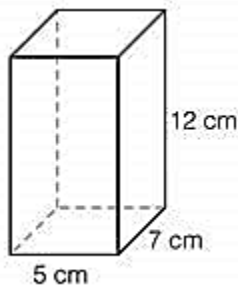
k)  $0.27 \times 0.08$

l)  $1.32 \div 0.12$

m)  $-6\frac{4}{9} - 3\frac{3}{4} - 3\frac{5}{9}$

n)  $-3\frac{1}{4} \times 1\frac{3}{5} \times (-1\frac{2}{13})$

7. a) Find the volume and surface area of

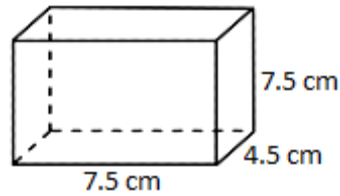


b) Find the height of parallelogram when its base is 8 cm and area is  $72 \text{ cm}^2$ .

8. a) Find the radius, circumference and area of circle with diameter 42 mm.

b) Draw a line of 6 cm and construct a perpendicular bisector on it.

9. a) Find the volume and surface area of



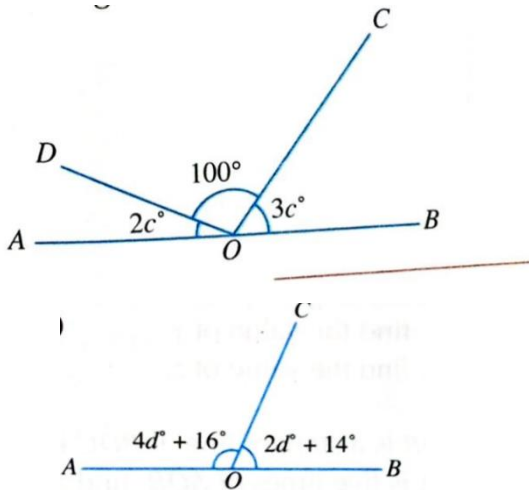
b) If  $a = \frac{y^2 - xz}{5}$ , find the value of a when  $x = 2, y = -1$  and  $z = -3$ .

10. There are 32 teachers and 150 boys in a school. Find the percentage of  
 i) boys, ii) teachers  
 in class.

11. a) The result of a number when decreased by 20% is 192. Find the number.

b) An elastic band which is 72cm long is stretched to 90 cm. Find the percentage increase in its length.

12. Given that AOB is a straight line find the value of the unknown.



13. a) If a train departs at 15:05 on Tuesday and arrives at 07:15 on Wednesday. Find the journey time.

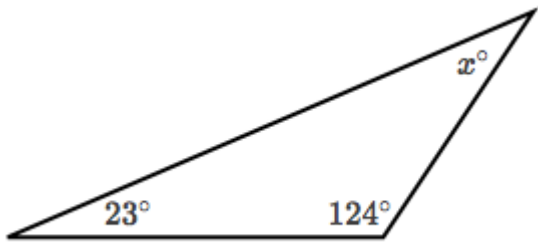
b) Given that  $\frac{2x}{5} = \frac{3y}{8}$ , find the ratio of  $x : y$ .

14. a) Find

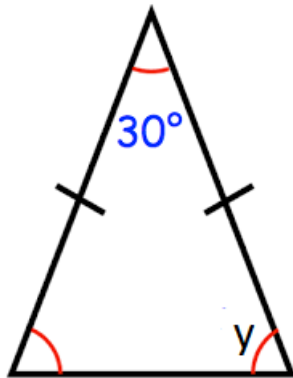
- i) Complementary angle of  $64^\circ$ .
- ii) Supplementary angle of  $102^\circ$ .

b) Find the value of unknowns in the following figures:

i)

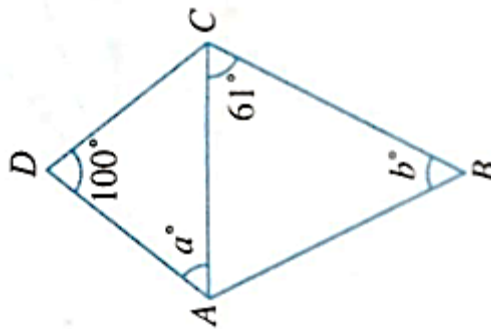


ii)

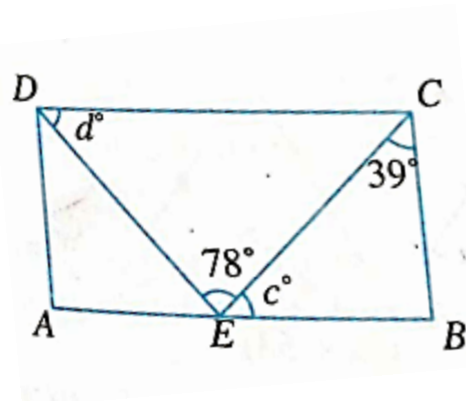


15. Find

a) The value of unknown in the following kite:



b) The value of unknown in the given rectangle:



16. a) A group of preschoolers has 8 boys and 24 girls. What is the ratio of girls to all children?

b) A train departs at 15:05. If journey time is 8 hours and 15 minutes, find the arrival time.

17. Solve the following equations:

i)  $2(2x - 2.2) = 4.6$

ii)  $5(7f - 3) = 28(f - 1)$

iii)  $7y - 2\frac{3}{4} = \frac{1}{2}$

iv)  $9x + 4 = 31$

18. a) Find the area of parallelogram with base 20 cm and height 35 cm.

b) Construct a triangle ABC such that  $AB = 8$  cm,  $BC = 9$  cm and  $\hat{BAC} = 90^\circ$ . Measure and write down length of AC.

## 4. Islamiat

1. Describe the method of Prayer.
2. Write and memorize the Tashahud and Dua-e-Qanoot.
3. How to offer the funeral prayer (Janazah)? Memorize its dua?
4. Write and memorize the last four surahs of the Holy Quran.
5. For what services Hazrat Khadija is called the mother of the poor? What is lesson for us in it?
6. Write your experience of generosity during the recent lock down.
7. Write a few examples of generosity from the life of Holy Prophet Muhammad (PBUH).
8. Explain how can we save ourselves and community from the effects of Covid19?
9. What are the teachings of Islam about pandemic situation?
10. Describe the rights and duties of parents and children.
11. How can we keep our environment neat and clean according to the teachings of 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

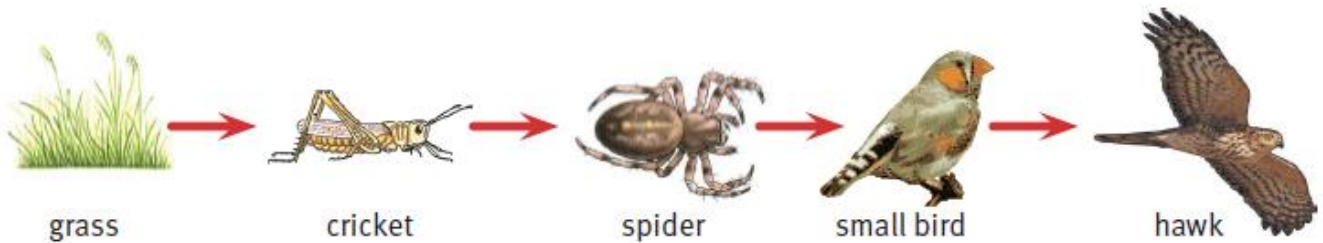
### 1.1 Photosynthesis

Where do you get your energy from?

Your energy comes from the food that you eat. Energy is passed from one organism to another along a food chain.

Every food chain begins with a plant. Plants capture energy from light, and transfer some of the energy into the food that they make. When we eat food, we get some of that energy.

In this unit, we will look at how plants use energy from light to make food.



The arrows in a food chain show the energy passing from one organism to another.

#### Note

Read the paragraph and answer the given questions.

1. Where do you get your energy from?

2. How energy travels in a food chain? Give an example.

### What else do plants need for photosynthesis?

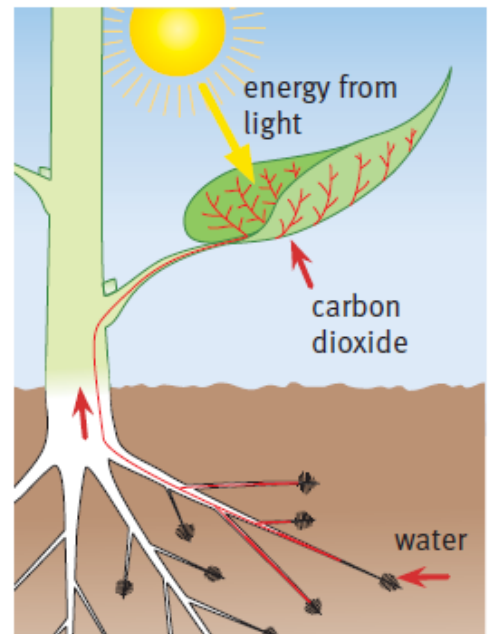
- Plants use **water** in photosynthesis. They get the water from the soil.
- Plants use **carbon dioxide** in photosynthesis. They get the carbon dioxide from the air.

You already know that plants make food by photosynthesis. But they also make a very important gas – **oxygen**.

We can summarise photosynthesis like this:  
Water and carbon dioxide are changed into food and oxygen, using energy from light.

### Biomass

Plants use the food that they make in photosynthesis to make new cells and tissues. Material that is made of living cells and tissues is called **biomass**.

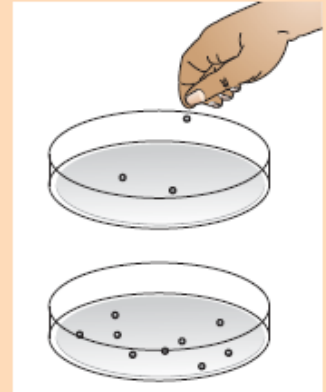


## Activity 1.1

### Plants and light

You are going to find out what happens to plants that do not get light.

- 1 Sow some small seeds on damp filter paper, in two identical dishes. Leave them in a warm place to germinate. Make sure that they do not dry out.
- 2 When the seeds have germinated, put one set into a dark cupboard, or into a closed cardboard box. Leave the other set in a light place. Keep giving them both a little water. Try to make sure that the temperature is the same for both sets of seedlings.
- 3 After two days, compare the appearance of the two sets of seedlings. You could also make labelled drawings of a seedling from each set.



4. Explain why it was important to keep one set of seedlings in the light.
5. Explain why it was important that the temperature was the same for both sets of seedlings.

## 1.2 Leaves

In most plants, the leaves are the organs that carry out photosynthesis.

### Chlorophyll

Most leaves are green. This is because they contain a green pigment called **chlorophyll**. (A pigment is a coloured substance.)

Chlorophyll is essential for photosynthesis. Chlorophyll captures energy from light. The leaf can then use this energy to make food.



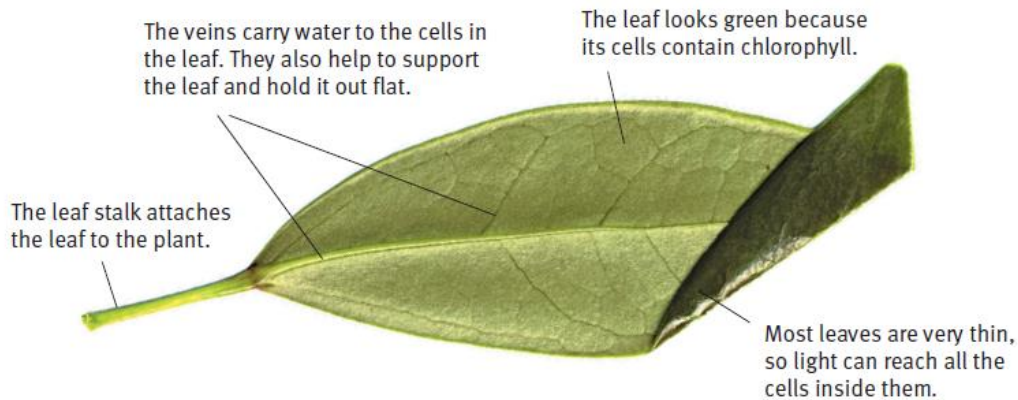
Leaves capture energy from light.

- 1 What do you know about the structure of a cell? What is the name of the part of a plant cell – also beginning with ‘chloro’ – that contains chlorophyll?
- 2 Explain why leaves are green, but roots are not.
- 3 Think back to Activity 1.1, where you grew some seedlings in the dark. What happened to the chlorophyll in them?



### The structure of a leaf

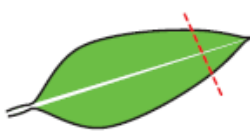
The picture shows the different parts of a leaf.



How a leaf is adapted for photosynthesis.

### Inside a leaf

The diagram on the right shows what a leaf looks like if you cut it across, and then look at the cut edge.



Leaves are so thin that it is difficult to imagine they contain several layers of cells. It is the cells in the middle of the leaf that carry out photosynthesis.

A vein carries water to the cells in the leaf.

A waxy layer on the leaf surface stops the leaf cells from drying out.

The upper epidermis protects the cells inside the leaf.

The palisade layer contains cells that do most of the photosynthesis.

The spongy layer has lots of air spaces. The cells in the spongy layer do a small amount of photosynthesis.

The lower epidermis protects the cells inside the leaf.

A stoma (plural: stomata) is a tiny hole in the lower epidermis. These holes let carbon dioxide from the air get into the leaf.

### Activity 1.2

Which surface has the most stomata?

Take a fresh, green leaf. Push the leaf into some warm water. Watch carefully to see where air bubbles appear on the leaf surface.

### Questions

1. On which surface of the leaf did most bubbles appear?
2. The bubbles contained gas that came out from inside the leaf. Which part of the leaf do you think the gas came from? (Look at the diagram of the inside of the leaf above.)

3. Explain how the gas got out of the leaf.
4. Using your knowledge about the effect of heat on gases, explain why the gases came out of the leaf when it was put into warm water.

## 2.1 Nutrients

Everyone enjoys eating tasty food. Food gives us pleasure. It also gives us the **nutrients** that we need to stay healthy.

Nutrients are substances in food that the body uses:

- to provide energy
- to provide materials for making the chemicals that are needed to make cells and other parts of the body.

Different kinds of food contain different nutrients.

### Protein, carbohydrate and fat

The nutrients that we need to eat in the largest quantity are protein, carbohydrate and fat.

**Protein** is used for making new cells. Protein is also used for making many important chemicals in the body, such as enzymes (see pages 28–29) and antibodies (see page 37). Cells can use protein to supply energy.

**Carbohydrate** is used to provide energy. **Starch** and **sugar** are two kinds of carbohydrate.

**Fat** also provides energy. Fat can be stored in the body. Fat stores underneath the skin provide insulation. Fat is needed to make new cell membranes.

### Vitamins and minerals

**Vitamins** and **minerals** are nutrients that we need in only very small quantities. They do not provide energy. There are many different kinds of vitamins and minerals that we need to eat. Fruit and vegetables are a good source of some of them. There is more information about two vitamins and two minerals on page 20.

### Fibre and water

**Fibre** (roughage) helps to keep food moving easily through the digestive system. We get fibre from fresh fruit and vegetables, and also from foods made from whole seeds such as brown rice or wholemeal bread.

**Water** is sometimes considered to be a nutrient. Between 60% and 70% of the body is made up of water.



These foods are good sources of protein.



These foods are good sources of starch (a type of carbohydrate).



These foods contain a lot of fat.



These foods contain a lot of fibre.

1. Explain the difference between food and nutrients.
2. The headings on the previous page contain the names of the seven kinds of nutrients. Enlist them here.
3. Which three nutrients provide the body with energy?

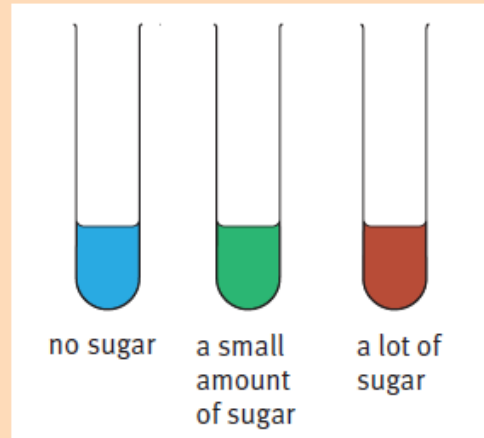
**Activity 2.1****Testing foods for carbohydrates**

Starch and sugar are two types of carbohydrate.

You can find out if a food contains starch using iodine solution.

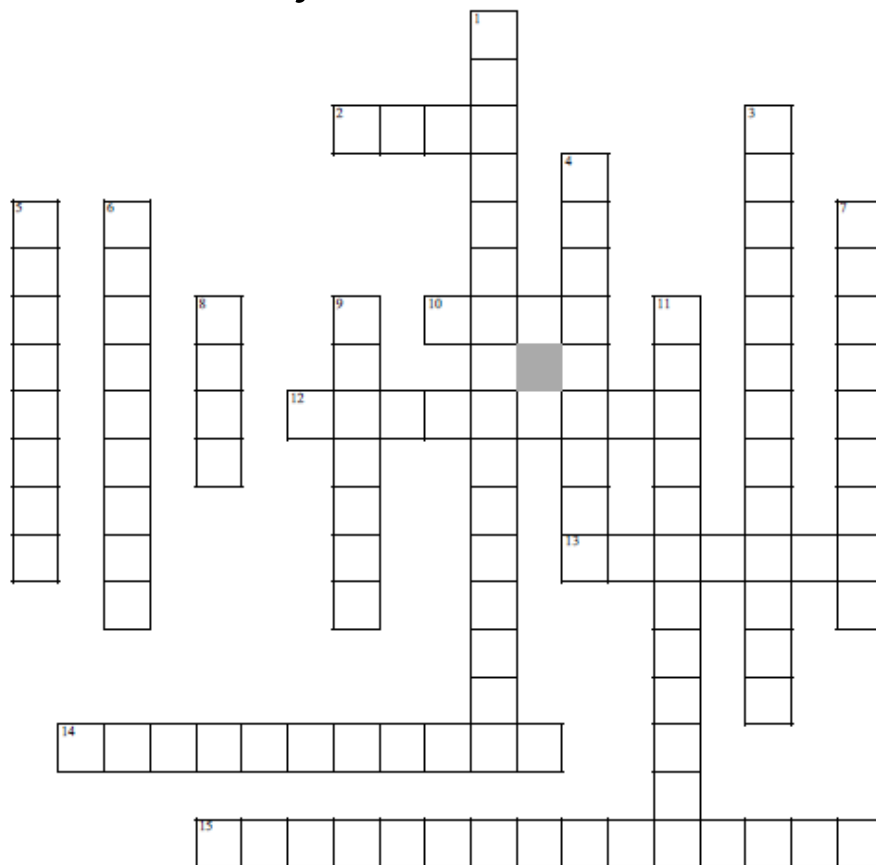
You can find out if a food contains sugar using Benedict's solution.

- 1 First, test each food for starch.
  - Put a small amount of the food onto a white tile.
  - Add a drop or two of iodine solution. If the iodine turns blue-black, there is starch in the food.
- 2 Next, test each food for sugar.
  - Chop or crush a small amount of the food, and put it into a boiling tube. Add a little water and stir or shake it well.
  - Add enough Benedict's solution to make the mixture look blue.
  - Put the boiling tube into a water bath at about 80 °C. Leave it for about 5 minutes.
  - If there is sugar in the food, the colour will change as shown on the right.
- 3 Record your results in a results table like the one below. Add as many more rows as you need.



Food	Colour with iodine solution	Did it contain starch?	Colour with Benedict's solution	Did it contain sugar?

# Chemistry Crossword Puzzle



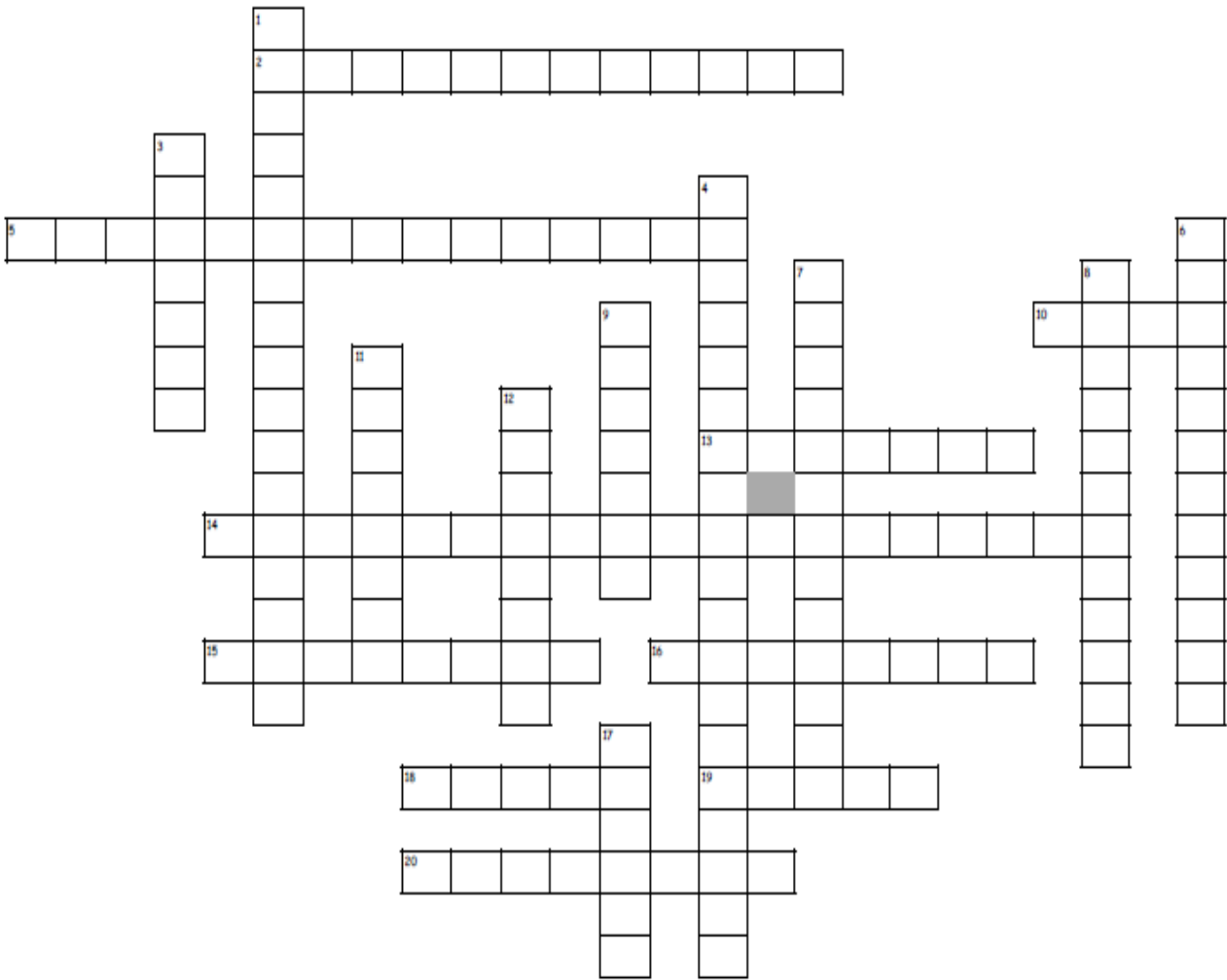
## Across

1. A unit of measurement for quantifying atoms and molecules
2. The amount of matter of an object
3. A physical property defined as the mass of a given substance divided by its amount of substance
4. Pure substance found on the periodic table
5. Numbers in front of each substance in an equation
6. A formula that shows what elements are in a compound and what it will become

## Down

1. More than one substances turning into other substances.
2. A section of chemistry that involves using relationships between reactants and/or products in a chemical reaction to determine desired quantitative data
3. A type of matter with a fixed composition:
4. A substance in which the atoms of 2 or more elements are combined:
5. The scientific study of the structure, properties, and reactions of the chemical elements and the compounds they form
6. Substances that react
7. Law of Conservation and \_\_\_\_\_
8. Substances that are made
9. The best chemistry teacher 😊

# Force and Motion Review



**Across**

1. The rate of change of velocity over time
2. A force that is greater in a specific direction than the opposing force
3. The amount of matter in an object
4. A pulling force
5. Newton's 3rd law of motion
6. A measure of how difficult it is to stop something
7. Speed in a given direction
8. A push or a pull
9. Distance divided by time
10. A force resisting the relative motion of surfaces

**Down**

1. Newton's second law of motion
2. The force a planet exerts on an object
3. Isaac Newton created this type of instrument to see into outer space
4. Difference between final velocity and initial velocity; or direction of distance between two points
5. A force that is equal in all directions
6. Newton's first law of motion

7. The tendency of an object to resist a change in motion
8. The overall force on an object
9. Isaac Newton invented this study of Mathematics
10. The unit of measurement of force



# 7. Computer studies

## 1.1 Critical thinking exercises about related topics

Prepare yourself for upcoming class discussions about some topics by making points to support your ideas

- Technology in education
- Recommendations for technology solutions
- Reactions to computer problems
- Latest gadgets



## 1.2 Reaction to computer problems.

Instructions: Write almost five problems that you encounter while using a computer.

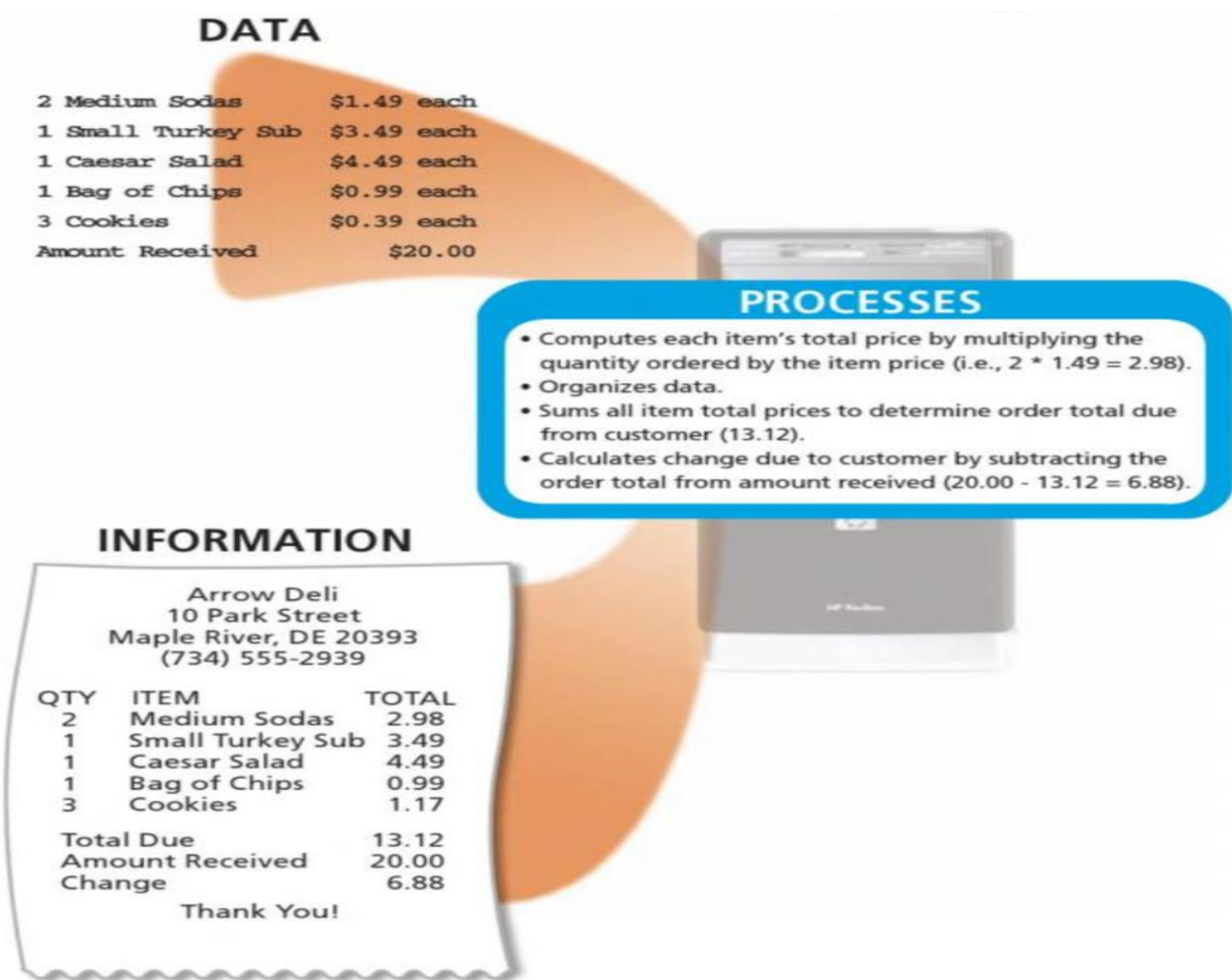
Match the images with the relevant names

_____ 1. MOUSE	A. 
_____ 2. CD	B. 
_____ 3. INKJET PRINTER	C. 
_____ 4. KEYBOARD	D. 
_____ 5. SCANNER	E. 
_____ 6. MONITOR	F. 
_____ 7. FLASH DRIVE	G. 
_____ 8. LASER PRINTER	H. 

1.3 Make timeline of milestone in computer gadgets.

Instructions: make a simple time line chart to show some gadgets invention

1.4 Diagram making according to data/process/Information with an example



1.5 Computer applications in society

Instructions : Write an application of computer in society. Give at least five fields to justify your answer?



















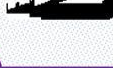



# COMPUTER PARTS

MATCH THE IMAGES AND THE WORDS

1 SPEAKERS	2 MODEM	3 MOUSE	4 WIRES
5 PRINTER	6 MONITOR	7 CD	8 HEADPHONE
9 FLASHDRIVE	10 MOUSE PAD	11 CPU	12 FLOPPY
13 LAPTOP	14 PC	15 POWER STRIP	16 WEBCAM
17 JOYSTICK	18 SCANNER	19 KEYBOARD	20 BURNER

iSLCollective.com

## 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.

*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.

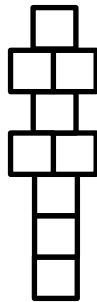
*The Onion* (20 July, 2020).

<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 and that means you're not thinking about other things – so these activities become a good way to relax, distract your brain from things that are causing you stress (like exams!)
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 1<sup>st</sup> 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 1<sup>st</sup> 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.



# Lesson 2. Deforestation



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.

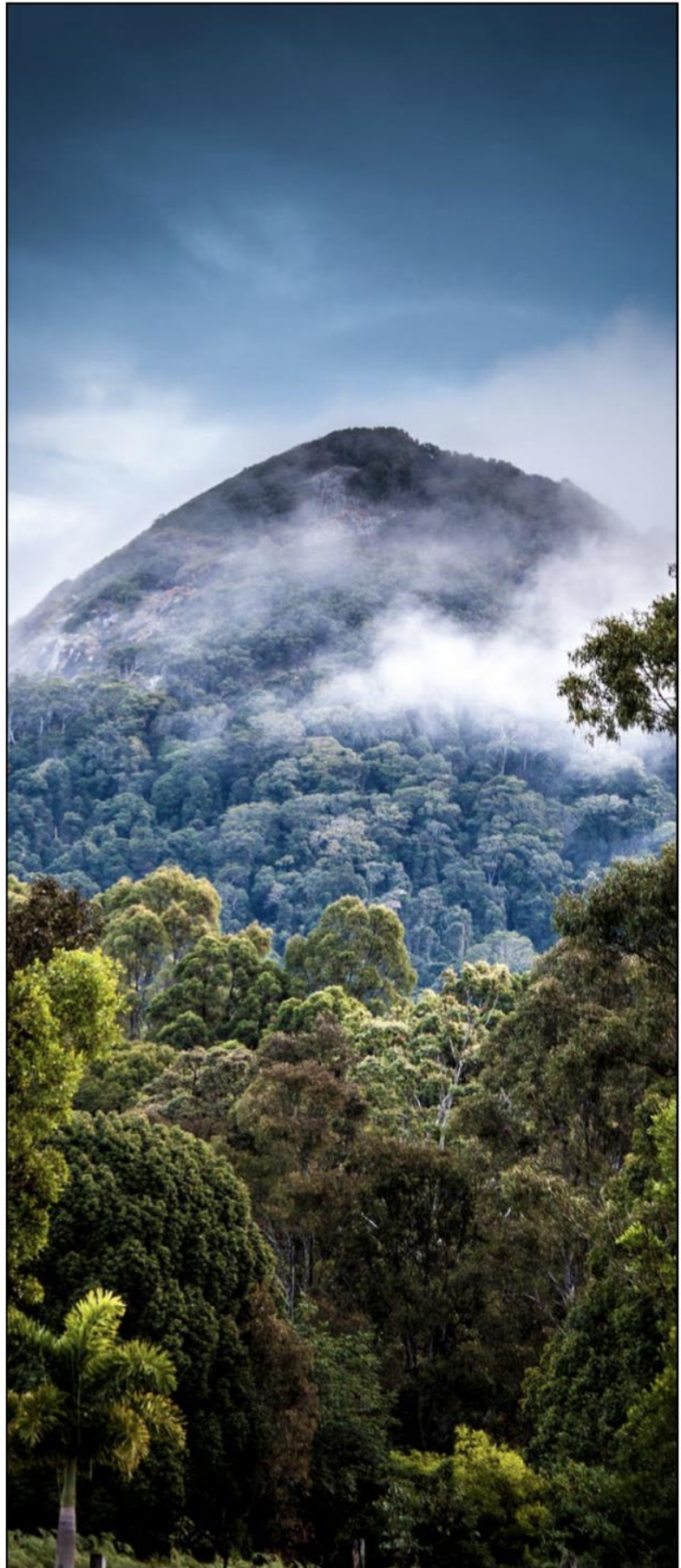
8. Reflect: List at least three things you learnt about deforestation from this material.

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.



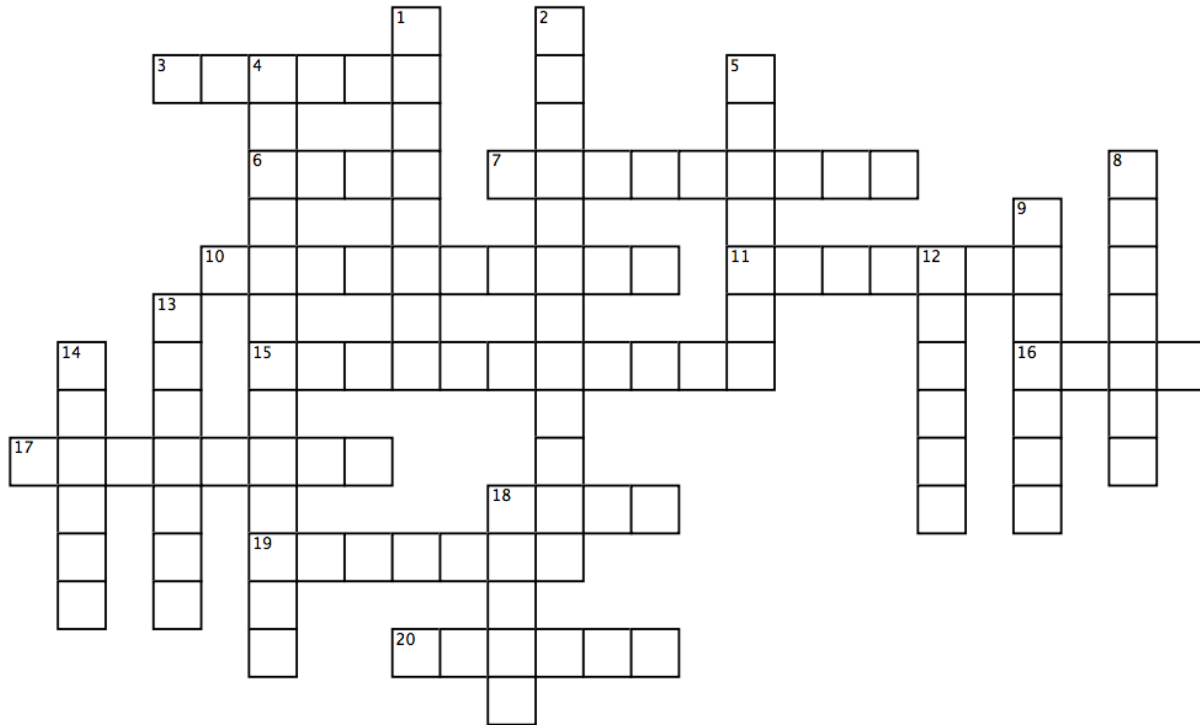
## What can I do?

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.

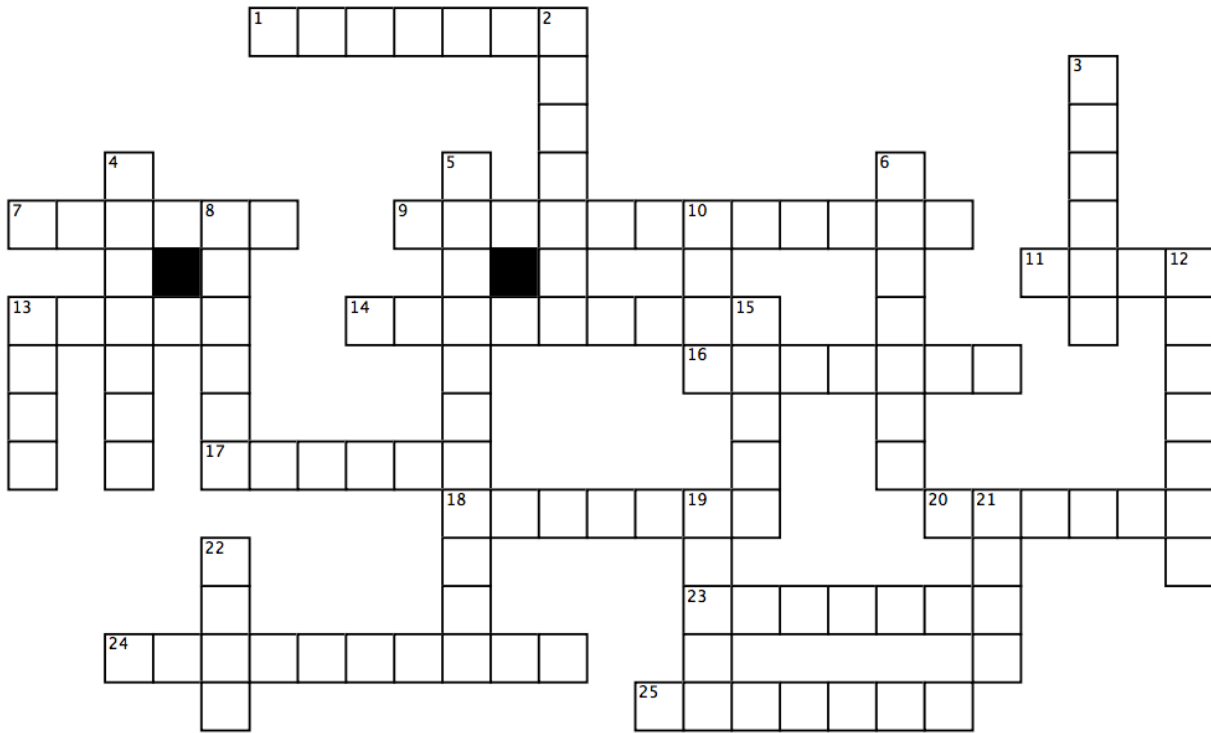
## Down

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.





# Deforestation 2



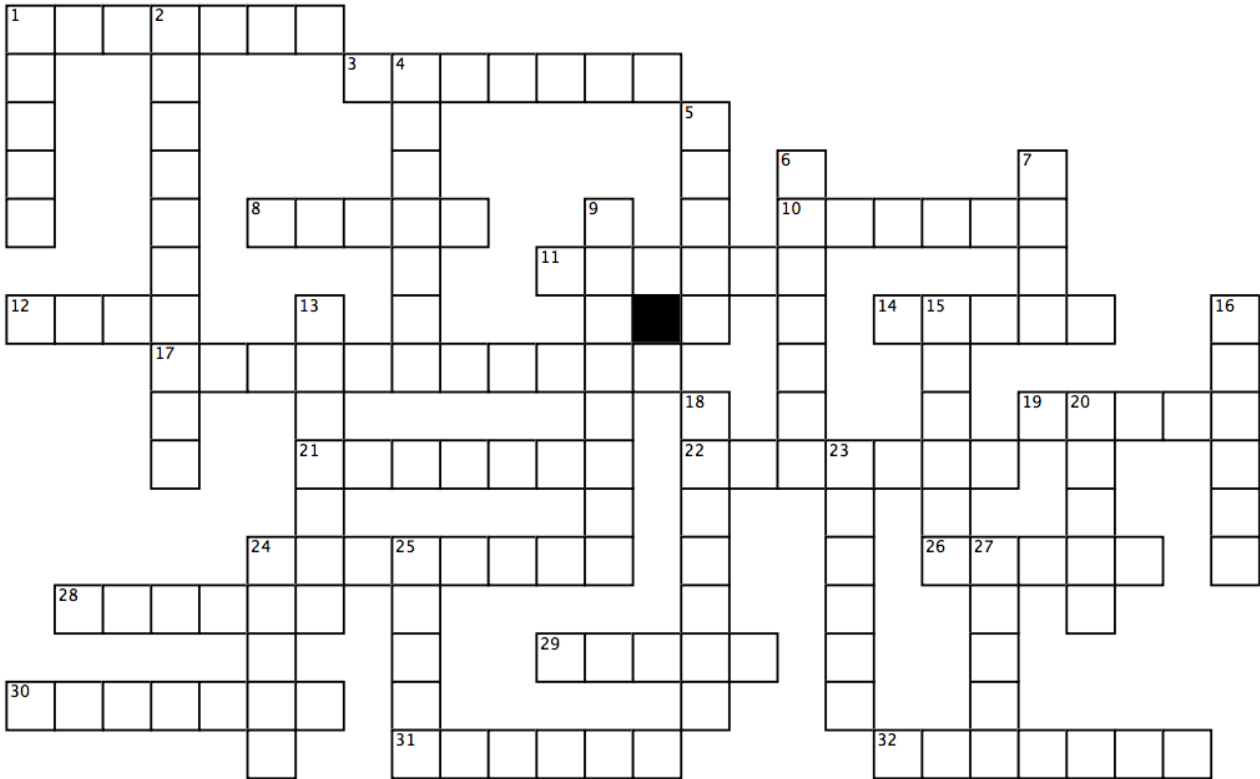
### Across

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.

# Brazil



## Across

1. Early sailors often called Brazil Terra di Papaga (Land of \_\_\_\_\_).
3. Rio de Janeiro is home to two well known \_\_\_\_\_, the Ipanema and the Copacabana.
8. The predominant religion throughout Brazil is \_\_\_\_\_ Catholic.
10. Brazil has been the world's largest producer of \_\_\_\_\_ for more than 150 years.
11. 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.
12. Brazil spans \_\_\_\_\_ time zones.
14. Sao \_\_\_\_\_ is the most populous city in the southern hemisphere.
17. Brazil's Itaipu Dam generates the most \_\_\_\_\_ of all the world's hydroelectric plants.
19. In the 16th century Brazil's major export was \_\_\_\_\_, but in the 17th century it was gold.
21. Brazil is the largest country in South \_\_\_\_\_.
22. Rio de Janeiro hosted the 2016 \_\_\_\_\_ Games and 2016 Paralympic Games.
24. In September 1822 Brazil declared independence from \_\_\_\_\_ and declared Prince Pedro de Alcântara the first Emperor of the Brazilian Empire.
26. Most Brazilians \_\_\_\_\_ Portuguese.
28. The Iguazu Falls are on the Brazil-Argentina \_\_\_\_\_.
29. The Amazon River \_\_\_\_\_ includes the vast Amazon rainforest.
30. Brasilia was planned and developed in 1956 to move the capital from Rio de \_\_\_\_\_ to a more central location.
31. Deforestation of the \_\_\_\_\_ rainforest has a double-effect on the greenhouse effect and therefore climate change: living trees store CO<sub>2</sub> and dead trees release CO<sub>2</sub> into the atmosphere.
32. In 2014-2016 a severe \_\_\_\_\_, caused by El Nino, had a significant impact on Sao Paulo and Rio de Janeiro.

## Down

1. 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.
2. The Amazon \_\_\_\_\_ has the greatest biological diversity in the world.
4. Brazil is the only country with the \_\_\_\_\_ and the Tropic of Capricorn running through it.
5. The final of the 2014 football \_\_\_\_\_ Cup was played at the Maracana Stadium in Rio de Janeiro.
6. Brazil's \_\_\_\_\_ is eighth-largest by GDP.
7. Brazil's currency, the \_\_\_\_\_, is pegged to the US dollar.
9. Brazil's national sport is \_\_\_\_\_ and the men's national team has won the World Cup 5 times.
13. Brazil borders all South American countries except \_\_\_\_\_ and Chile.
15. Brazil remained neutral in World War 2 until 1942, at which time it joined the \_\_\_\_\_.
16. The \_\_\_\_\_ the Redeemer statue overlooking Rio de Janeiro is 30 metres tall and was built in 1931.
18. The Amazon basin includes land in Brazil as well as \_\_\_\_\_, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela.
20. 85% of Brazil's population live in \_\_\_\_\_ areas.
23. The Christ the Redeemer statue overlooking Rio de Janeiro is 30 \_\_\_\_\_ tall and was built in 1931.
24. In 1500 \_\_\_\_\_ Alvares Cabral claimed the area of Brazil for the Portuguese Empire and it remained a Portuguese colony until 1808.
25. Brazil's original official name was \_\_\_\_\_ da Santa Cruz (Land of the Holy Cross).
27. Brazil's capital city is Brasilia, but the largest city is Sao \_\_\_\_\_.