Year 7

Learning from Home

Term 4

Weeks 2 and 3

BRISBANE WATER SECONDARY COLLEGE | UMINA CAMPUS

Learning from Home: Term 4 Weeks 2 and 3

Key Learning Area: ENGLISH

Year Group: YEAR SEVEN

Student Name: _____

Please Circle Your Team:

1	2	3	4	5	6	7	8	9

Work Overview and Instructions	**Learning Intentions**
➔ Complete the set Reading tasks each day you have English on your timetable ➔ Complete the six tasks over the course of the fortnight - you may like to complete one task per timetabled English lesson	➔ Students' core literacy skills will be developed ➔ Students will compose a series of texts that reflect their own experiences
Assessment Overview	**Submission and Feedback Instructions**
N/A	All tasks are due on Monday of week four. Tasks can be submitted via: ● Google Classroom - please submit during timetabled lessons if you are completing one task per scheduled lesson, or submit outside of these times prior to the due date ● Hard Copy - if you are unable to submit via Google Classroom, please return completed hard copy work to the Front Office prior to the due date

Student Feedback: _____

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READING: Please complete the following each day you have English

1. Read for a minimum of fifteen minutes (a novel is preferrable, but it is okay to read another type of print text that you have access to).

2. Complete a Reading Reflection, using the following scaffold.

Page numbers ⇩ *Today I read pages __ -__ of '_____' by _____. I noticed _____ '_____'.*

Title of Text ⇩ Author ⇩ What did you notice? ⇩ Quote ⇩

Do you need something else to read? Go to the Library Google Classroom where you will find lots of options. The code is: unu7pgw

TIME CAPSULE

Time capsules are created to commemorate an event or to capture a moment for the future. Usually time capsules are buried, to be uncovered at a point in the future.

The following tasks require you to create time capsule items that capture life in 2021.

TASK ONE

Choose one of the following writing tasks. Set a thirty minute timer. Write *as much as you can as well as you can* in that time.

Note: The tasks are ordered from most simple, to most complex.

*Write a journal entry that describes a typical day in your life during lockdown. Take a photo, or draw a picture, to support the ideas in your journal entry.

*Write a journal entry that captures your thoughts and feelings about an aspect of lockdown. For example, you could write about learning from home or being isolated from your friends and family. Take a photo, or draw a picture, to support the ideas in your journal entry.

*Write a journal entry that captures what you have learnt about yourself, the people around you and the wider world through the pandemic. Take a photo, or draw a picture, to support the ideas in your journal entry.

TASK TWO

<u>Choose one</u> of the following writing tasks. Set a thirty minute timer. Write *as much as you can as well as you can* in that time.

Note: The tasks are ordered from most simple, to most complex.

*Take a photo of, or draw a picture of, the object that has helped you *survive lockdown*. Write a journal entry about the object and your interaction with it.

*Take a photo of, or draw a picture of, the person that has helped you *survive lockdown*. Write a journal entry about your interaction with the person and explain how much they mean to you.

*Take a photo of yourself, or draw a self-portrait. Write a journal entry that describes how much you have grown throughout lockdown and outline your goals for the future.

TASK THREE

<u>Choose one</u> of the following tasks.

*Create an Alphabox that captures life today. Write one word for every letter of the alphabet, A-Z.

*Design five survey questions that could be asked to capture people's thoughts and feelings about life today. Ask at least three people the questions you have designed and record their responses.

*Write a newspaper feature article about life today. Guide Length: 100-200 words

*Write a narrative that captures life today. Guide Length: 200-300 words

TASK FOUR

A Prayer for the Twenty First Century	**1. Read the poem *A Prayer for the Twenty First Century*** (which is in the first column) **2. Mark the Text:** As you read the stanzas, you must: ✓ Underline the key ideas in the stanzas. ✓ Highlight any poetic techniques you notice. **3. Write in the Margins:** Once you have marked the text, you must write in the margins. Focus on: ✓ Briefly explaining the parts you have underlined. ✓ Labelling the techniques you have highlighted.
May the road be free for the journey May it lead where it promised it would May the stars that gave ancient bearing Be seen, still be understood. May every aircraft fly safely, May every traveller be found, May sailors in crossing the ocean Not hear the cries of the drowned. May gardens be wild, like jungles, May nature never be tamed,	

May dangers create of us heroes, May fears always have names. May the mountains stand to remind us Of what it means to be young. May we be outlived by our daughters May we be outlived by our sons. May the bombs rust away in the bunkers, And the doomsday clock not be rewound, May the solitary scientists working, Remember the holes in the ground. May the knife remain in the holder, May the bullet stay in the gun, May those who live in the shadows Be seen by those in the sun. by John Marsden	*If you are unable to write in the margins due to constraints with technology, you can do this in a way that suits you - you might like to write a list, or draw a table for example. **4. Short Answer Response:** Answer the question below, using the TE (topic sentence and example) structure. **What is your favourite couplet (two lines) in the poem? Why?** EXTENSION: Write a more detailed response through using the TEEEC structure.

TASK FIVE

Write an <u>eight line stanza</u> to be included in the poem, *A Prayer for the Twenty First Century*. What you write should highlight <u>your hopes for the future of our world</u>. It is to be included in the *time capsule.*

EXTENSION: Rather than writing an additional stanza, compose your own complete poem.

- ➔ Choose a title for your poem
- ➔ Write at least 12 lines

TASK SIX

<u>Choose one</u> of the following visual tasks. Note that the tasks are ordered from most simple, to most complex.

*Create a collage of images that represent life today.

*Imagine a film is being written about life during the pandemic. Design a poster advertising the film.

*Imagine a film is being written about life during the pandemic. Design a DVD cover for the film, and write a blurb for the back cover.

*Research an aspect of the pandemic that you are interested in. Design an infographic that conveys relevant information and data.

*Imagine a novel is being written about life during the pandemic. Design the front and back cover for the novel, include a blurb on the back cover.

BRISBANE WATER SECONDARY COLLEGE | UMINA CAMPUS

Learning from Home: Term 4 Weeks 2 and 3

Key Learning Area: LITERACY

Year Group: YEAR SEVEN

Student Name: _____

Please Circle Your Team:

1	2	3	4	5	6	7	8	9

Work Overview and Instructions	**Learning Intentions**
➔ Complete the tasks on the following pages	➔ Students core literacy skills will be refined
Assessment Overview	**Submission and Feedback Instructions**
N/A	All tasks are due on Monday of week four. Tasks can be submitted via: ● Google Classroom - please submit during timetabled lessons if you are completing one task per scheduled lesson, or submit outside of these times prior to the due date ● Hard Copy - if you are unable to submit via Google Classroom, please return completed hard copy work to the Front Office prior to the due date

Student Feedback: _____

_____

_____

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_____

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YEAR SEVEN LITERACY

1. Reading

Read for a minimum of fifteen minutes (a novel is preferrable, but it is okay to read another type of print text that you have access to).

Remember to join the Library Google Classroom if you need something new to read: unu7pgw

2. Punctuation

Complete the following sentence table based on the section of the text you have just read.

Type of Punctuation Mark I Noticed:	Purpose of the Punctuation:	Example from the Text:

*Write the type of punctuation you noticed when reading *State the purpose of the punctuation *Give a quote from the text

EXTENSION: Rather than stating the purpose of the punctuation in the middle column, discuss the effect.

3. Vocabulary

a) Make a list of the engaging/interesting/unfamiliar words in the section of the text you have just read. Include at least five words.

b) Choose your three favourite words from the list. Use the words in a sentence of your own - focus on using descriptive language to create a strong image in the reader's mind.

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Learning from Home: Term 4 Week 2 and 3

Learning Area: Library skills session (711, 721, 722, 732, 751, 752, 771, 772)

Year Group: Year 7

Student Name: _____

Please Circle Your Team:

1	2	3	4	5	6	7	8	9

Work Overview and Instructions	Submission and Feedback Instructions
Please complete the news diet challenge. **Use your own materials to complete the task and attach to this cover page.** **The activities are available online in Google Classroom**	All tasks are due on Monday of Week 4 Term 4. Tasks can be submitted via: • Google Classroom - please submit prior to the due date • Hard Copy - if you are unable to submit via Google Classroom, please return completed hard copy work to the Front Office prior to the due date

Student Feedback: _____

Media Literacy - Library skills session Week 2 & 3 Term 4

News diet challenge

Monitor & assess your current news diet
- what kinds of stories do you consume?
- where and how do you find them?
- what kinds of news do you need more OR less of?

Try changing your diet
- add some 'new ingredients' to your usual mix.
- try using some different news sources.
- broaden the range of stories you normally follow.

Digest and review
- did you notice any patterns in your news habits?
- were you missing important things in your diet?
- did you try something new that you liked?

TO DO

1. Keep a news diary for one or two days
2. rank the stories in your diary from "most nutritional" to "least nutritional"
3. Take one of your most nutritional stories and look for it on news sources you don't usually follow
4. Try following a story or topic you wouldn't normally.
5. Summarise your experience!

ABC Education: News Diet Challenge

BEFORE YOU BEGIN

Things to think about:

Everyone's news diet is different.

The news that is important to you may be different to news your friends and family value most. And that's ok!

For example — for some people, the most 'nutritional' news might be stories about world issues or politics. For others, it might be sports related news, entertainment news, or news about their local community.

It all depends on the information that is most important to YOU and the purpose it serves.

Remember: there are no right or wrong answers
This is about the kinds of news you consider to be good for you, and why. Be honest!

Try thinking of some simple statements that could summarise how you feel:
e.g. nutritional news is something that helps me...

- feel informed and know what's going on.
- to have something to talk about with friends or family.
- understand the world I live in and be a better citizen.
- to have fun and laugh with my friends.
- gain new perspectives on things I care about.
- gain deeper understanding about a topic or issue.
- to understand trends that are changing society.

To help you articulate which types of news have 'nutritional' value for you, it might help to talk with family and friends about the role news plays in your life.

STEP 1

Monitor and assess your news diet

i) Spend two days tracking the **type of news stor;es** currently in your daily diet.

Then. consider **how nourish;ng your current news d;et ;s.**

Use th;s panel to help you

Handy hint: use our worksheets to track your progress

Q News Diet Diary

Q News Diet Nutri tion Analysis

YOUR NEWS PROFILE

What kinds of news are you normally hungry for?
Which kinds do you conside r to be nut rition a l for :tm,1? Why ?

MOST NUTRITIONAL forme	FAIRLY NUTRITIONAL forme	LEAST NUTRITIONAL forme
e.g. News thllt: > makes you think > helps you feel deep ly informed > drives you to act > helps you engage with soc iety	**e.g. News thllt:** > you are aware of. but you don't follow it too closely > you get the gist but don't have a deep und erstanding > acts as filler	**e.g. News thllt:** > doesn 't make you think as deeply > gives you immediate sat is faction > doesn 't help you to learn much

ABC Education: News Diet Challenge

STEP 1

Monitor and assess your news diet

ii) Summarise your news d;et

Do this on your own or in a gro up.

Handy hi nt: think about what you have on your 'news plate'.

Q News Pl ate w orksheet

Tips for presenting your summar y:

- Try mak ing a sh ort video dia ry a bout what *you 've* noticed so far. You can also use lns t ag ram or Sna pchat sto ries . download these and savefor later_
- You mig ht i nte rview other peo ple incl ud ing your friends .
- Be creati ve ' A ni ma tors and creative g eniuses can t hink a bout how t hey would re present the ir news cons um ption for a sto ry. Go c razy, it does n't need to be basic!

EXPLAIN:

Is your news diet nutritiona l en ough? Why? Why Mt?

e.g. ı don 't wa tch or read m uch news but I feel like I sh ould.

Is th e re anyt hin g yo u'd like to change? What would you do to change it?

e.g. ı don 't feel like ı know anyth in.g about loc.al news in *m y* commun ity .

Try discussing this with friends or family. Wha t n sw s sources do you *have in* com mon ?

STEP

2 TASTING PLATE:

Try Broadening Your Diet

Over one or two days, **continue your normal diet, but try adding some new ingredients.**

e Handy hints:

- Take a story that you're interested in from your 'Most Nutritional' list and check how it 's covered by news services that youdon't usually foll ow.
- OR - try following astory or topic that youwouldn't normally bother to Learn about .
- Use our worksl'leet to track your progress.

GI News Diet Diary #2

0 Diet tips:

- To helpyouwtthyour summary it's**agreat idea** to colleci: snaps or **video** of what you **are doing.** It can **also be** useful to report on your **experience** 'Live as tt happens to you.
- **Creative geniuses mayllike to** Interpret this **p.irt a.s a metaphor** - go on, **dress up** If youhavetol

0 EXPLAIN:

Do stories 'taste ' different to the coverage In your usual.news sources? In W:hat ways?

A.re stories presented differently on differel'lt platforms (e.g. TV compared to YouTube)? How and why?

Have you tried someth1.ng new that you liked? Why did you Uke It?

A.re there things you think you SHOULD know about but avoid? What are these? Why do).IOU avoid them?

Has trying a new type of story made yo more interested In following differen t types of news?

STEP

3 Digestion + Review

0 Things to think about

Did you notlce any patterns i111 your ha!btts witih111ews? Did tihey change over tihe cou se of tihis eJCip et1ment?

Were you missit1tg anythit1tg im,portant in yot1r news diet?

Wtll.your news diet be different now? Wi you keep e}(Jperiment1t1tg? tf so, ho,w aindl why?

Or, will you stlic:k to your origina!U habtts and t1tes ? Why?

What hiav,e been the biggest s111rpris es?

Does, n ,ew s stm have 'th,e same kit1td of importance 'to y,ou as tt dtdl befor,e *you* did this eJ<iperiment?

Hiow d:td th is, experi11nent have an im:pact on the way you s,ee and engage withnews?

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Sport and Physical Education Weeks 2 & 3

Run / Row / Ride / Swim - Around Australia

To be completed in your Sport & PE lessons on your timetable. Remember – The guidelines are to complete 60 minutes of physical activity each day!

During Weeks 2 & 3, we will be working as a school to see how far we can run / row / ride / swim around Australia. Your challenge during your Sport & PE lessons is to track your running / rowing / swimming / riding and to enter the total km's that you cover. You can submit your points via the 1000 Point Challenge website (www.bwsc1000pointchallenge.com), or you can submit your results hard copy in the table below.

Week 2	***Run***	***Row***	***Ride***	***Swim***
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Total kms	_____*kms*	_____*kms*	_____*kms*	_____*kms*

Week 3	***Run***	***Row***	***Ride***	***Swim***
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Total kms	_____*kms*	_____*kms*	_____*kms*	_____*kms*

BRISBANE WATER SECONDARY COLLEGE | UMINA CAMPUS

Learning from Home

Term 4 Weeks 2 and 3

Key Learning Area: Technology Mandatory

Year Group: 7

Student Name: _____

Please Circle Your Team:

1	2	3	4	5	6	7	8	9

Work Overview and Instructions	Learning Intentions
Instructions **During weeks 2 and 3 learning from home you will have two options of work that can be completed:** • Students can go back and attempt any work that may not have been completed or submitted in term 3. *(Please refer to page 2 for further information)* • Alternatively, if you have completed all the work packages in Term 3 and submitted these to your teachers, please complete the "Creative Cooking Bingo" activity.	*Complete any outstanding work packages during Term 3, using the learning intentions as guides to support completing the learning activities.* ***Or*** *Students are applying design and practical skills at home using resources available to produce a variety of designed meals.*
Assessment Overview ***(If required)*** Please make sure that you submit all completed work. Teachers will be using this work to support assessment and reporting over Semester Two**.**	**Feedback Instructions** Please attempt to submit via google classroom. You can photograph your work to submit online for marking via the google classroom app. Alternatively Please return your completed work to the school.

Student Feedback

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BRISBANE WATER SECONDARY COLLEGE

UMINA CAMPUS

Learning from Home
Term 4 Weeks 2 and 3

During weeks 2 and 3 of Term 4 you will have the choice of completing activities that may have not been finished during Term 3. If you have completed all the work and are up to date then you can complete the "**Creative Cooking Bingo**" activity on pages 3 and 4.

You can choose to go back and complete work that may not have been submitted and this can be accessed via your Technology Mandatory Google Classrooms. If you require hard copies of the previous work packages, you can pick up the required work pack from the school front office.

If you have missed completing a whole work package during the previous term the expectation is that you only focus on **ONE** of the below activities as a minimum. If students choose to complete a past activity that has been set, they can also complete the Creative Cooking Bingo activity as an extension task.

Below is a list of the previous work package activities:

Weeks 2-3- Livability and Sustainability Activity

Weeks 4-5- Cooking Challenge

Weeks 6-7- Paper Aeroplane Challenge

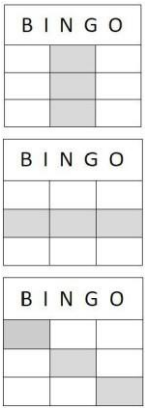
Weeks 8-9- Australian Agriculture Activity

Weeks 10- 1 (Term 4) – Coding a Maze Activity

Please use this time to catch up on any missed activities and access your class Video Conferences to ask questions about key aspects of the work packages. If you are having issues accessing any past work packs please contact your teacher via Google Classroom.

UMINA CAMPUS
Veron Road UMINA NSW 2257
P 02 4341 9066
E umina-h.school@det.nsw.edu.au

Creative CtJoki1g BIN60!

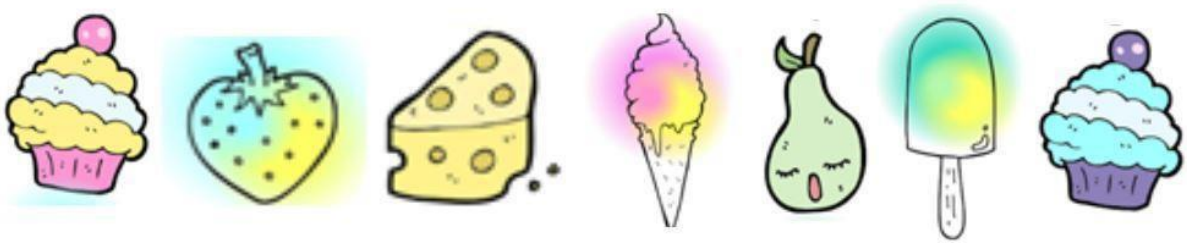


BINGO Rules: Complete a row of **THREE** cooking tasks below. The row can be completed horizontally, vertically or diagonally (see images at right).

You **MUST** show **evidence** of the completed task as a photo using the Google Sheets scaffold on Google Classroom. You cannot use the same image/meal for more than one task.

Students who complete a full row will receive a reward. Time to get creative in the kitchen!

PREPARE A SNACK OR MEAL INSPIRED BY A BOOK OR MOVIE	COOK SOMETHING IN A MUFFIN TIN	COOK A DINNER MEAL WITH AT LEAST THREE DIFFERENT VEGETABLES
MAKE BREAKFAST FOR YOU AND/OR YOUR FAMILY	COOK A PASTA MEAL	BAKE SOMETHING SWEET
PREPARE A COLOURFUL MEAL	COOK A RECIPE FROM ANOTHER COUNTRY OR CULTURE	PREPARE A SMOOTHIE OR MILKSHAKE



BRISBANE WATER SECONDARY COLLEGE | UMINA CAMPUS

Learning from Home
Term 4 Weeks 2 and 3

Key Learning Area: **MATHEMATICS**

Year Group: **Year 7 - WICOR**

Student Name: _____

Please Circle Your Team:

1	2	3	4	5	6	7	8	9

Work Overview and Instructions

1. Write the EQ in your workbook.
2. Write down the notes and examples in your workbook.
3. **Read** the notes carefully and **follow the steps provided** in the examples
4. Attempt / complete the set questions in your workbook
5. **Mark your work** by checking the answers at the back of this document.
6. Try your best to correct any answers that you may have got incorrect.
7. Attempt / complete the set MathsOnline lessons related to the EQ.

Learning Intentions

1. Why are units squared used to measure area?
2. How does area compare to perimeter?
3. How are the areas of squares and rectangles calculated?
4. What method is used to convert between metric units of area?
5. What needs to be identified to calculate the area of triangles?
6. How does calculating the area of parallelograms relate to triangles?

Assessment Overview
(If required)

c) Complete the weekly quiz questions to test your understanding. This can be done by submitting online or completing a similar MathsOnline Task

d) Submit your work by returning the booklet, taking Photos/Scans of your work or completing the assigned google classroom

Feedback Instructions

1. Contact your teacher if you're unsure where you made your mistake.
2. Watch the clips provided found on MathOnline/YouTube and in Google Classroom
3. Take photos/scan your work and submit it on google classroom when you complete a lesson
4. All tasks are due within the two weeks

Student Feedback:

Lesson 1	
Week: 2	**Topic:** Length and simple area

EQ: Why are units squared used to measure area?

Questions

MathsOnline: Introduction to Area – Lesson 1488

MathsOnline: Measuring Small Areas – Lesson 2326

MathsOnline: Measuring Large Areas – Lesson 2328

Youtube: https://www.youtube.com/watch?v=C4Ah_zzV6WI

Write these notes and examples in your workbook

Area

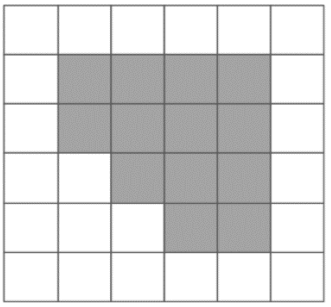
Area is measured in square units. It is often referred to as the amount of space contained inside a flat shape; however, three-dimensional (3D) shapes also have surface areas. The amount of paint needed to paint a house is an example of area calculations.

Counting Area

- Find the area of the figure by counting the number of square centimetres

Count the number of shaded squares

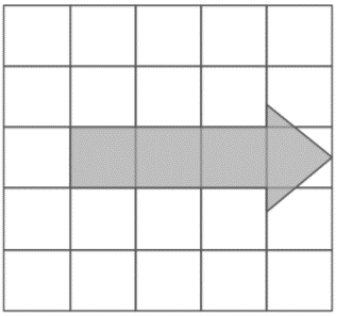
Area $= 13\ cccc^2$



- Find the approximate area of the shape

Count the whole squares and approximate the rest

Approximate area $= 4cccc^2$



Summary:

WRITE THE FOLLOWING QUESTIONS, SHOWING YOUR ANSWER AND ANY WORKING OUT

1. Which unit of measure could be used for area? Select the correct answer below.

a. $cc㎜$ b. $cccc$ c. $cccc^2$ d. $cc㎜^2$

2. Is each statement true or false?

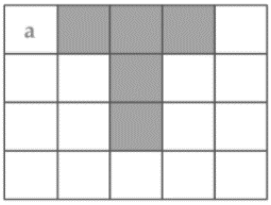
a. Area is the distance around a shape.

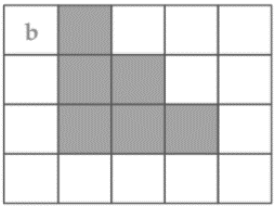
b. Area is measured in square units.

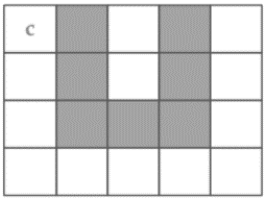
c. Perimeter is the size of a region.

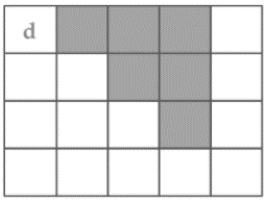
d. Perimeter and area are two different measurements.

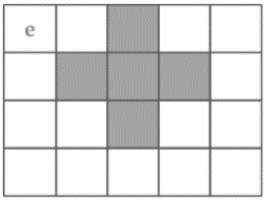
3. Find the area of each shaded figure if each square is a square centimeter.

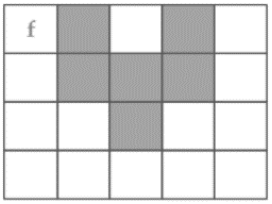




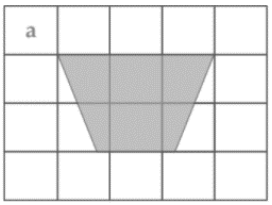


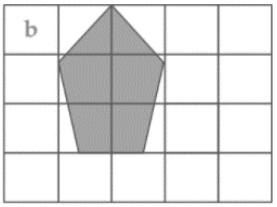


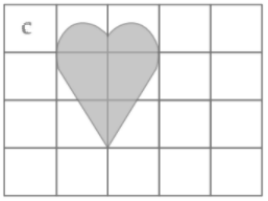




4. Find the approximate area of the shaded shapes below.







Lesson 2

Week: 2	**Topic:** Length and Simple Area

EQ: How does area compare to perimeter?

Additional Links

Youtube: https://www.youtube.com/watch?v=nLY2bzRfQyo

Write these notes and examples in your workbook

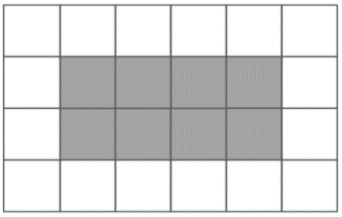
Area vs Perimeter

In simplest terms: area is the amount of space inside a shape, and perimeter is the distance around a shape.

- Area is the number of squares that fit inside of the shape, so it is always measured in square units (square metres cc^2, square centimetres $cccc^2$, square millimetres $cccc^2$, square kilometres $kkcc^2$).
- Perimeter is the measures length, or distance. It is always measured in regular units (metres cc, centimetres $cccc$, millimetres cc, kilometres $kkcc$).

Area and Perimeter of Rectangles

- This rectangle is $4\ cccc$ long and $2\ cccc$ wide.



Find the area of the rectangle by counting the number of square centimetres

Count the number of shaded squares

Area $= 8\ cccc^2$

Find the perimeter of the above rectangle

$PPPPPPPPccPPPPPPPP\ oooo\ PPPPccPPrrrrrrrrPP = 2rr + 2ww$

$= 2 \times 4 + 2 \times 2$

$= 12\ cccc$

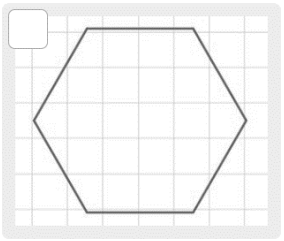
WRITE THE FOLLOWING QUESTIONS, SHOWING YOUR ANSWER AND ANY WORKING OUT

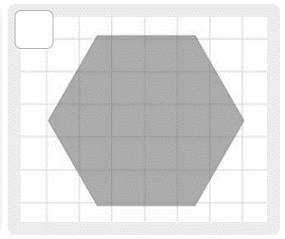
1. Area is the distance around a shape. Circle one of the answers below.

   True

   False

2. Circle the diagram that indicates the perimeter of the shape.

   A 

   B 

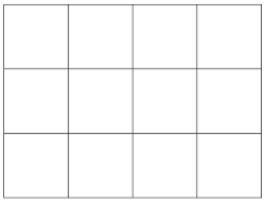
3. Calculate the area of the rectangle.

   a. 12 uurrPPPPuu

   b. 12 uurrPPPPuu²

   c. 14 uurrPPPPuu

   d. 14 uurrPPPPuu²



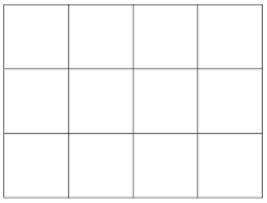
4. What is the perimeter of the rectangle?

   a. 12 uurrPPPPuu

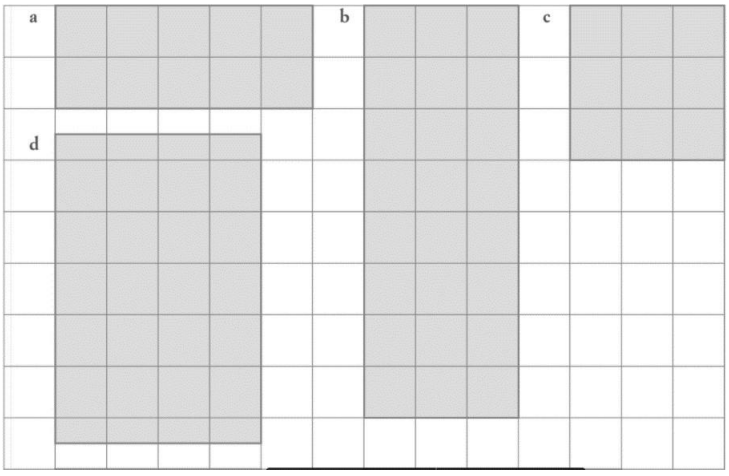
   b. 12 uurrPPPPuu²

   c. 14 uurrPPPPuu

   d. 14 uurrPPPPuu²



5. Calculate the area and perimeter of each of the rectangles below. Write your answers in the table.



Rectangle	Perimeter (units)	Area (uuuuuuuuu²²)
a		
b		
c		
d		

Summary:

Lesson 3	
Week: 2	**Topic:** Length and Simple Area
EQ: How are the areas of squares and rectangles calculated?	

Additional Links:

MathsOnline: Area of Rectangles and Squares – Lesson 3269

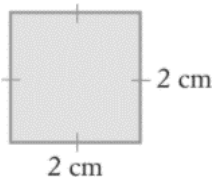
Youtube: https://www.youtube.com/watch?v=CggY7a630Q

Write these notes and examples in your workbook.

Area of Squares

To find the area of a square use the formula:

- $AAPPPPr\ r = uuPPssP\ \ P \times uuPPssP\ P = u\ u \times uu$ or $A\ A = uu^2$
- Find the area of this square

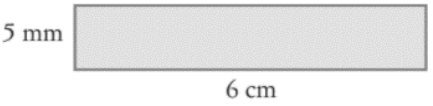


$$AA = uu^2$$
$$= 2^2$$
$$= 2 \times 2$$
$$= 4\ cccc^2$$

Area of Rectangles

To find the area of a rectangle use the formula:

- $AAPPPPr\ r = rrPPrrrrPPh \times wwPPssPPh$ or $A\ A = rrww$
- Find the area of this rectangle



$AAPPPPrr = rrPPrrrrPPh \times wwPPssPPh$

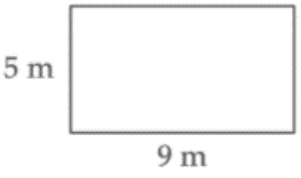
$= 60 \times 5$ *Change 6 cccc to 60 cccc to make units the same*

$= 300\ cccc^2$

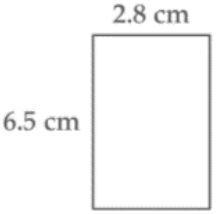
Summary:

WRITE THE FOLLOWING QUESTIONS, SHOWING YOUR ANSWER AND ANY WORKING OUT

1. What is the area of a rectangle of length 8 $cccc$ and width 7 $cccc$. Select the correct answer.
   a) 48 $cccc^2$
   b) 56 $cccc^2$
   c) 64 $cccc^2$
   d) 30 $cccc^2$
2. What is the area of a rectangle if $rr = 4.7\ cc$ and $ww = 3.6\ cc$? Select the correct answer.
   a) 17.02 cc^2
   b) 29.61 cc^2
   c) 26.64 cc^2
   d) 16.92 cc^2
3. Find the area of each rectangle.
   a)

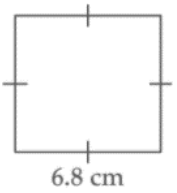


   b)

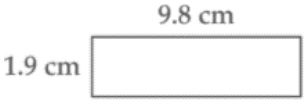


   c)

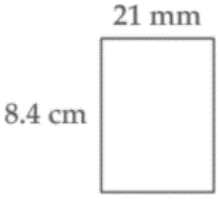
   d)



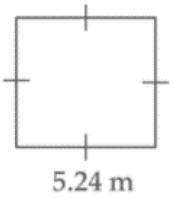
   e)



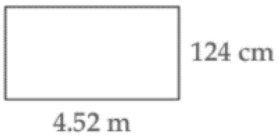
4. Find the area of each rectangle.
   a)



   b)



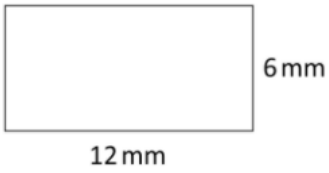
   c)



WEEK 2 QUIZ

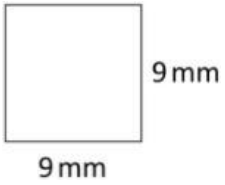
Student Name: Class: Teacher:

Q.1



AAPPPPrr =

Q.2



AAPPPPrr =

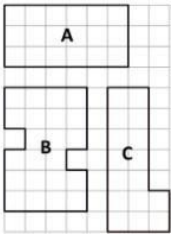
Q.3

Below is a 1 *cccc* square grid. Find the area of each plane shape.

Shape A: Area = ☐ cm²

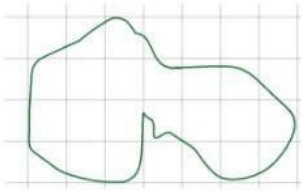
Shape B: Area = ☐ cm²

Shape C: Area = ☐ cm²



Q.4

Estimate the area (one row at a time).



R1: ☐ squares

R2: ☐ squares

R3: ☐ squares

R4: ☐ squares

Total Area = ☐ squares

Q.5

A pathway is 110 *cccc* wide and 5.4 *cc* long. Find the area in cc^2.

110 *cccc*

5.4 *cc*

Lesson 4

Week: 3	**Topic:** Length and Simple Area

EQ: What method is used to convert between metric units of area?

Additional Links:

Youtube:
https://www.youtube.com/watch?v=ppMiX60ru-M

Write these notes and examples in your workbook

Area

The area of a shape is the amount of surface that is enclosed by the shape.

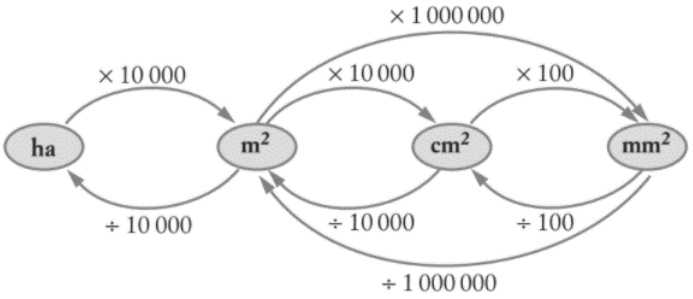
Quantity	Name of unit	Abbreviation
Area	square millimetre	$cccc^2$
	square centimetre	ccc^2
	square metre	cc^2
	hectare	hrr

Converting between different units of area

$1\ cccc^2 = 100\ cccc^2$

$1\ cc^2 = 10\,000\ cccc^2 = 1\,000\,000\ cccc^2$

$1\ hrr = 10\,000\ cc^2$



E.g. Convert

a) $3\ cccc^2$ to $cccc^2$

$3\ cccc^2 = 3 \times 100\ cccc^2$

$= 300\ cccc^2$

b) $4000\ cccc^2$ to cc^2

$4000\ cccc^2 = 4000 \div 1\,000\,000\ cccc^2$

$= 0.004\ cccc^2$

c) $81\,000\ cc^2$ to hrr

$81\,000\ cc^2 = 81\,000 \div 10\,000\ hrr$

$= 8.1\ hrr$

Summary:

WRITE THE FOLLOWING QUESTIONS, SHOWING YOUR ANSWER AND ANY WORKING OUT

1. What unit of area would you use when measuring the area of:
   a) A farm?
   b) A classroom?
   c) A shirt?
   d) The school oval?
   e) A sheet of paper?
   f) Your eardrum?

2. Copy and complete each statement.
   a) $15\ ccc^2 =$ _____ $cccc^2$
   b) $1\ 500\ 000\ cccc^2 =$ _____ cc^2
   c) $690\ cccc^2 =$ _____ ccc^2
   d) $6.5\ cc^2 =$ _____ ccc^2
   e) $0.5\ cccc^2 =$ _____ $cccc^2$
   f) $12\ hrr =$ _____ cc^2
   g) $12\ 200\ ccc^2 =$ _____ cc^2
   h) $1250\ ccc^2 =$ _____ ccc^2
   i) $0.32\ hrr =$ _____ cc^2
   j) $7.9\ ccc^2 =$ _____ $cccc^2$
   k) $0.75\ cc^2 =$ _____ $cccc^2$
   l) $2\ 450\ 000\ cc^2 =$ _____ hrr
   m) $865\ 000\ ccc^2 =$ _____ cc^2
   n) $51\ 300\ cccc^2 =$ _____ cc^2

Lesson 5

Week: 3	**Topic:** Length and Simple Area

EQ: What needs to be identified to calculate the area of triangles?

Additional Links:

MathsOnline: Area of Triangles 1 – Lesson 3270

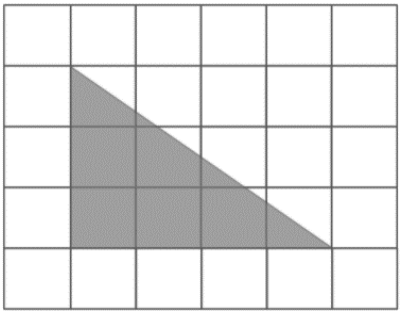
MathsOnline: Area of Triangles 2 – Lesson 3271

Youtube: https://www.youtube.com/watch?v=pvMuDPVOm7Y

Write these notes and examples in your workbook

Area of a Triangles

This triangle has a base length of $4\ cccc$ and a height of $3\ cccc$.



The area of the triangle is 6 square centimetres if we count the squares. The area can also be calculated by observing that the triangle is half of a rectangle with length $4cccc$ and width $3\ cccc$.

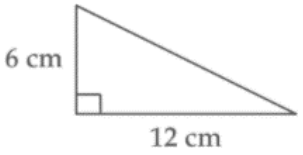
So, the area of the $\frac{1}{2} \times 4 \times 3 = 6cccc^2$

Formula for the Area of a Triangle

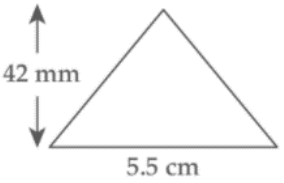
$AAPPPPrr\ r = \frac{1}{2} \times bbrrwwP\ P \times hPPPPrrhPP$ or $AA = \frac{1}{2} bbh$

Find the area of each triangle

$$AAPPPPrr = \frac{1}{2} \times bbrrwwPP \times hPPPPrrhPP$$
$$= \frac{1}{2} \times 12 \times 6$$
$$= 36\ cccc^2$$



$$AA = \frac{1}{2} bbh$$
$$= \frac{1}{2} \times 5.5 \times 4.2 \quad \longleftarrow \quad 42\ cccc = 4.2\ cccc$$
$$= 11.55\ cccc^2$$



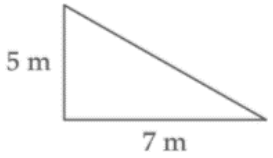
Summary:

WRITE THE FOLLOWING QUESTIONS, SHOWING YOUR ANSWER AND ANY WORKING OUT

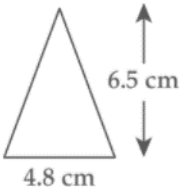
1. What is the area of a triangle with base 15 *cccc* and height 12 *cccc*. Select the correct answer.
   a) 180 *ccc*^{2}
   b) 45 *ccc*^{2}
   c) 90 *ccc*^{2}
   d) 54 *ccc*^{2}

2. What is the area of a triangle with base 8.6 *cc* and height 4.2 *cc*. Select the correct answer.
   a) 36.12 *cc*^{2}
   b) 18.06 *cc*^{2}
   c) 9.03 *cc*^{2}
   d) 25.6 *cc*^{2}

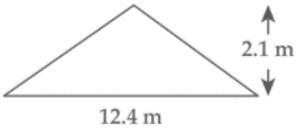
3. Find the area of each triangle below
   a)



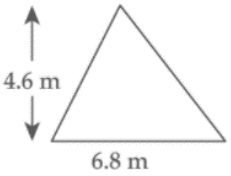
   b)



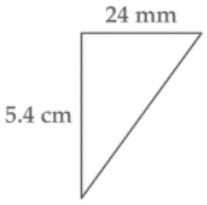
   c)



   d)



4. Find the area of each triangle below.
   a)



   b)

5. Find the area of a triangle with base 5.9 *cc* and height 45 *cccc*.

Lesson 6

Week: 3	**Topic:** Length and Simple Area

EQ: How does calculating the area of parallelograms relate to triangles?

Additional Links:

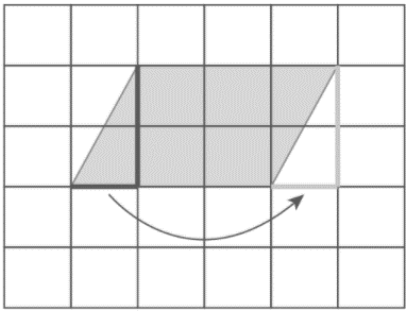
MathsOnline: Area of Parallelograms – Lesson 3274

Youtube: https://www.youtube.com/watch?v=uj6k22WubCk

Write these notes and examples in your workbook

Area of Parallelograms

This parallelogram has a base length of 3 $cccc$ and a height of 2 $cccc$.



If the triangle outlined in dark grey is moved to the space outlined in light grey, then the parallelogram will become a rectangle. The area of the rectangle will be the same as the parallelogram.

So, the area of the parallelogram $= 3 \times 2$

$= 6\ cccc^2$

Formula for Area of a Parallelogram

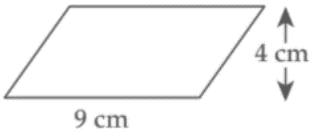
$AAPPPPrr\ r = bbrrwwP\ P \times hPPPPrrhPP$ or $A\ A = bbh$

Find the area of each parallelogram

$AAPPPPrr = bbrrwwPP \times hPPPPrrhPP$

$= 9 \times 4$

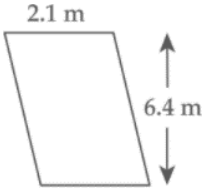
$= 36\ cccc^2$



$AA = bbh$

$= 2.1 \times 6.4$

$= 13.44\ cc^2$



Finding the Base Length or Height when given the Area

When given the area and one of the height or base length of a parallelogram, use one of two formula. Which formula is used will depend on the missing length.

If finding base length → $bb = AA \div h$

If finding height → $h = AA \div bb$

Find the base length or height of the parallelogram

Finding the base length

$bb = AA \div h$

$= 146.32 \div 11.8$

$= 12.4\ cc$

Area = 146.32 m²

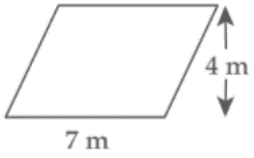
Base = ?

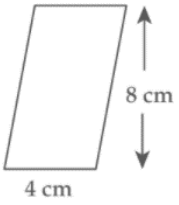
Summary:

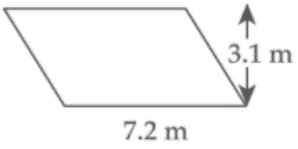
WRITE THE FOLLOWING QUESTIONS, SHOWING YOUR ANSWER AND ANY WORKING OUT

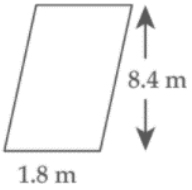
1. Find the area of a parallelogram with base $11\ cccc$ and height $5.6\ cccc$. Select the correct answer.
   a) $61.6\ ccc^2$
   b) $71.5\ ccc^2$
   c) $30.8\ ccc^2$
   d) $33.2\ ccc^2$

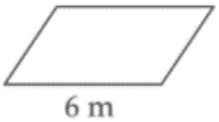
2. The area of a parallelogram is $24\ cc^2$. What is its base if its height is $8\ cc$? Select the correct answer.
   a) $4\ cc$
   b) $6\ cc$
   c) $3\ cc$
   d) $12\ cc$

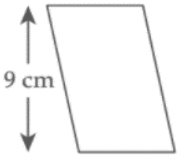
3. Find the area of each parallelogram
   a)
   

   b)
   

   c)
   

   d)
   

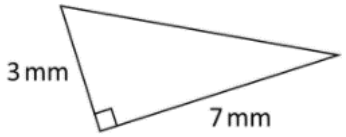
4. Find the value of the missing base or height in each of these parallelograms
   a)
   

   Area = 48 m²
   Height = ?
   b)
   

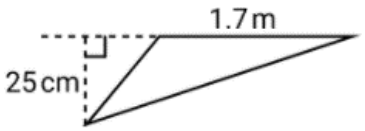
   Area = 63 cm²
   Base = ?

WEEK 3 QUIZ		
Student Name:	Class:	Teacher:

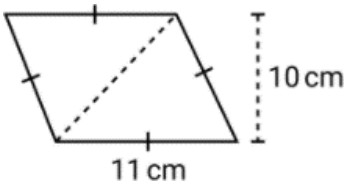
Q.1 Find the area of this triangle



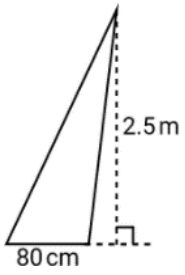
Q.2 Find the area of this triangle



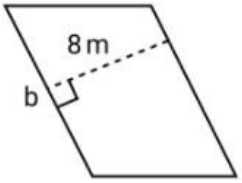
Q.3 Find the area of this parallelogram



Q.4 Find the area of this triangle



Q.5 Find the value of the base of this parallelogram



Area = 70 m²

ANSWERS

Lesson 1

1. C
2. a. False b. True c. False d. True
3. a. 5 $cccc^2$ b. 6 $cccc^2$ c. 7 $cccc^2$ d. 6$cccc^2$ e. 5 $cccc^2$ f. 6$cccc^2$
4. a. 4 $cccc^2$ b. 4 $cccc^2$ c. 4 $cccc^2$

Lesson 2

1. False
2. A
3. b
4. c
5. a. $PPPPPPPcc^{PPPPPPPP} = 14\ uurr^{PPPuu}, AAPPPPrr = 10\ uurr^{PPPuu2}$
   b. $PPPPPPPcc^{PPPPPPPP} = 22\ uurr^{PPPuu}, AAPPPPrr = 24\ uurr^{PPPuu2}$
   c. $PPPPPPPcc^{PPPPPPPP} = 12\ uurr^{PPPuu}, AAPPPPrr = 9\ uurr^{PPPuu2}$
   d. $PPPPPPPcc^{PPPPPPPP} = 20\ uurr^{PPPuu}, AAPPPPrr = 24\ uurr^{PPPuu2}$

Lesson 3

1. B
2. D
3. a. 45 cc^2 b. 18.2 $cccc^2$ c. 23.94 cc^2 d. 46.24 $cccc^2$ e. 18.62 $cccc^2$
4. a. 17.64 $cccc^2$ b. 27.4576 cc^2 c. 5.6048 cc^2

Lesson 4

1. a. hectares b. cc^2 c. $cccc^2$ d. cc^2 e. ccc^2 f. $cccc^2$
2. a. 1500 $cccc^2$ b. 1.5 cc^2 c. 6.9 $cccc^2$ d. 65 000 $cccc^2$ e. 500 000 $cccc^2$ f. 120 000 cc^2
   g. 1.22 cc^2 h. 12.5 $cccc^2$ i. 3200 cc^2 j. 790 $cccc^2$ k. 750 000 $cccc^2$ l. 245 hrr
   m. 86.5 cc^2 n. 0.0513 cc^2

Lesson 5

1. C
2. D
3. a. 17.5 cc^2 b. 15.6 $cccc^2$ c. 13.02 cc^2 d. 1564 cc^2
4. a. 6.48 $cccc^2$ b. 89342 $cccc^2$
5. 1.3275 cc^2

Lesson 6

1. A
2. C
3. a. 28 cc^2 b. 32 $cccc^2$ c. 22.32 cc^2 d. 15.12 cc^2
4. a. 8 cc b. 7 $cccc$

BRISBANE WATER SECONDARY COLLEGE | UMINA CAMPUS

SCIENCE

Term 4 - Weeks 2 & 3

Topic: Space

Year Group: 7

Student Name: _____

Please Circle Your Team:

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**

Work Overview & Instructions	**Enquiry Questions (EQ's)**
• Attached is the work for Science in Weeks 2 & 3. • Students will commence a new topic on **SPACE**.	• All relevant EQ being addressed are noted in the lessons provided.
Assessment Overview	**Feedback Instructions**
	• Students will need to complete and submit activities on Google Classrooms. • Regularly check feedback provided. • Attend Video Conferences if possible.

BRISBANE WATER SECONDARY COLLEGE

UMINA CAMPUS

Student Feedback

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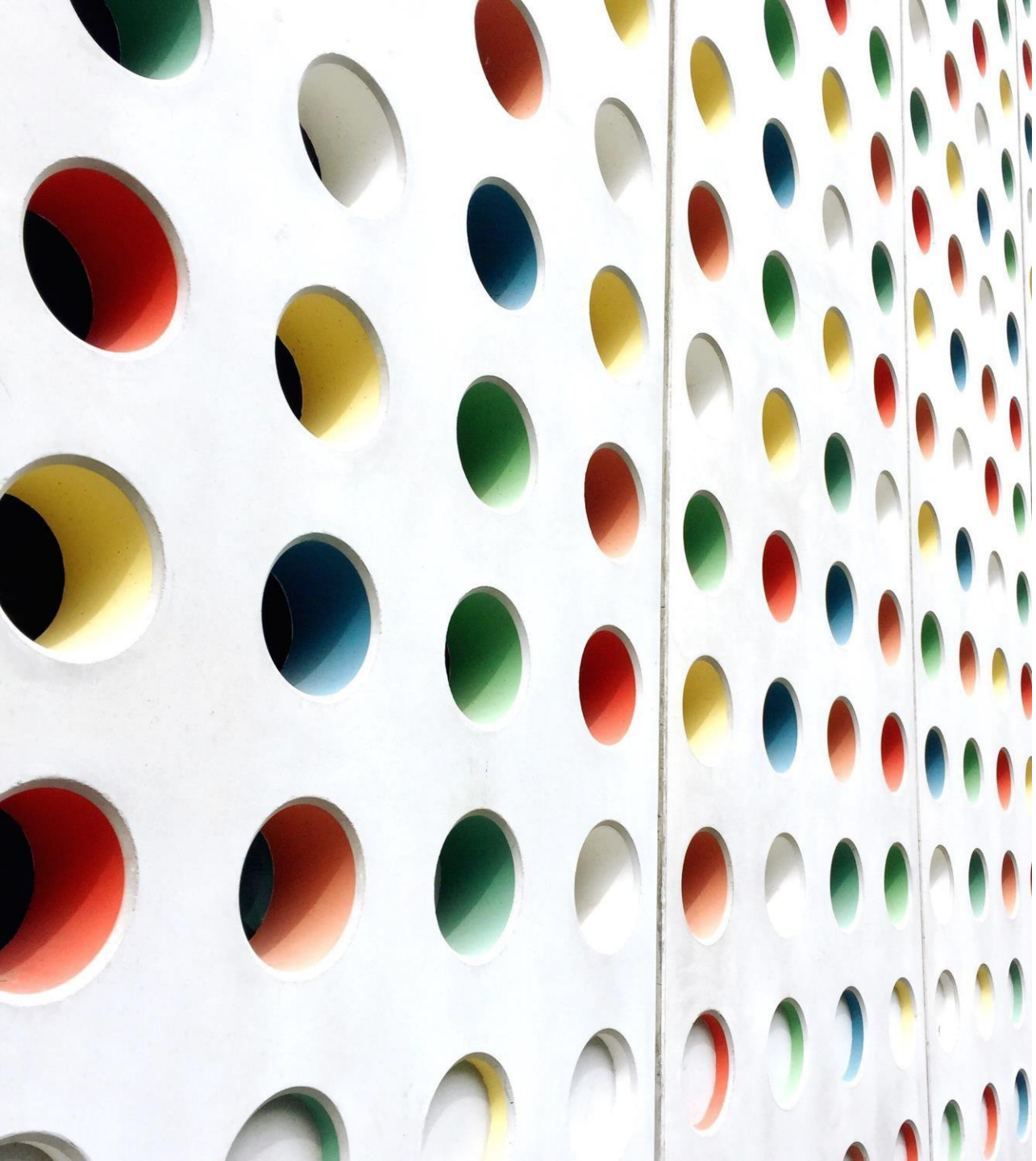
Veron Road UMINA NSW 2257
P 02 4341 9066
E umina-h.school@det.nsw.edu.au



SCIENCE

TERM 4 - WEEK 2

LESSON 1

INSTRUCTIONS:

THIS LESSON YOU WILL BE COMPLETING A MILESTONE ON THE TOPIC OF HABITATS & INTERACIONS

MILESTONE WILL BE “OPEN BOOK” – MEANING YOU CAN LOOK UP YOUR NOTES TO ANSWER THE QUESTIONS

COMPLETE THE MILESTONE ONLINE THROUGH YOUR GOOGLE CLASSROOMS (IF YOU CAN…) – OTHERWISE, PLEASE COMPLETE ON THE PAPER COPY PROVIDED IN THE WORK PACK.

Year 7 Milestone – Habitats and Interactions

1. A scientist who studies the interactions between living things and their environment is known as:

A) A taxonomist
B) A chemist
C) A geologist
D) An ecologist

2. Complete questions A-E using words from the WORDBANK below.

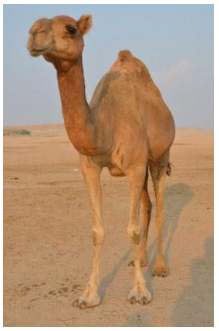
WORDBANK				
the ocean	the artic	the desert	the beach	a river

A) The habitat of this animal is _____

B) The habitat of this animal is _____

C) The habitat of this animal is _____

D) The habitat of this animal is _____



E) The habitat of this animal is _____

3. An ability to retain water is an adaptation of both plants and animals. Where would an animal with this adaptation is most likely to be found?

   A) Desert
   B) Rainforest
   C) Grassland
   D) Woodland

4. The original source of all energy used by consumers in a food web is:

   A) Soil
   B) Water
   C) Green plants
   D) The sun

5. Which of the following statements about food chains is **NOT** true?

    A) Food webs always start with producers
    B) Food webs and food chains both illustrate the direction of energy flow
    C) As a general rule, there are more higher order consumers than lower order consumers
    D) A food web can be described as a series of interconnecting food chains

6. The first order consumer in the food chain below is the:

    A) The maize
    B) The locust
    C) The lizard
    D) The snake

7. A secondary consumer is

    A) an animal that eats plants
    B) a plant
    C) an omnivorous animal
    D) an animal that eats an animal that eats plants

8. Identify the producer in the following food chain

Grass → Grasshopper → Frog → Snake → Kookaburra

    A) The kookaburra
    B) The grass
    C) The snake
    D) The sun

9. Identify the second order consumer in the following food chain

Grass → Grasshopper → Frog → Snake → Kookaburra

    A) The kookaburra
    B) The grass
    C) The snake
    D) The sun

10. Which of these human activities has a positive effect on food webs?

    A) Opening up an area of bushland for recreational activities
    B) Removing introduced predators from an area
    C) Overfishing particular fish species causing a decline in numbers
    D) Introducing exotic species, such as rabbits and foxes

11. Severe drought may cause vegetation to die. Consider the following food chain. Predict the effect on the number of dingoes if all the grass died off

Grass → kangaroo → dingo

Predict the effect on the number of dingoes if all the grass died off

    A) The number of dingoes would decrease because the kangaroos would die off and the dingoes would have less to eat
    B) The number of dingoes would increase because the kangaroos would have no food
    C) There would be no change because dingoes do not eat grass
    D) The number of dingoes would increase because they would breed more

12. Read the description and then classify each organism as **carnivore, omnivore or herbivore.**

Bears in Canada are often photographed catching fish as the fish try to jump up waterfalls on their way to breed upstream. Bears are also seen picking berries from low bushes. Campers have to place all their food and rubbish in sealed containers or bears will steal food from them.

The bear is a_____.

There are many different goannas and their diets vary. Their prey includes insects, snakes, smaller lizards, birds and birds' eggs. Some giant goannas will kill a young kangaroo or even attack a dog. Goannas are attracted by the smell of rotting meat and feed off the bodies of dead animals.

The goanna is a_____.

Desert hopping mice live in very harsh environments with little rain. To survive they have to eat what is available to them and have a varied diet of seeds, leaves, shoots, roots and insects.

The Desert hopping Mice is a_____.

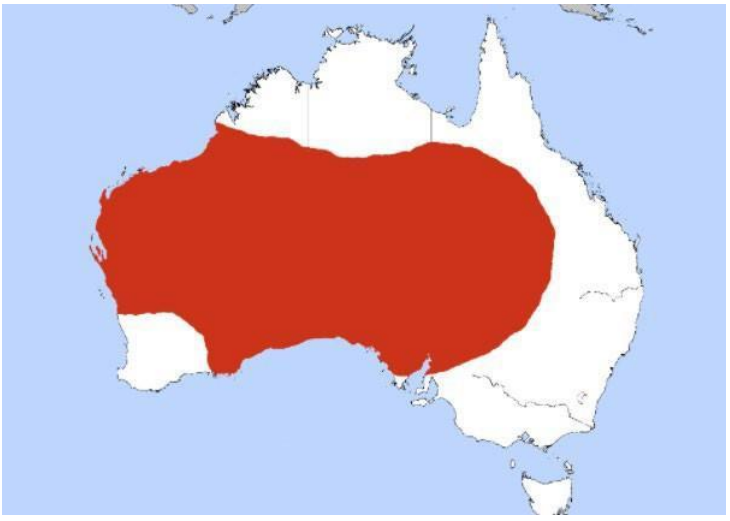
The common brushtail possum has adapted to living in cities and suburbs. In its natural habitat a brushtail possum eats mainly leaves and flowers. A particular favourite is fresh gum tips. Possums occasionally eat insects, eggs and meat. In urban areas possums hunt through open compost bins to see what they can find.

The brushtail possum is a_____.

The diet of yellow-footed rock wallabies is similar to most other wallabies. They eat grass, plants and shrubs, which they chew with flat teeth at the back of their jaw.

The yellow-footed wallaby is a_____.

13. The map below shows where a Red Kangaroo (Macropus rufus) can be found.
The areas where an animal is found is known as its:



The areas where an animal is found is known as its:

A) Habitat
B) Pattern
C) Location
D) Distribution

14. Identify the correct list of ABIOTIC factors that influence where an organism can live.

A) Competition, temperature and predation
B) Temperature, amount of light and wind
C) Competition, shelter and predation
D) Temperature, competition and shelter

15. Which of these human activities would have a NEGATIVE impact on a natural environment?

    A) Clearing forests and replacing them with exotic trees.
    B) Removing grazing cattle from a natural woodland area.
    C) Replanting eucalypt trees.
    D) Reintroducing koalas into eucalypt forests

16. A type of bird called a cattle egret feeds on insects, especially grasshoppers, flies (adults and maggots) and moths. Cattle egrets are usually found with cattle and other large grazing and browsing animals. Scientific studies have shown that cattle egrets find more food when they are near a large animal than when feeding on their own. The cattle are not affected by the egrets in any way.

    The type of symbiotic relationship that exists between the cattle egret and the cattle is known as:

    A) Mutualism
    B) Commensalism
    C) Parasitism

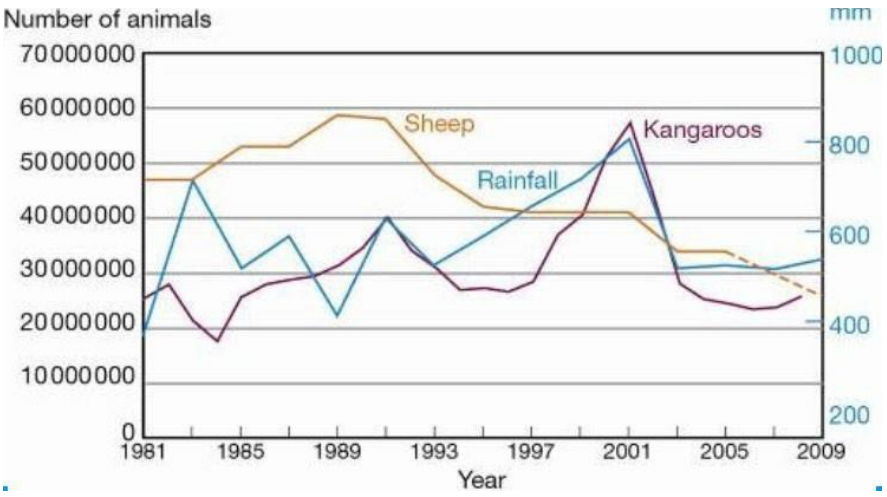
17. Deduce the relationship between the mosquito and the human whose arm can be seen in the photograph.

    A) predator/prey
    B) commensalism
    C) mutualism
    D) parasite/host

18. There are consequences caused by the introduction of the European fox into Australia in the 1860s. Select the consequence that is a BENEFIT for the natural environment.

A) It attacks lambs and chickens
B) It eats a wide variety of native animals
C) It eats rabbits—another introduced species
D) It provided sport for fox hunters

19. Compare the three graphs to identify the relationships between sheep numbers, kangaroo numbers and rainfall.



A) The number of sheep and the number of kangaroos follow the same pattern
B) Sheep numbers are high when rainfall is good
C) Kangaroo numbers are higher in years of good rainfall
D) Rainfall does not affect sheep or kangaroo numbers

20. The following two photographs are of part of a banksia tree showing the fruit that contains the seeds. The pictures show the tree before and after a fire. Deduce the effect of the fire.

A) The fire burns the tree and fruit, killing the tree and any seeds
B) The fruit explodes and the seeds are destroyed
C) The fire dries the fruit, which opens, allowing the seeds to come out
D) The fire just causes the tree and the fruit to turn black

21. In an area where there is frequent flooding, the local council is planning a new development that includes playing fields, a children's playground, housing and a shopping center with cinemas and car parks on its lower levels. A new electricity substation will be needed to supply electricity to the development. The land set aside for the development is divided into three main areas:

- Area X floods on average every 5 years
- Area Y floods on average every 25 years
- Area Z floods on average every 100 years.

Deduce the best use of the land.

A) Area X: electricity substation and shopping centre; Area Y: housing; Area Z: playing fields and play ground.
B) Area X: housing and playing fields; Area Y: electricity substation and shopping centre; Area Z: car park and playground.
C) Area X: playing fields and playground; Area Y: shopping centre; Area Z: housing and electricity substation.
D) Area X: shopping centre; Area Y: playing fields and playground; Area Z: housing and electricity substation.

22. Choose the correct word from the WORDBANK to match the definition below.

WORDBANK			
Habitat	decomposer	abiotic	biotic
Adaptation	consumers	prey	competitors

a. Organisms which share the same food source_____.
b. The living factors in an ecosystem_____.
c. Organisms that rely on other organisms for food_____.
d. An organism that is consumed by a predator_____.
e. The non-living factors in an ecosystem_____.
f. The physical characteristics or behaviours of an organism help it to survive and reproduce in a particular environment_____.
g. An organism that breaks down organic matter, so it is recycled_____.
h. The place where an organism lives_____.

23. Propose TWO reasons why an animal might be threatened with extinction.

_____

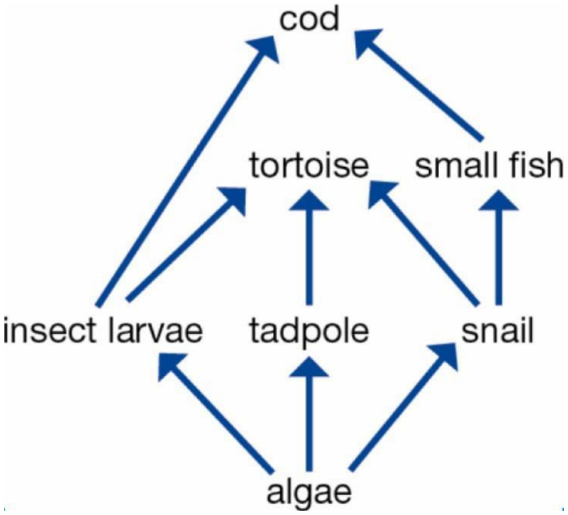
_____

_____

_____

_____

24. Study the following diagram representing a food web in a freshwater creek:



a) Explain what the arrow between two organisms means.

_____

b) Name an organism that is prey for the small fish _____

c) Draw two different food chains that include the tortoise. Don't forget to use arrows.

Food Chain 1:

Food Chain 2:

d) What would be the effect on the population of snails if the cod were fished out of the lake by fishing enthusiasts? Justify your answer.

_____

_____

25. The snow Owl shown in the photo is native to the Arctic regions of North America. It is an active hunter, consuming rabbits, rodents and fish. Unlike most Owls, the snow owl hunts during the day when it is light. It can sneak up on its prey by flying almost silently.

Use the photos and text above to describe two characteristics of the organism that are adaptations to surviving in the Arctic and explain HOW these adaptations help it to survive.

_____

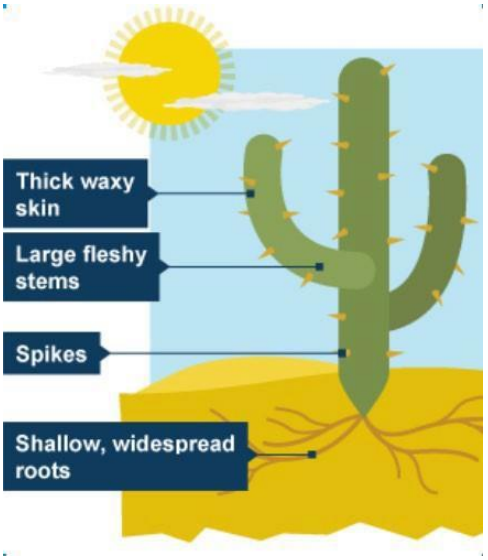
_____

_____

_____

_____

26. The diagram below shows some adaptations of a cactus. Choose TWO of these adaptations and explain HOW each helps the cactus to survive in the desert.



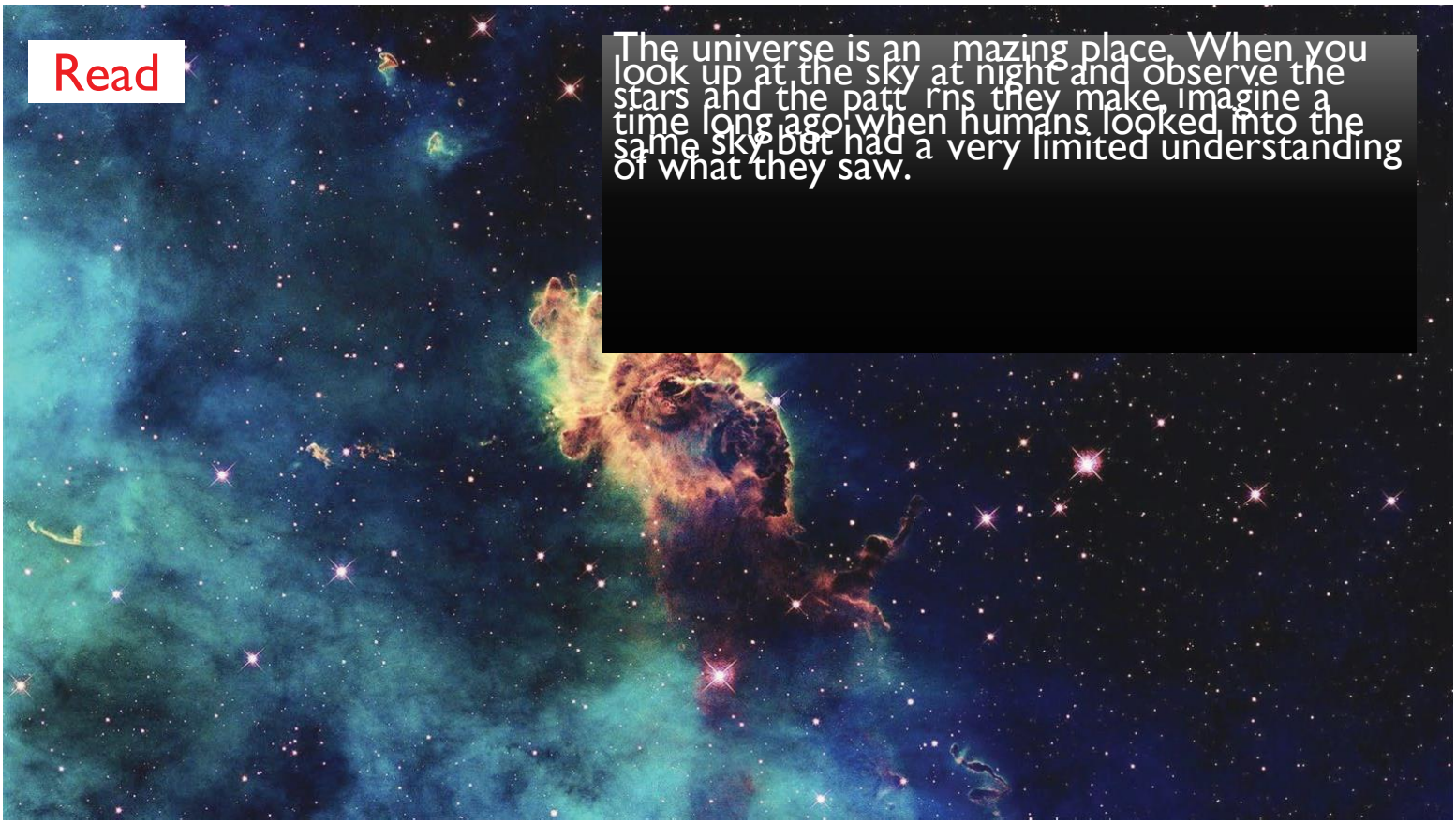
YEAR 7
WEEK 2
LESSON 2

INSTRUCTION: YOU NEED TO DO A NEW TITLE PAGE.
THE TOPIC IS:

EARTH IN SPACE

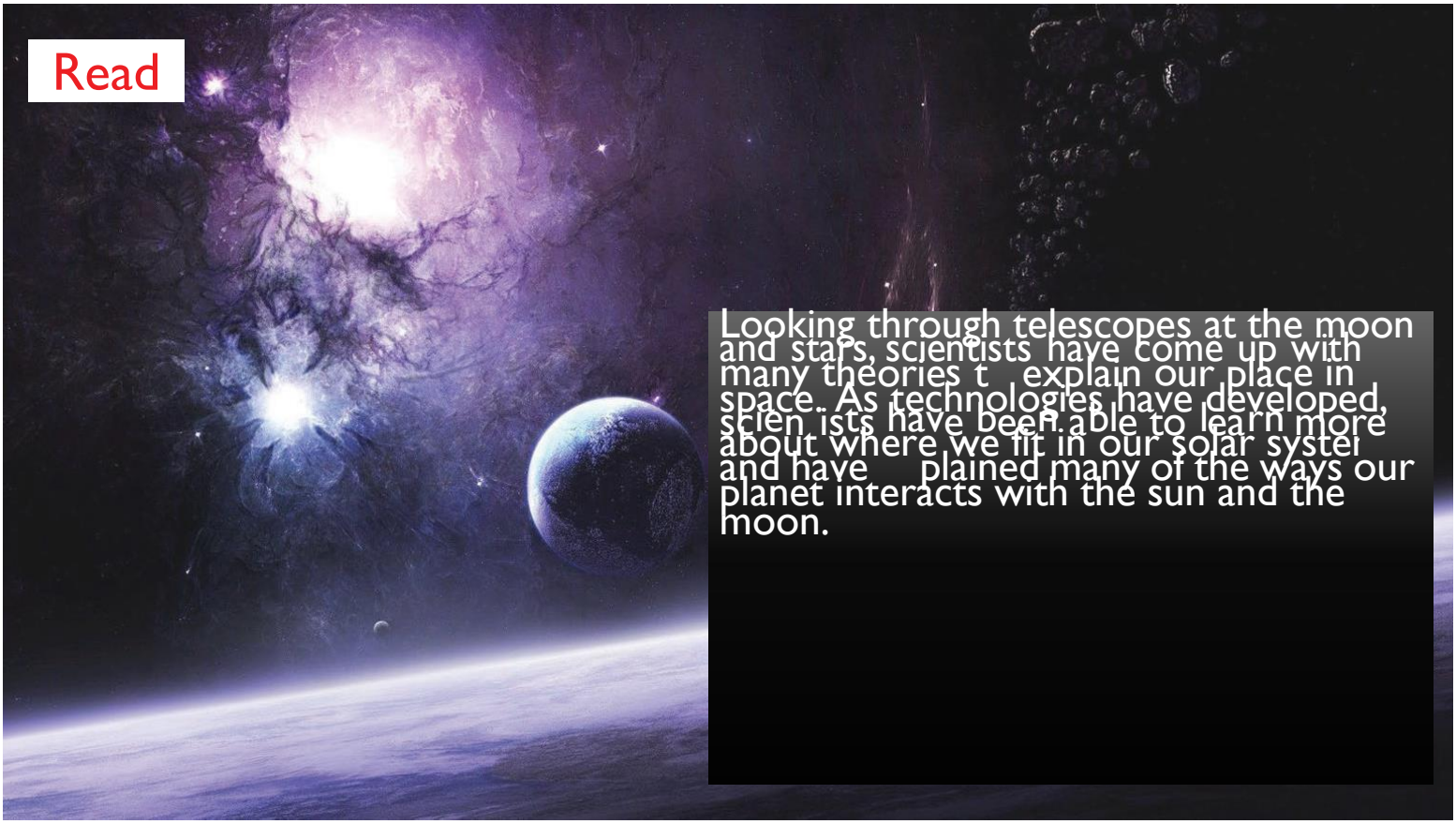
TOPIC: INTERACTIONS WITH THE SUN

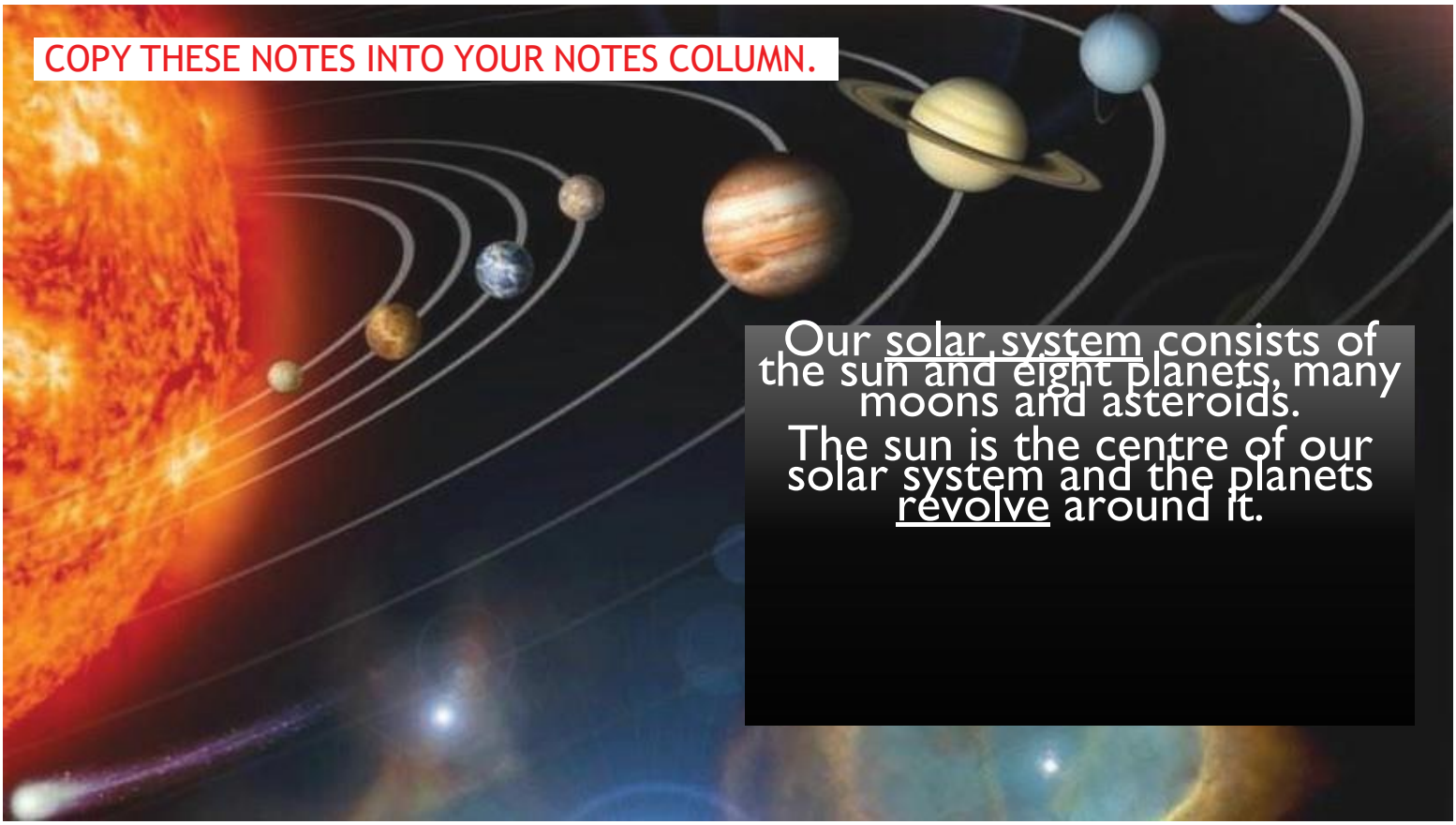
EQ: IDENTIFY WHAT OUR SOLAR SYSTEM CONSISTS OF

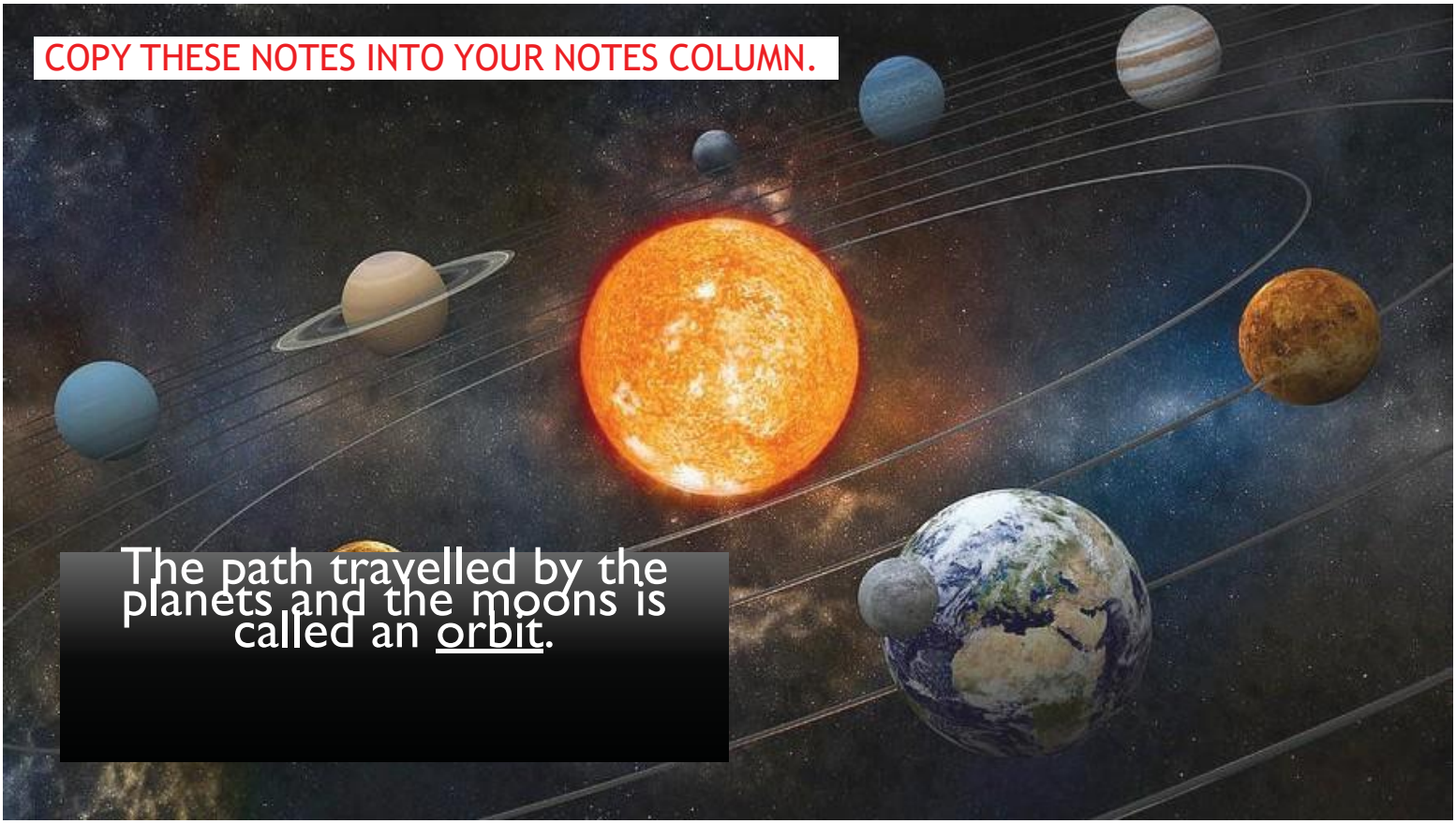


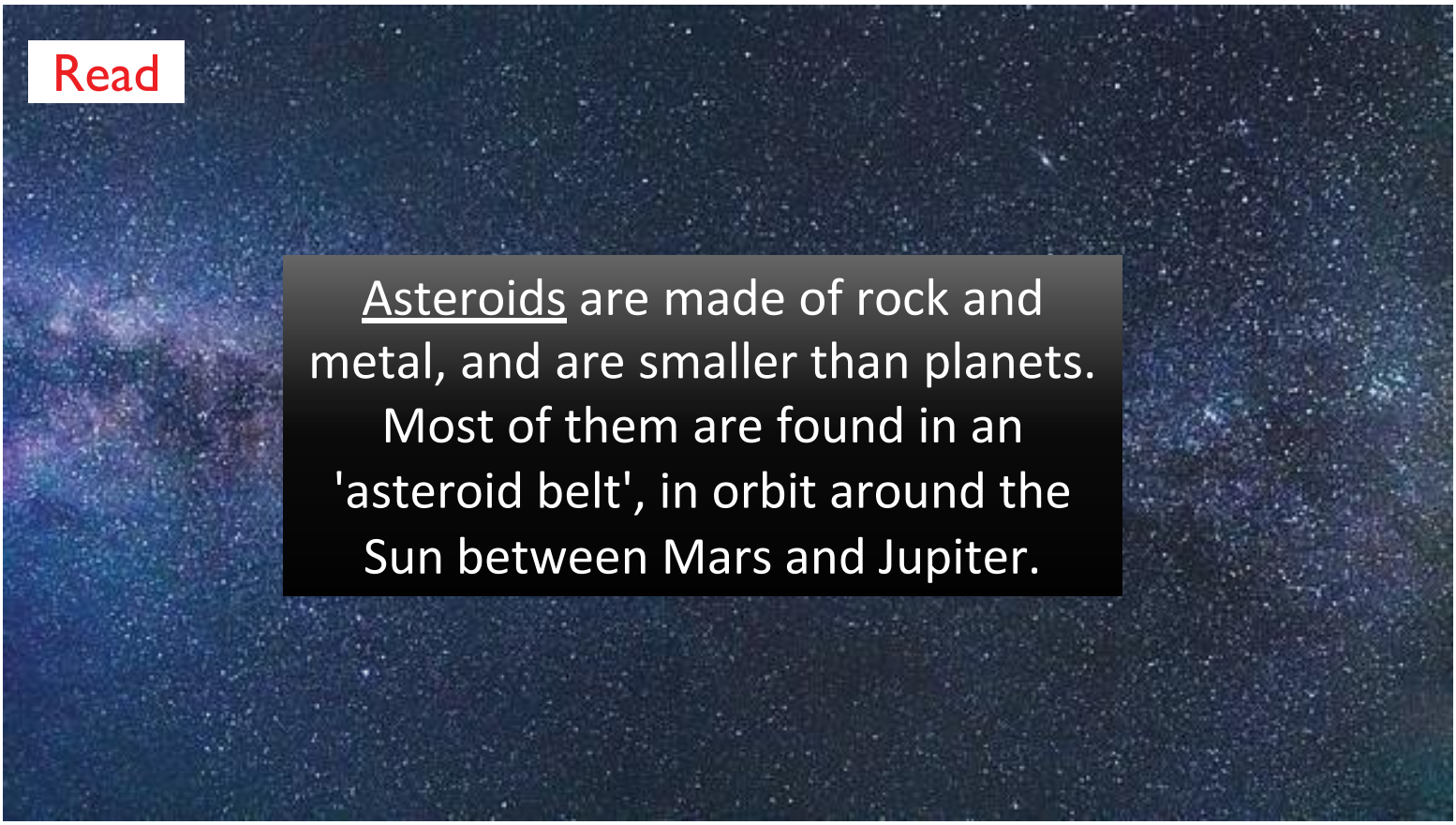
Read

The universe is an mazing place. When you look up at the sky at night and observe the stars and the patt rns they make, imagine a time long ago when humans looked into the same sky but had a very limited understanding of what they saw.


Read
Looking through telescopes at the moon and stars, scientists have come up with many theories t explain our place in space. As technologies have developed, scien ists have been able to learn more about where we fit in our solar systei and have plained many of the ways our planet interacts with the sun and the moon.


COPY THESE NOTES INTO YOUR NOTES COLUMN.
Our solar system consists of the sun and eight planets, many moons and asteroids.
The sun is the centre of our solar system and the planets revolve around it.

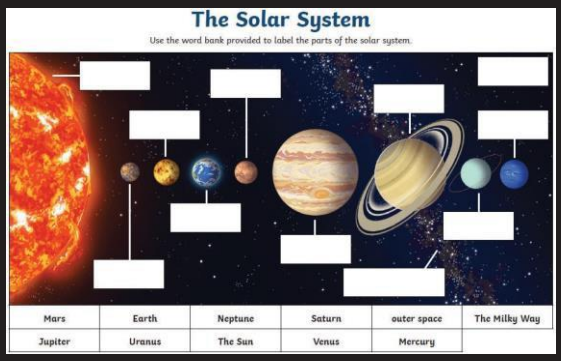

COPY THESE NOTES INTO YOUR NOTES COLUMN.
The path travelled by the planets and the moons is called an orbit.


Read
Asteroids are made of rock and metal, and are smaller than planets. Most of them are found in an 'asteroid belt', in orbit around the Sun between Mars and Jupiter.

INSTRUCTIONS:

Complete 'The Solar System Labelling Activity' worksheet. You will find this as an attachment in your Google Classroom.

Glue your completed worksheet on the left-hand side of your Science book.



BONUS ACTIVITY

Choose a planet to research

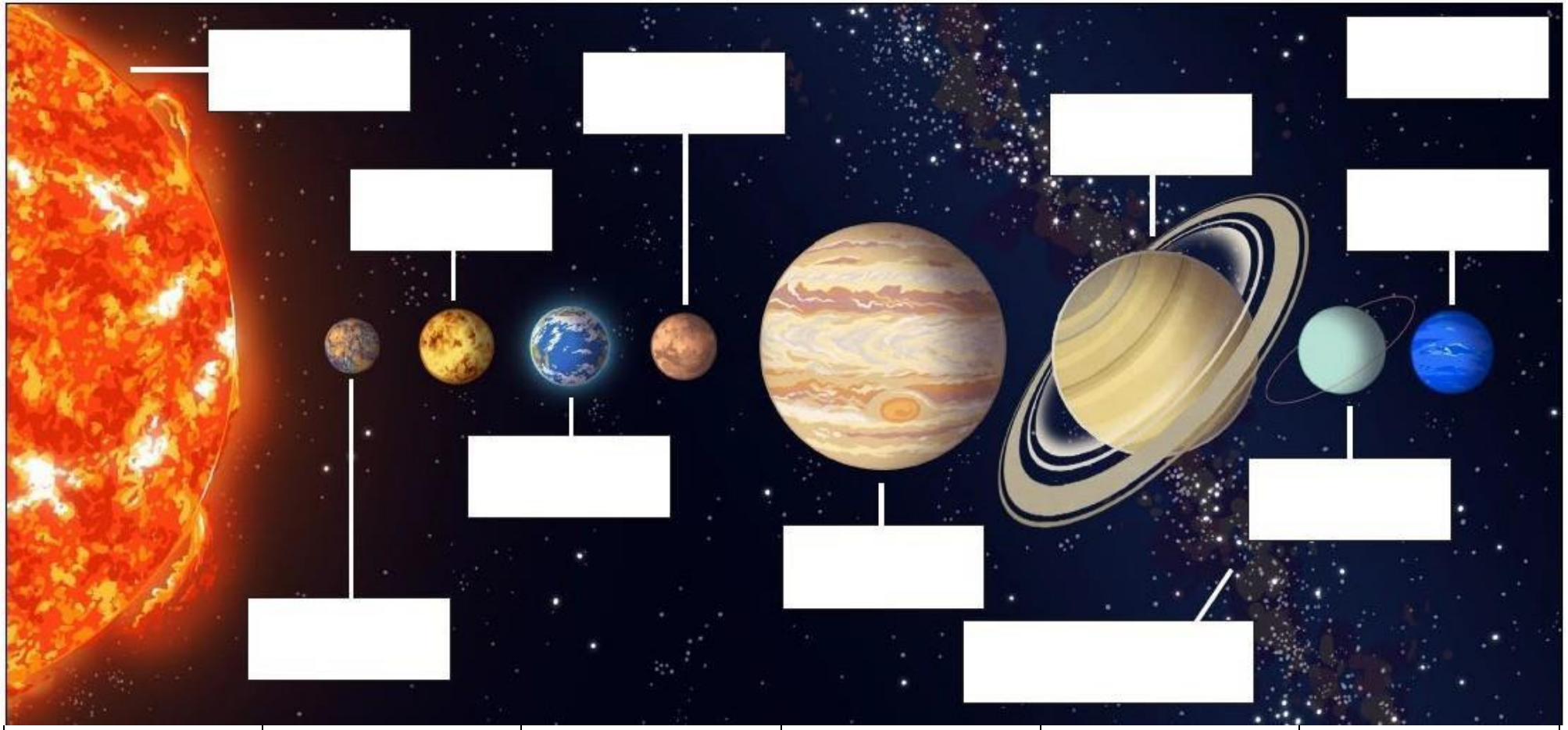
My planet is _____

Research the planet and organise the information into the table.

Size		**Temperature**	
Moons		**Atmosphere**	
Length of day		**Length of year**	

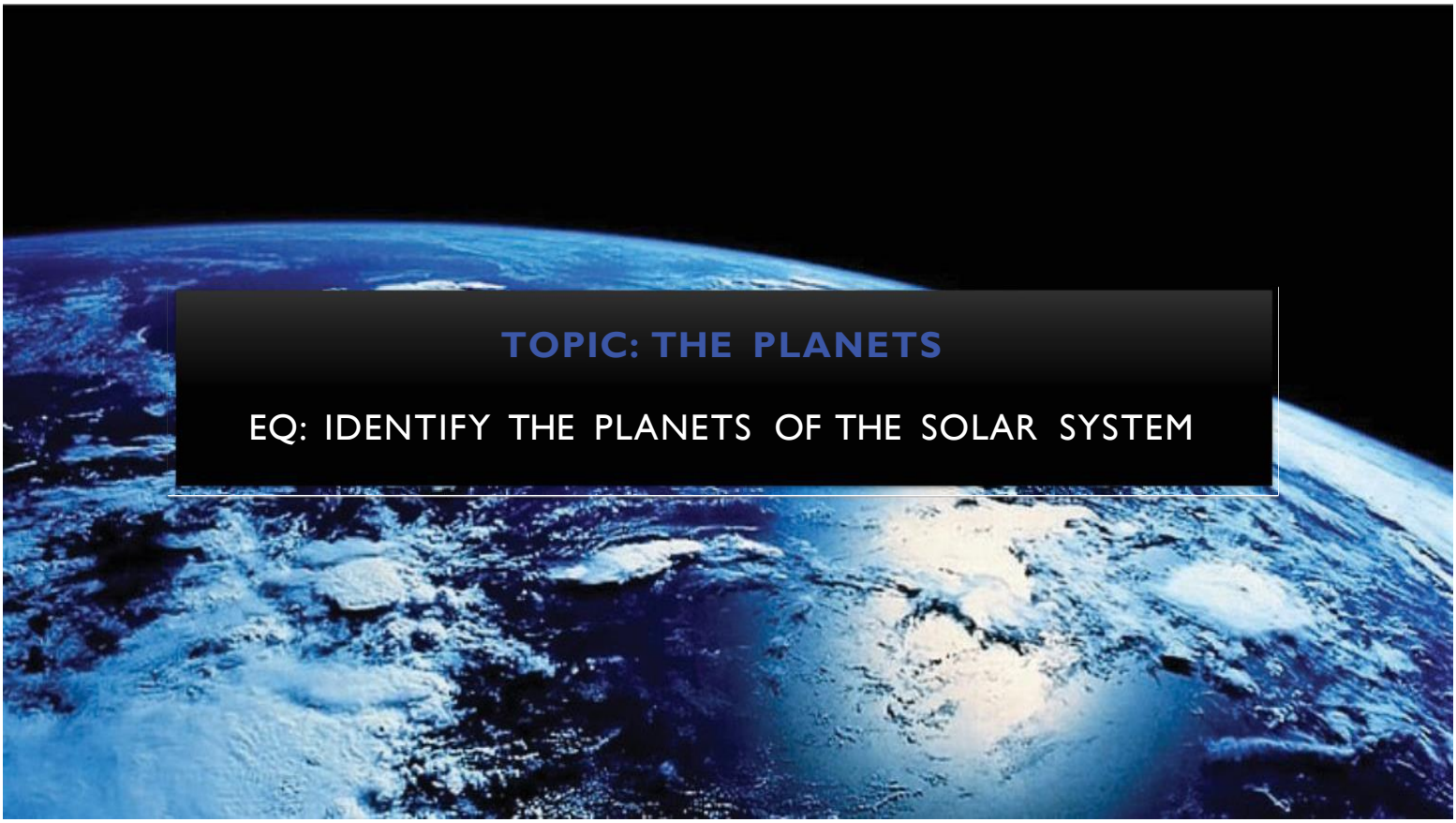
The Solar System

Use tile word banll provided to la bel tile parts of the so la r s ystem.



Mars	**Earth**	**Neptune**	**Saturn**	**outer space**	**The Milky Way**
Jupiter	**Uranus**	**The Sun**	**Venus**	**Mercury**	

YEAR 7
WEEK 3
LESSON 3



TOPIC: THE PLANETS

EQ: IDENTIFY THE PLANETS OF THE SOLAR SYSTEM

INSTRUCTIONS:

Watch the 4 minute video on the Solar System.

Pause the video and write important facts about each planet in your Cornell Notes column.

You must write two dot points on each planet.

#NationalGeographic #SolarSystem #Educational

Solar System 101 | National Geographic

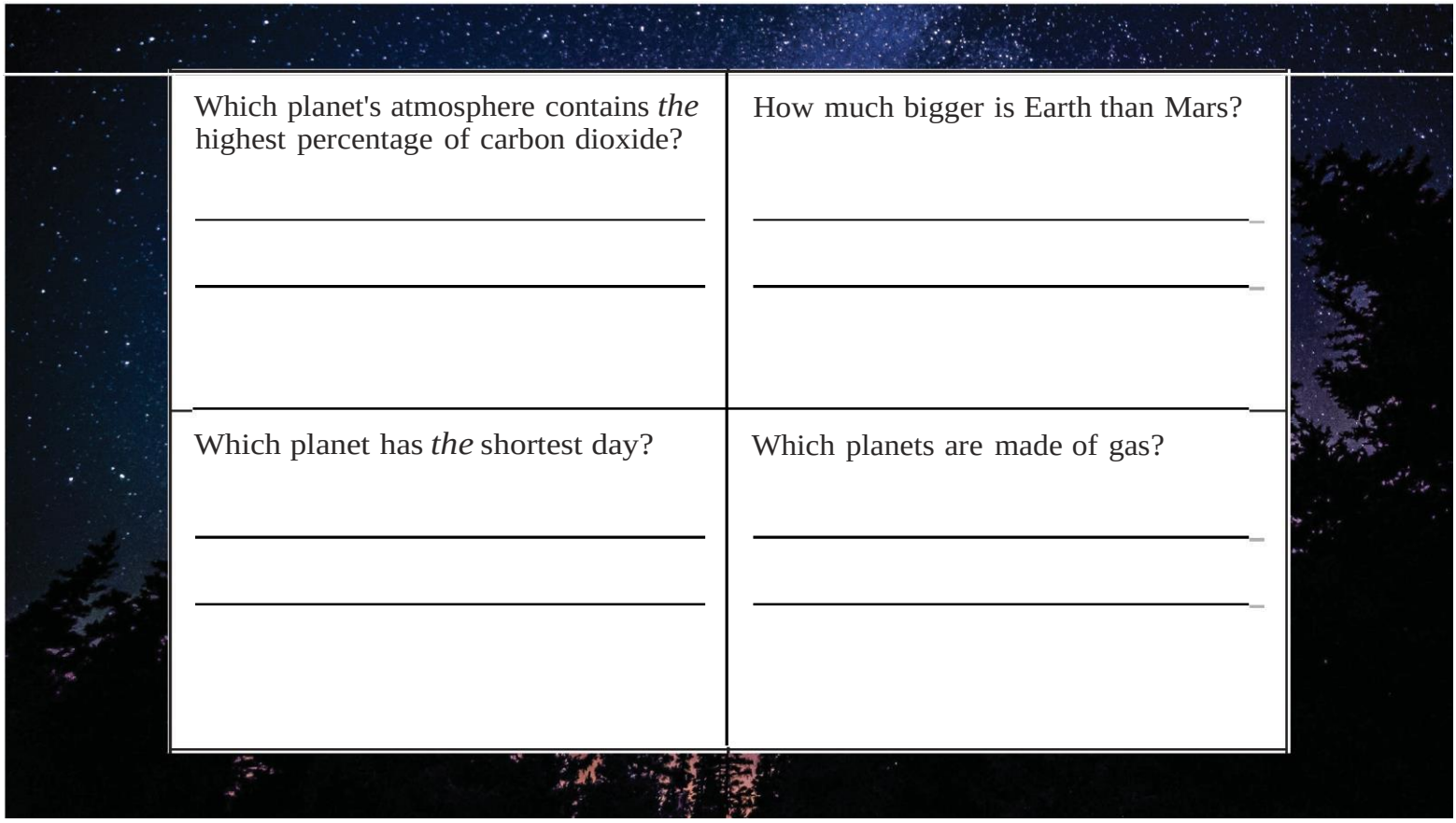
https://www.youtube.com/embed/libKVRa01L8

INSTRUCTIONS: Complete slides 4, 5 and 6 on the left-hand side of your page. You must copy out the question.

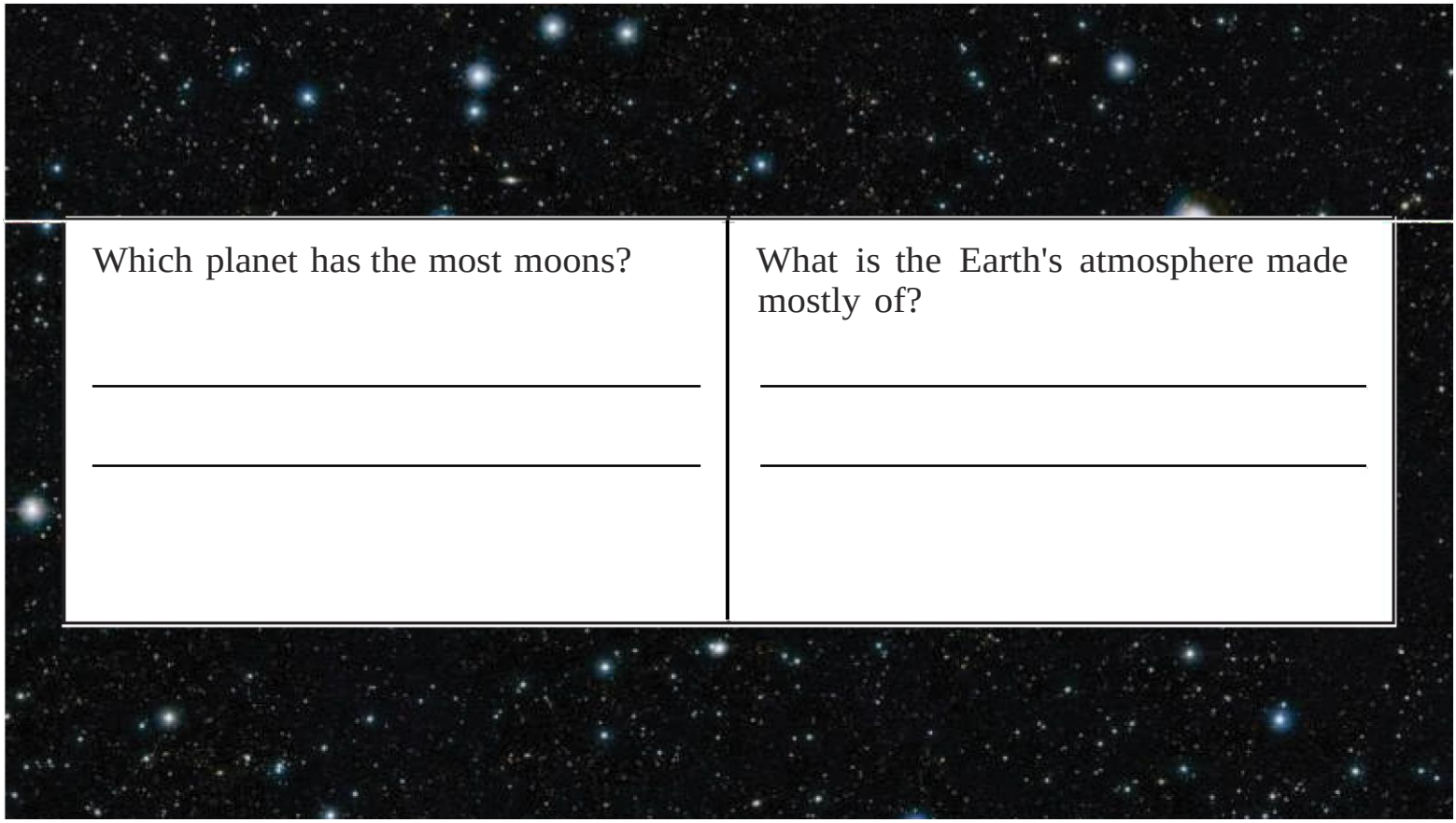
Solar System Fact Hunt

Use the internet to find answers to the following questions

Which planet orbits closest to the Sun?	Which planet has the highest maximum temperature?

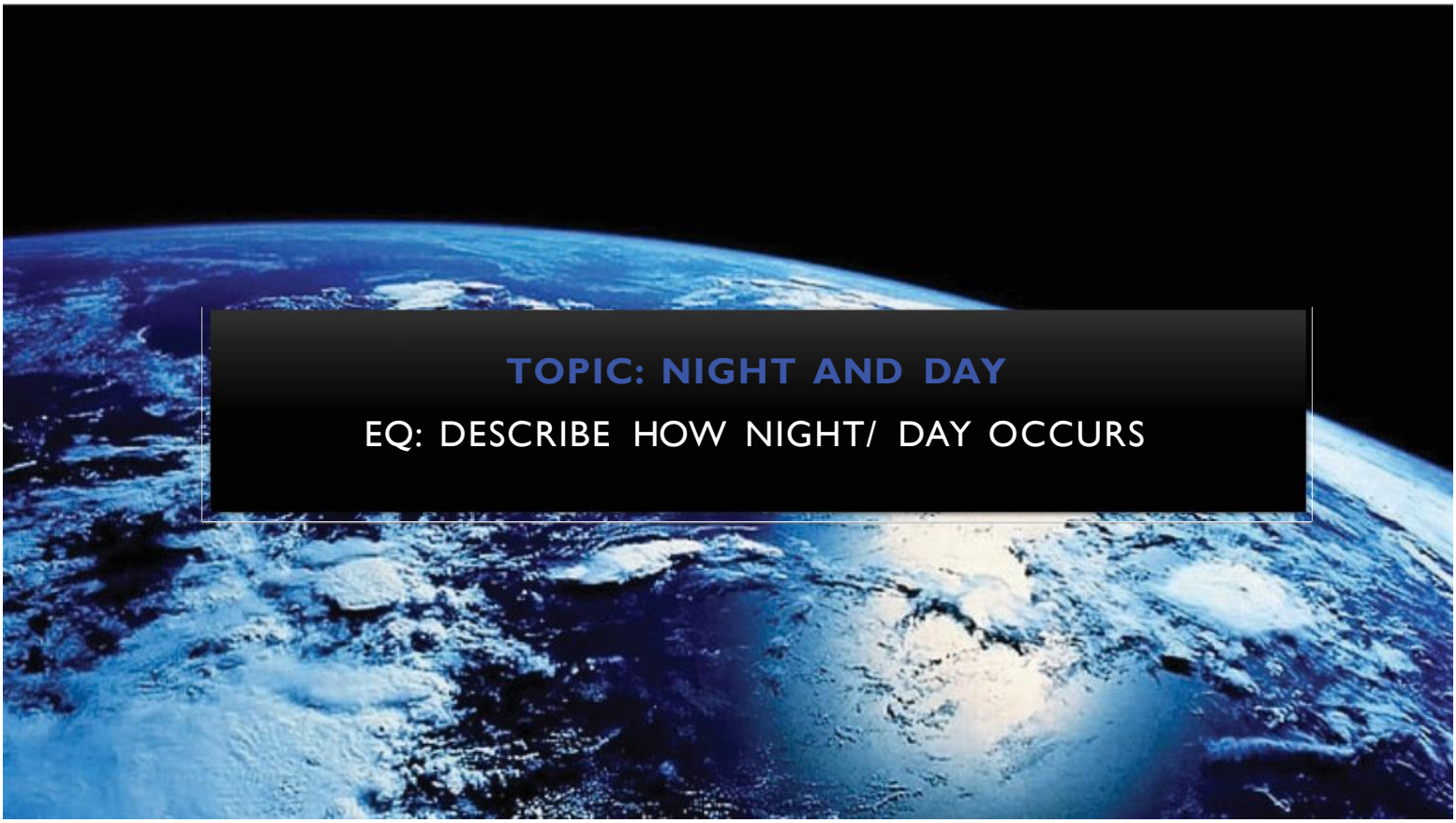


Which planet's atmosphere contains *the* highest percentage of carbon dioxide?	How much bigger is Earth than Mars?
Which planet has *the* shortest day?	Which planets are made of gas?



Which planet has the most moons?	What is the Earth's atmosphere made mostly of?

YEAR 7
WEEK 3
LESSON 4



TOPIC: NIGHT AND DAY

EQ: DESCRIBE HOW NIGHT/ DAY OCCURS

Read

The Earth is three dimensional and so only half of the planet can be in the sunlight at any given time. The rest of the Earth is in its own shadow. The side that faces the sun is lit up and is experiencing daytime, while the side facing away from the sun is experiencing the darkness of night.

Read

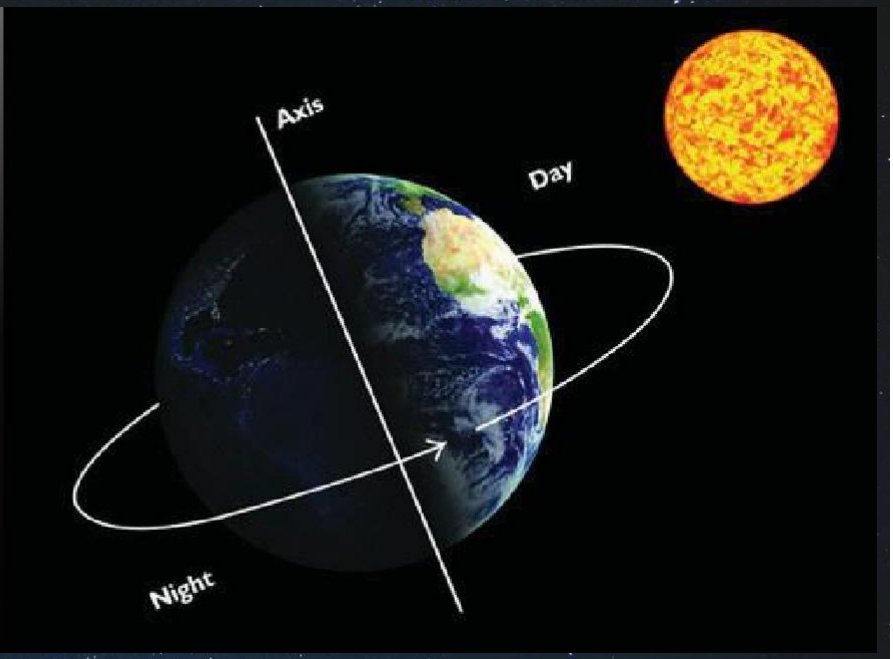
Day and night are caused by the Earth spinning on its axis, which is an imaginary line joining the North and South Poles.

It takes the Earth 24 hours to complete one full rotation, which is why there are 24 hours in a day. If the Earth's axis was straight up and down then we would have exactly 12 hours of day and 12 hours of night, however, the Earth's axis is tilted at an angle of about 23°. This means the further away a location is from the equator, the greater the difference between the lengths of day and night.

All parts of the Earth experience periods of day and night because the planet rotates on its axis, exposing each region to sunlight and darkness at different times.

COPY THESE NOTES INTO YOUR NOTES COLUMN.

The earth spins on its axis as it moves around the sun.
Day and night are caused by this spinning. It takes 24 earth hours to complete one full rotation, which is why there are 24 hours in one day



Read

The gravitational force between the sun and the Earth holds the Earth in its orbit around the sun.

COPY THESE NOTES INTO YOUR NOTES COLUMN.

A Year

A year is the time a planet takes to make one complete orbit around the sun (365.25 days).

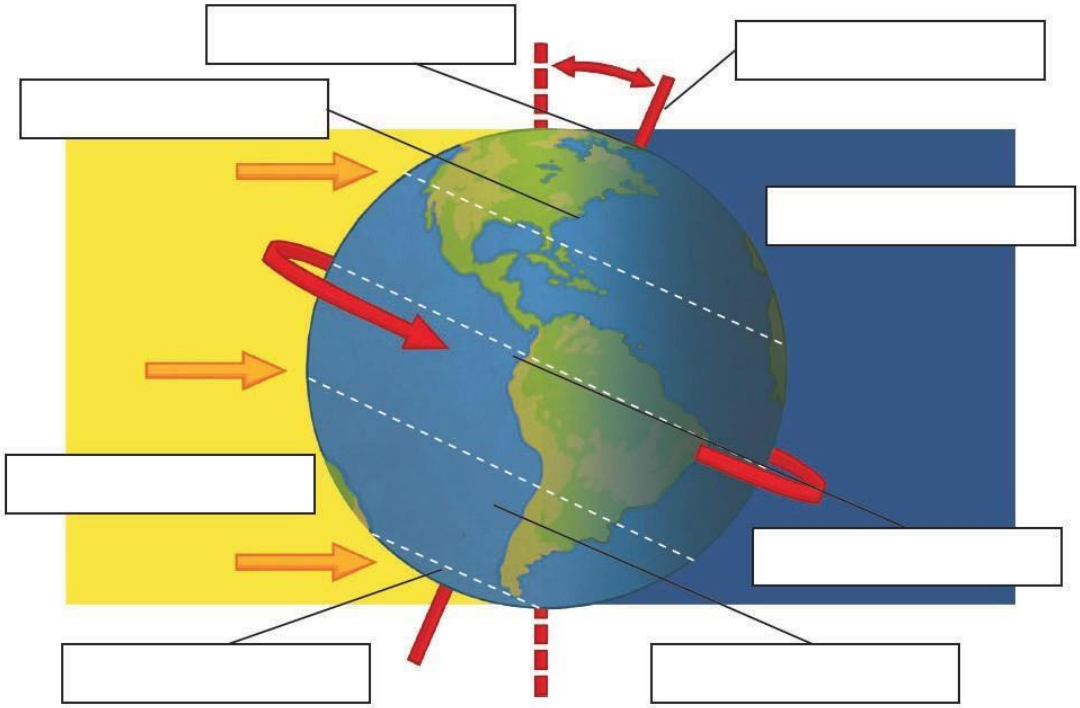
Our calendar is set to whole days (365 days in a year). An extra day is added to the month of February every four years to make up the difference. This is known as a leap year.

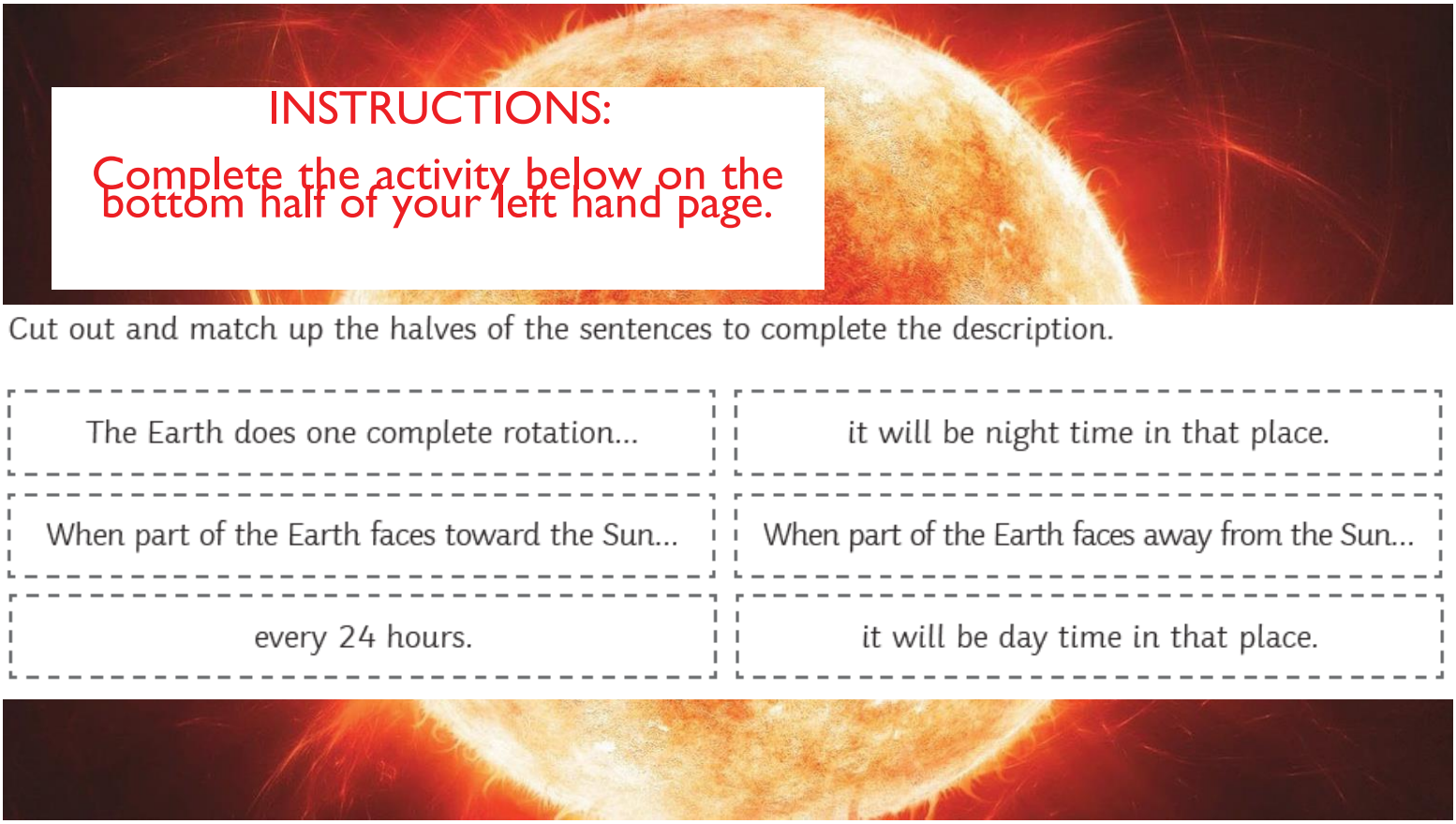
INSTRUCTIONS:

Complete the 'Day and Night Cut and Stick Activity' on the left-hand side of you page.

Day and Night Cut and Stick Activity

Cut out the labels below and stick them in the correct places on the diagram.





INSTRUCTIONS:

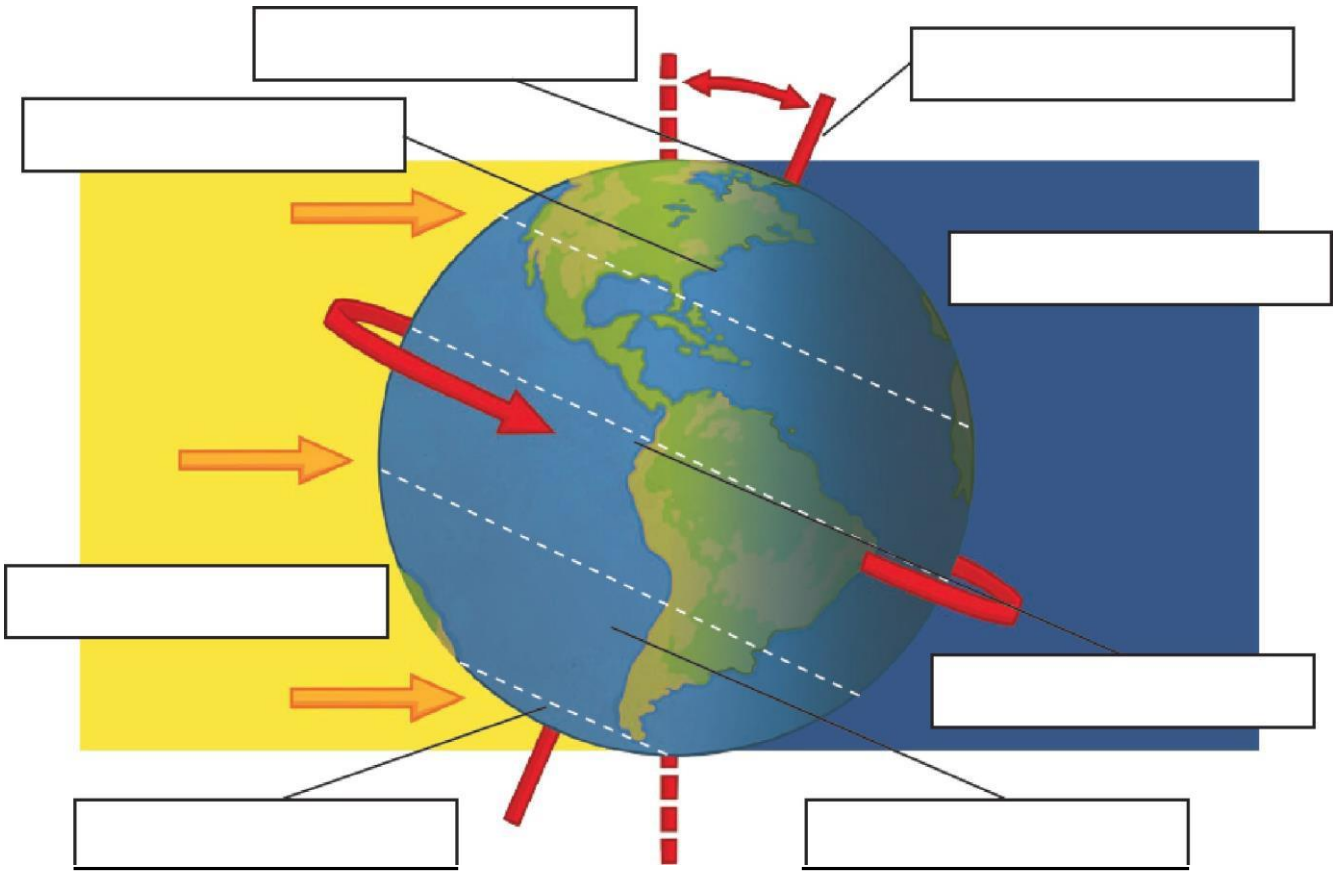
Complete the activity below on the bottom half of your left hand page.

Cut out and match up the halves of the sentences to complete the description.

The Earth does one complete rotation...	it will be night time in that place.
When part of the Earth faces toward the Sun...	When part of the Earth faces away from the Sun...
every 24 hours.	it will be day time in that place.

Day and Night Cut and Stick Activity

Cut out the labels betow and stick them i:n the correct places on the diagram_



North Pote	northern hemisph_ere	day tLme	South Pole	
nigh_t time	southern hemisph_ere	equator	Earth_'s axis	

Cut out and match up the halves of the sentences to complete the description_

The Earth does one complete rotation____	it w ill be nig h t time in that ptace _
When part of the Earth faces toward tne Su.n___	When part of the Earth faces away from the Su.n _
every 24 hours_	it wi.tl be day time in that place_

YEAR 7
WEEK 3
LESSON 5

TOPIC: SEASONS

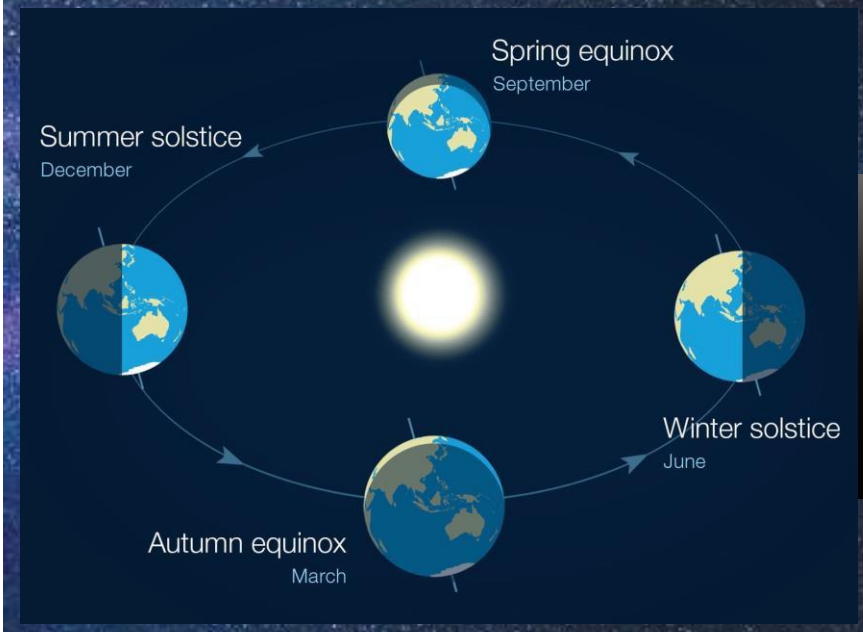
EQ: DESCRIBE HOW SEASONS OCCUR

Read

The tilt of the Earth on its axis causes different regions of the Earth to point towards or away from the sun at different times of the year.

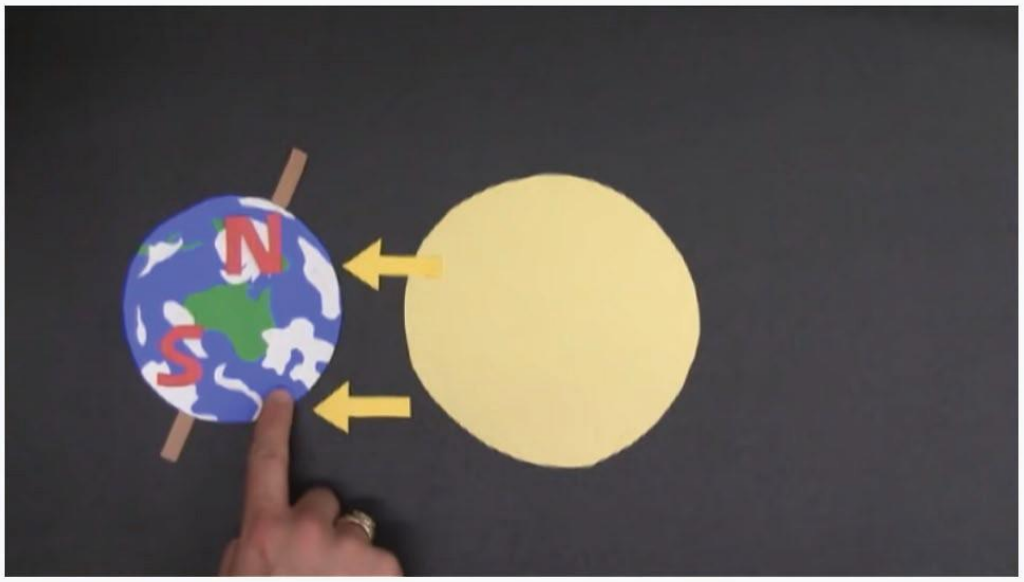
This causes the differ nt parts of the Earth to experience changing lengths of daylight and night-time, as well as changing climates— which we know as the four seasons.

COPY THESE NOTES INTO YOUR NOTES COLUMN.



The tilt of the Earth on its axis causes different regions of the Earth to point towards or away from the sun at different times of the year.

Watch



Earth's Tilt 1: The Reason for the Seasons

https://www.youtube.com/embed/Pgq0LThW7QA

Read

Australia experiences summer when the southern hemisphere is tilted towards the sun. Rays from the sun hit the Earth at right angles and the sun appears to be high in the sky. More of the heat radiation from the sun's rays ters the atmosphere because of the angle, producing warmer temperatures.

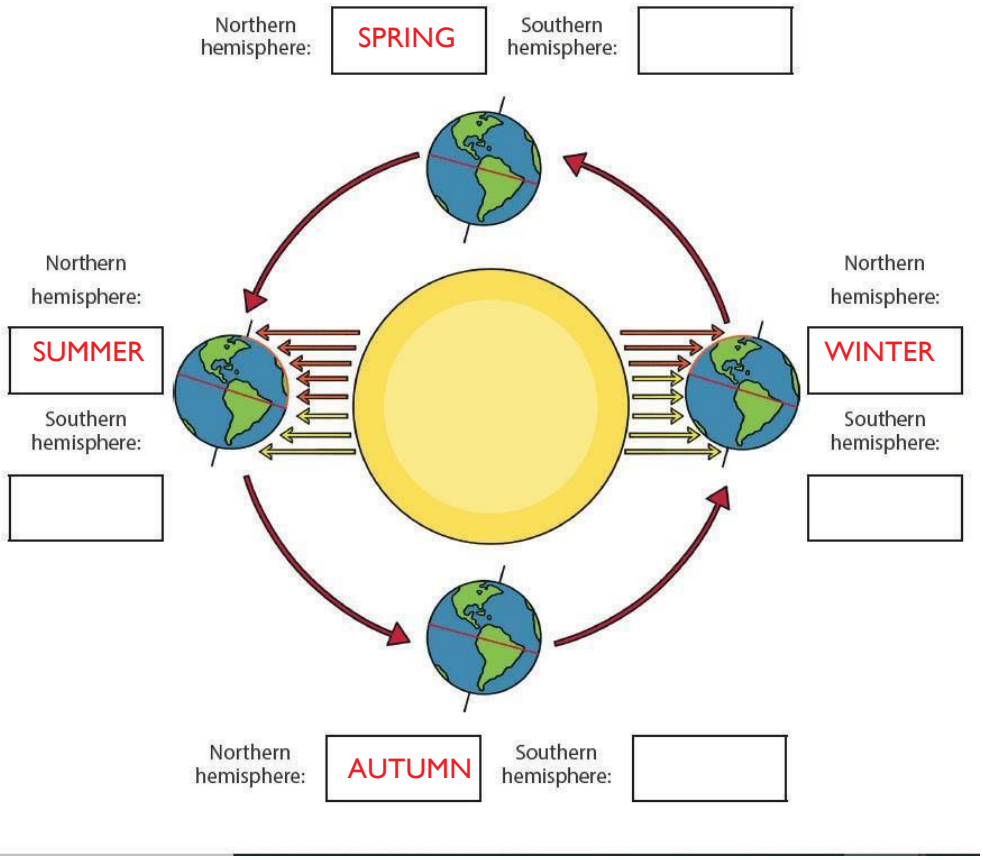
In Australia's winter the southern hemisphere is tilted away from the sun. The rays from the sun hit at a much greater angle and are therefore more sp ead out. As a result, the southern hemisphere experiences cooler temperatures and the sun appears to track a lower path through the sky.

INSTRUCTIONS:

Cut out the diagram or carefully copy to the left-hand side page.

Write/paste the words on slide 6 into the diagram.

The North n Hemisphere answers have been completed for you.



WORDBANK:

autumn

winter

spring

summer

BRISBANE WATER SECONDARY COLLEGE

UMINA CAMPUS

Learning from Home

Term 4 Week 2 and 3

Key Learning Area: HSIE

Year Group: 7

Student Name: _____

Please Circle Your Team:

1	2	3	4	5	6	7	8	9

Work Overview and Instructions	Syllabus Dot Point/Essential Questions
• Attached is the work pack for HSIE for Term 4 Week 2 and 3. • Instructions are clearly identified in the slides provided. • Complete all work in your workbook. If you do not have a new Geography book, please complete on loose paper. Upload images to Google Classroom.	• GE4-1 locates and describes the diverse features and characteristics of a range of places and environments • GE4-2 describes processes and influences that form and transform places and environments • GE4-7 acquires and processes geographical information by selecting and using geographical tools for inquiry • GE4-8 communicates geographic information using a variety of strategies
Assessment Overview ***(If required)***	**Feedback Instructions**
Each fortnight there will be a quiz that will be required to be completed. The quiz will be marked as part of your assessment task. The quiz is accessible via Google Classroom, and a hard copy is provided at the end of this work pack. Instructions are included at the beginning of this week's work. Quiz 2 – Due Monday 25th October 2021. Complete online or hand back to the front office.	• Submit work into Google Classroom, following your classroom teachers' instructions. • Upload a photo to the activity and submit via google classroom. • Upload the work at any time during the two-week cycle • Remember, you have work for two weeks here, please use your time wisely to have all work completed on time.

Student Feedback

_____

_____

_____

_____

_____

_____

_____

Year 7 Geography - Term 4 - Week 2 & 3

Lessons

1. Changing environments
   a. *Natural causes*
   b. *Human impacts*
   c. *Mining*
2. Land degradation
   a. *Notes & definitions*
   b. *Video & response*
   c. *Great Barrier Reef task*
3. Landscape protection
   a. *Notes*
   b. *Video & questions*
   c. *Research Task*
4. Value of landscapes
   a. *Summary activity*
   b. *Postcard*
5. Economic value
   a. *Textbook activity*
   b. *Skills questions*
6. Quiz

Instructions: Please complete the following activities in your Geography book. Upload images of your work to Google Classroom or hand in the loose papers with your name and cover sheet on them to the front office.

Lesson 1 - Activity A - Changing environments

- Copy the notes and table under EQ "How are landscapes altered by natural causes?"

Environments can change from many different factors. The table shows how some landscapes can change from natural causes.

Gradational force		Process	Landforms
Weathering		This is the breakdown or decay, but not the removal, of rocks and minerals at or near the surface.	Weathered landforms can include unique rock features such as fins, alcoves, arches (pictured) and hoodoos.
Erosion		The land surface is worn down by running water, ice, wave action or wind. The debris is then transported either by the running water, ice, waves or wind.	Erosional landforms can include river valleys created by running water, cirques and U-shaped valleys created by glaciers (pictured), mesas and buttes created by wind, and stacks and bays created by wave action.
Deposition		This occurs once the weathered and eroded material has been transported by running water, ice, waves or wind, and is said to be 'laid down'.	Depositional landforms can include deltas formed by running water; terminal moraine left by glacial retreat; sand dunes created by wind; and beaches, spits and tombolos created by wave action.

Lesson 1 - Activity B - *Changing landscapes*

- Copy the notes below under the EQ "In what ways do humans alter environments?"
- Write 3-5 points on how building and development, and recreation and tourism impact environments.

Changing environments

Landscapes are always changing, through natural processes, however, humans have also altered them in many ways. Sometimes these are temporary changes, but with our global population increasing, and more people moving to urban areas, these changes can become more permanent.
Some of the biggest impacts of humans are daming, mining, deforestation, erosion and degradation.

Building and development

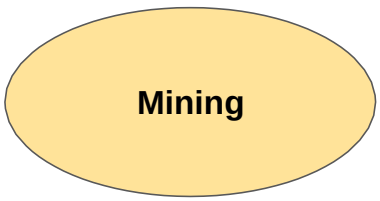
-
-
-
-
-

Recreation and tourism

-
-
-
-
-

Lesson 1 - Activity C - *Mining*

- Research task - research the environmental impacts of mining.
- Create a mind map with at least **10 different impacts** caused by mining.
- In addition to your 10 points, **include at least 3 different locations** that mines **in Australia** (can be currently operational or non-operational)



Lesson 2 - Activity A - *Land Degradation*

- Copy the notes under the heading *Land Degradation.*
- Under your notes, find a definition of each of the causes and write it in **your own words.**

Land degradation

Land degradation affects 33% of the Earth's land surface. It reduces the quality of the land and its ability to produce food. The main causes of land degradation are from human activities, such as,

- overgrazing
- crop growing without resting fields
- deforestation and land clearing
- collection of wood for fuel and
- industrialisation including mining

Lesson 2 - Activity B - *Land Degradation*

- Watch the video on land degradation.
- Once you have watched the video, answer the question below.

Land degradation

Why is it important to manage land and protect it from degradation?

Write a TEEEC paragraph to answer this question. Be sure to include examples from the video, including statistics where appropriate.

T.E.E.E.C

T - topic sentence
- this sentence introduces the topic or main point of the paragraph

E - expand
- this is where you expand or elaborate further on the topic or point.

E - example
- this is where you give an example to support your topic or point.

E - explain
- this is where you explain your example to further support your topic or point.

C - Conclude
- this is where you conclude (finish) your paragraph

Lesson 2 - Activity C - Soil degradation

- EQ: *How are humans impacting soil and land degradation?*
- Watch the video How soil offers hope for the climate crisis (YouTube) answer the questions below.

Soil Degradation

1. What is soil?
2. What do we use it for?
3. How have practices of farming changed over the last 70 years and how has this affected soil?
4. How can farmers not kill the soil?
5. What can you and I do to help?
6. How can soil help reduce climate change?

Lesson 2 - Activity D - Case Study

- EQ: How have humans impacted the Great Barrier Reef?
- Copy the table into your books. Use the Internet to research the impacts of each human activity on the Great Barrier Reef. Find at least 2-3 points for each cause.

Cause	Impacts/Effects
Human activity and tourism	
Mining and farming	
Rapid industry development	
Overfishing	

Lesson 3 - Activity A - Notes

- Heading: *Landscape Protection*
- EQ: *In what ways are landscapes protected within Australia?*
- *Copy the notes on this slide into your book.*

Landscapes can be protected at a variety of levels. They can be locally protected through to a World Heritage listing.

Locally Protected Places - Local governments, such as councils, work with their state and territory governments to ensure that the environment remains protected. If a land is privately owned, the land owner aims to protect the landscape and maintain it.

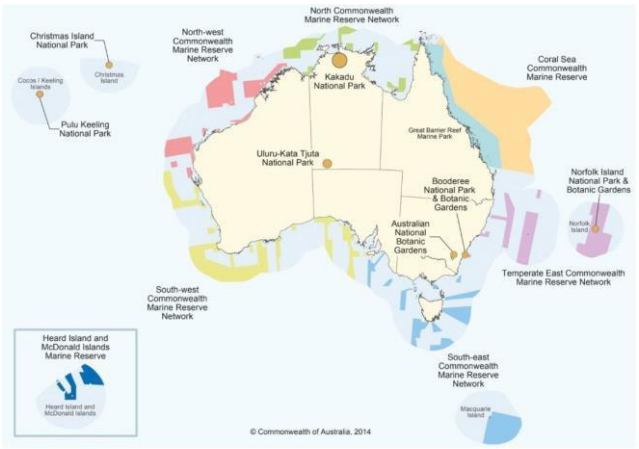
National Parks - National parks are usually managed by state and territory governments. There are 6 national parks, 2 botanic gardens and 27 marine protected areas which are managed by the federal government. Areas managed by the federal government tend to be of significant heritage to Australia as well as the aboriginal and Torres Strait Islander communities.

Lesson 3 - Activity A - Notes Continued

- Heading: *Landscape Protection*
- EQ: *In what ways are landscapes protected within Australia?*
- *Copy the notes on this slide into your book.*

Conservation Zones - Conservation zones are important to protecting our landscapes and biodiversity. Australia is home to approximately 700,000 species which many are native to Australia. Conservation zones allow our flora and fauna to be protected.

World Heritage Listing - Places or environments considered to be unique or special Can be either natural or cultural. Countries can apply to have these places listed and protected for future generations. Australia has 19 world Heritage sites of which three elicit to cultural values.



Source 4.4 Australian national parks and reserves

Lesson 3 - Activity B - Kakadu National Park

- EQ: Why is Kakadu National Park listed as a World Heritage?
- Read the statement and watch the clickview video Northern Territory: Walk before answering the question below.

Kakadu National Park is one of the few places that is listed as a World Heritage Site for both natural and cultural values. It covers 20, 000 sq kms of land in the Northern Territory. With its archaeological sites which record over tens of thousands of years worth of history and its ancient escarpment, it is a very dynamic environment.

What is the significance of Kakadu National Park and why is it so important that we look after it?

Answer this question using full sentences and giving examples where appropriate.

Lesson 3 - Activity C - Research Task

- Research different land management strategies that Aboriginal people found effective.

a) Create a mind map of the different land management strategies. (Find at least 5)
b) Choose one strategy and explain what it is, why it is effective and why you think we should/shouldn't use it today.

Lesson 4 - Activity A - Summarising activity

- Heading: "Valuing Landscapes and landforms", EQ: *How do humans value landscapes and landforms?*
- Copy the notes and table into your book
- Read the information on the next two slides. Gather the important points under each heading and write them in the table

The value of a place or object can refer to many different things. Over time it can change. Geographers divide the ways in which people value landscapes and landforms into four categories. They are; aesthetic value, cultural value, spiritual value and economic value.

Aesthetic Value	
Cultural Value	
Spiritual Value	
Economic Value	

Source 2.3 These Australian film posters reflect the colours of the Australian outback. They are examples of

Aesthetic value

Source 2.2 Unique and beautiful landscapes in Kosciuszko National Park, such as the spectacular Blue Lake, are an example of the aesthetic value of places.

The aesthetic value of a landscape is closely linked to its beauty and uniqueness. The aesthetic value attached to a place is always subjective (personal). People are drawn to places for many reasons. Being surrounded by the beauty of the landscape may give someone a sense of freedom, stability and well being. An individual might be drawn to a particular landform because of its overwhelming majesty, creating a personal connection to that place.

The aesthetic value of the landscape to the community has been recognised through the creation of national parks, where land has been set aside for the public's use and enjoyment. National parks exist in all landscapes, including alps, deserts, forests and reefs. The first national park in Australia, the Royal National Park, south of Sydney, was established in 1879. It is also the world's second oldest national park, after Yellowstone National Park in the United States. There are now more than 500 national parks and marine parks across Australia.

Cultural value

Cultural value is linked to the importance of landscapes and landforms as expressed by people through creative means such as poetry, literature, art and films. How people value something is also linked through their cultural background. Australia's landscapes and landforms have shaped Australian culture and identity. Many Australian films are set in northern Australia and feature the vast, unforgiving landscapes of the outback, as well as the tropical landscape of the Far North. These unique landscapes often have a transformative effect on characters.

Indigenous Australians express the importance of the land to them through Dreamtime stories, song and dance, and their art. Nearly all Aboriginal art relates to the landscape, and maps the landscape and the landforms of importance to Indigenous communities.

Spiritual value

For Indigenous Australians the spiritual value of land is expressed through the concept of 'Country'. Indigenous peoples believe that the stories of their Dreamtime bind them to the land. They also believe that their ancestors live on through the land and ensure their continued connection with it. Landscapes contain many sacred sites of spiritual importance. Uluru, for example, is a sacred place to the Anangu people who live in the area. They believe that, in the Dreamtime, a great sand hill was transformed into this rock along with the Kunia people who lived there.

Economic value

Economic value is a measurement of how financially important landscapes and landforms are. Economic value is particularly relevant to the tourism, agriculture and mining industries in Australia. Destination NSW (the leading government agency for New South Wales tourism), for example, wants regular visitors to the state because people who travel spend money on accommodation, transport, food, souvenirs and activities. This money provides income for the tourism and hospitality industries and the state. The Blue Mountains is a landscape in New South Wales with a high economic value because of its popularity with tourists.

Mining is the process of extracting natural resources from within the earth. These resources are sold, processed and used to manufacture a variety of goods – from jewellery to toys, construction materials and fuels. The mining industry attaches economic value to landscapes that contain sought-after metals and minerals such as coal and gold.

Under your table, choose which of these values is the most important to you? Explain why you chose answer.

Lesson 4 Activity

Activity B - Postcard

- Use the UNESCO World Heritage Sites website to research 1 natural world heritage site.

1. Choose a natural world heritage site (in Australia or somewhere else in the world). Create an image of the site on the front/top section of your postcard.
2. Using your knowledge of the 4 values of landscapes and landforms, write a short letter/postcard to someone you would like to share the knowledge with.
   You may want to include the importance of this site to the Indigenous people of that country, the cultural importance or the economic importance.
3. You will need to do some research on this landscape or landform to write your postcard.

Divide your page in half. The top half of your page will be the "front" of your postcard and the bottom will be the "back" of your postcard.

Or print the template attached to the material section of GC

The template will show you how to draw your postcard

Lesson 5 - Activity A - Textbook questions

- Read the PDF "Economic Value" and answer the review 2.1.4 questions.
- Only answer questions 1-5C

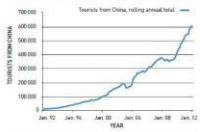
This is attached to your work for this week so it is easier for you to read.

ECONOMIC VALUE OF LANDSCAPES AND LANDFORMS

The unique landscapes and landforms in Australia attract tourists from around the world. Landscapes and landforms such as Sydney Harbour, the Blue Mountains, Uluru, the Great Ocean Road and Kakadu National Park not only have cultural, spiritual and aesthetic value, they also have an economic value to Australia because of tourism.

Source 2.13 Chinese tourists in Australia enjoying the aesthetic value of the Twelve Apostles on the Great Ocean Road

AUSTRALIA: GROWTH IN NUMBERS OF CHINESE TOURISTS



Source 2.14

The Chinese tourism boom in Australia

In recent years, there has been a significant increase in the number of tourists coming to Australia from China. In 2012, China became Australia's second-largest tourism market, after New Zealand. Many of these tourists come because they want to see landscapes and landforms that are different from those they see at home.

In terms of economic value, Chinese tourists are the biggest spenders in Australia, contributing $4.7 billion a year to the Australian economy. Tourism researchers are predicting that the number of Chinese visitors coming to Australia will continue to increase, and that by 2020 this number will exceed 850 000 a year.

Purpose of visit	Percentage of Chinese visitors
Holiday	53
Family or friend connections	19
Education	10
Business	7
Employment	2
Other	4

Source: Tourism Australia, China Market Profiles (2014)

Source 2.15 Chinese visitor arrivals by purpose of trip, 2013

REVIEW 2.1.4

Remember and understand

1 Identify what are in your opinion Australia's five best tourist sites.
2 In 2015, almost 2.3 million New Zealanders visited Australia. Why do you think this is the case?

Apply and analyse

3 Use Source 2.14 to describe the growth in the number of Chinese tourists to Australia from 1992 to 2012.
4 Brainstorm possible reasons for this growth.

Evaluate and create

5 Tourist researchers classify international tourists into groups so that people who work in the tourism industry, such as hotel owners and tour operators, can better understand their clients. Source 2.15 lists six groups of Chinese tourists, according to the purpose of their visit.
   a Which of these six groups do you believe are the biggest spenders in Australia? Why?
   b Which do you believe are the lowest spenders? Give some reasons for your answer.
   c Tourism Australia is keen to attract more Chinese visitors to Australia. On which of these six groups do you think they should focus?
   d Create a poster, brochure or web page that is designed to attract this group to Australia.

Lesson 5 - Activity B - Skills

- Read the source below, then answer the questions 1-6 (view in "present" mode to make it easier to see, also attached as a PDF "Economic Value")

Hint: read the steps to help you with the questions

SKILL DRILL

Analysing statistics

Many organisations collect information that geographers can use to describe and explain human activities. Sometimes this information is in the form of numbers, known as statistics. By learning a few simple techniques you can use this information to better understand changes and trends. Follow the steps below to learn how to identify maximum and minimum in order to rank entries as well as calculate averages.

Source 2.16 Tourist arrivals in Australia from the top five countries, 2013

Country of origin	Economic value to Australia ($ million)	Number of tourists ('000)	Change in visitor numbers 2012–13 (%)
China	3457	715	+14.2
United Kingdom	1807	634	+6.8
New Zealand	1615	1212	+0.9
United States	1308	509	+6.2
Japan	737	329	-7.1

Source: ABS and Tourism Research Australia

Step 1 Look carefully at the title of the statistics so you understand exactly what has been measured. Note the date in particular.

Step 2 Consider the source of the information. Statistics collected by government agencies such as the Australian Bureau of Statistics (ABS) are generally more reliable than those collected by individuals and companies.

Step 3 To identify the maximum and minimum, list the statistics in order from the largest to the smallest. This list is known as the rank, and the position of each country within it is a ranking or rank score.

Step 4 To calculate the average, add up all the numbers and divide this total by the number of countries in the table. Take note of the title of each column in the table as this will inform you of the quantities being counted – for example, it may be in thousands ('000) or millions of dollars ($ million).

Step 5 You can calculate averages of each row as well as each column. For example, by dividing the economic value of each country by the number of visitors from that country you will find out the average value to Australia of each person.

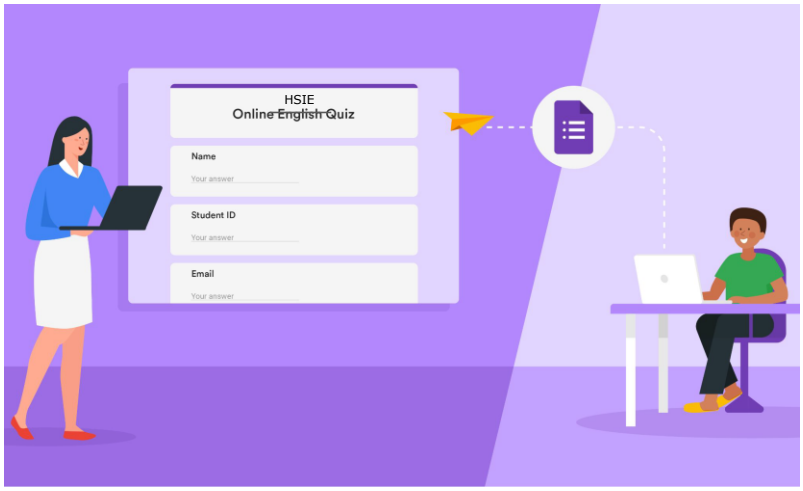
Step 6 Use the numbers you have calculated – average, rank, maximum and minimum – to make some statements about the statistics. Focus on trends or changes that you can identify as these can be used to make predictions about future changes.

Apply the skill

1 The statistics in Source 2.16 are for which year?
2 What is the source of these statistics? How do you think they were collected?
3 Rank the five countries in Source 2.16 from most tourists to Australia in 2013 to least tourists.
   a What is the rank score of China?
   b Which country contributed the most tourists?
   c Which one contributed the least tourists?
4 Calculate the average economic value to Australia of these five countries.
5 Which country's visitors contribute the highest economic value per person?
6 What are the two fastest growing tourism markets?

Lesson 6 - Quiz

- *Use the google form and answer the questions on the quiz. Answer these questions the best that you can as they are part of your final assessment.*



Access the quiz via Google Classroom or the attached hard copy.

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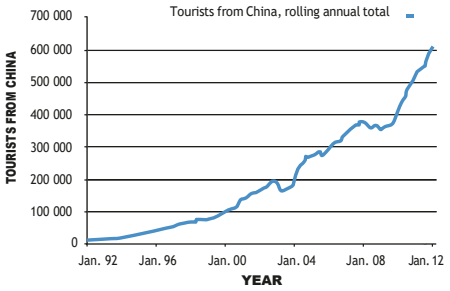

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Source: Tourism Australia, *China Market Portfolio* (2014)

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Apply and analyse

3 Use Source 2.14 to describe the growth in the number of Chinese tourists to Australia from 1992 to 2012.
4 Brainstorm possible reasons for this growth.

Evaluate and create

5 Tourist researchers classify international tourists into groups so that people who work in the tourism industry, such as hotel owners and tour operators, can better understand their clients. Source 2.15 lists six groups of Chinese tourists, according to the purpose of their visit.
   a Which of these six groups do you believe are the biggest spenders in Australia? Why?
   b Which do you believe are the lowest spenders? Give some reasons for your answer.
   c Tourism Australia is keen to attract more Chinese visitors to Australia. On which of these six groups do you think they should focus?
   d Create a poster, brochure or web page that is designed to attract this group to Australia.

Year 7 Geography 2021 - Landscapes and Landforms Quiz 2

This exit quiz will be used to determine your final mark and grade for Geography. You will have an exit quiz for each fortnight's worth of work. It should be completed at the end of the fortnight, once you have completed the work. Remember - check the amount each question is marked out of, this will help you in determining how much you should write.

This quiz covers information from Term 4 week 2 & 3
* Changing Landscapes
* Management of Landscapes and Landforms
Outcomes
* 4.1 - locates and describes the diverse features and characteristics of a range of places and environments
* 4.2 - describes processes and influences that form and transform places and environments
* 4.5 - discusses management of places and environments for their sustainability
* 4.8 - communicates geographical information using a variety of strategies

This quiz must be completed by Monday Monday 25th October 2021, Term 4, Week 4 and completed online OR returned to the front office.

The respondent's email (**null**) was recorded on submission of this form.
* Required

1. Email *

Quiz Grading Criteria

Grade	A	B	C	D	E
Quiz Grading Criteria	Mark of 85% or more Extended response question is accurate and detailed	Mark of between 70% and 84% Extended response is correct and contains some detail	Mark of between 50 and 69% Attempts the extended response with some correct information	Mark of between 25% and 49% May not attempt all questions, including the extended response	Mark of 24% or less May not attempt all questions, including the extended response

2. First Name *

3. Last Name *

4. Class *

Mark only one oval.

- 7.1.1
- 7.2.1
- 7.2.2
- 7.3.1
- 7.3.2
- 7.4.1
- 7.5.1
- 7.5.2
- 7.6.1
- 7.6.2
- 7.7.1
- 7.7.2

Section 1: Changing Landscapes - multiple choice and short answer

5. 1a. Which process occurs when material is moved from one location to another by running water, waves or wind? * 1 point

Mark only one oval.

- ( ) Deposition
- ( ) Erosion
- ( ) Streaming
- ( ) Weathering

6. 1b. What is the natural cause of the image below? * 1 point

Mark only one oval.

- ( ) Deposition
- ( ) Erosion
- ( ) Waves ( )

Weathering

7. 1c. Which of the following is not a natural change to environments? * 1 point

Mark only one oval.

- ( ) Earthquakes
- ( ) Flooding
- ( ) Pesticides
- ( ) Volcanoes

8. 1d: How much is the earth is impacted by land degradation? * 1 point

Mark only one oval.

- ( ) 7%
- ( ) 33%
- ( ) 37%
- ( ) 43%

9. 1e: Which of the following causes land degradation? * 8 points

Mark only one oval per row.

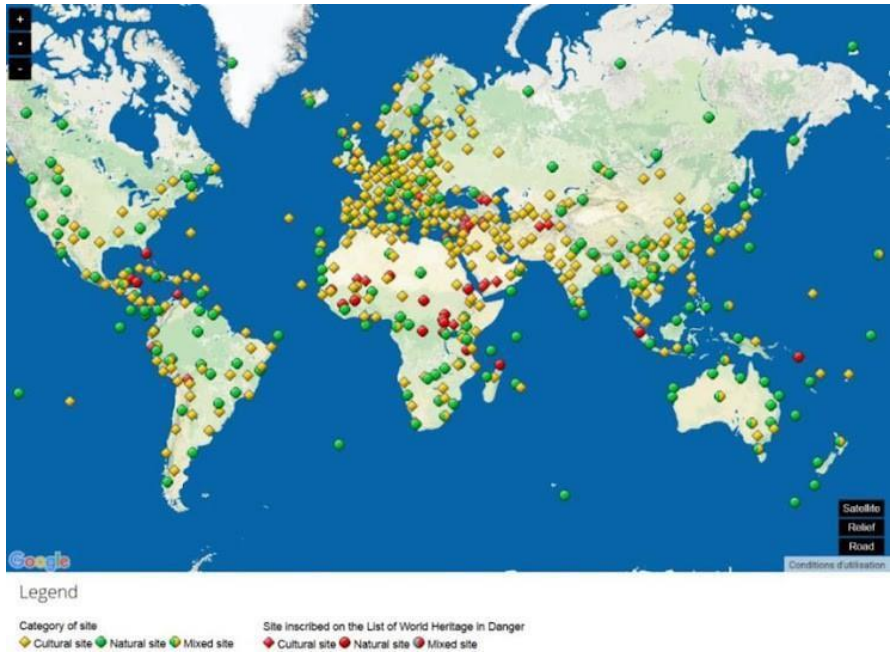
	Causes land degradation	Does not cause land degradation
Defforresttattiion	( )	( )
Ferrttiilliiserrs	( )	( )
Land cllearriing	( )	( )
Miiniing	( )	( )
Overrgrraziing	( )	( )
Overr watterriing	( )	( )
Repllanttiing ttrrees	( )	( )
Rottattiing crrops	( )	( )

10. 1f. What is land degradation? * 2 points

11. 1g. What ways can we protect and not kill our soil? * 2 points

Section 2: Landscape Management and Protection - multiple choice and short answer

12. 2a. What is this map of? * 1 point



Mark only one oval.

- ( ) Places with high population.
- ( ) UNESCO World Heritage Sites.
- ( ) National Parks around the world.
- ( ) Locations of where Indigenous people live.

13. 2b. How many national parks are managed by the Australian federal government? * 1 point

14. 2c. What state is Kakadu National Park in? * 1 point

Mark only one oval.

- ( ) NSW
- ( ) NT
- ( ) QLD
- ( ) WA

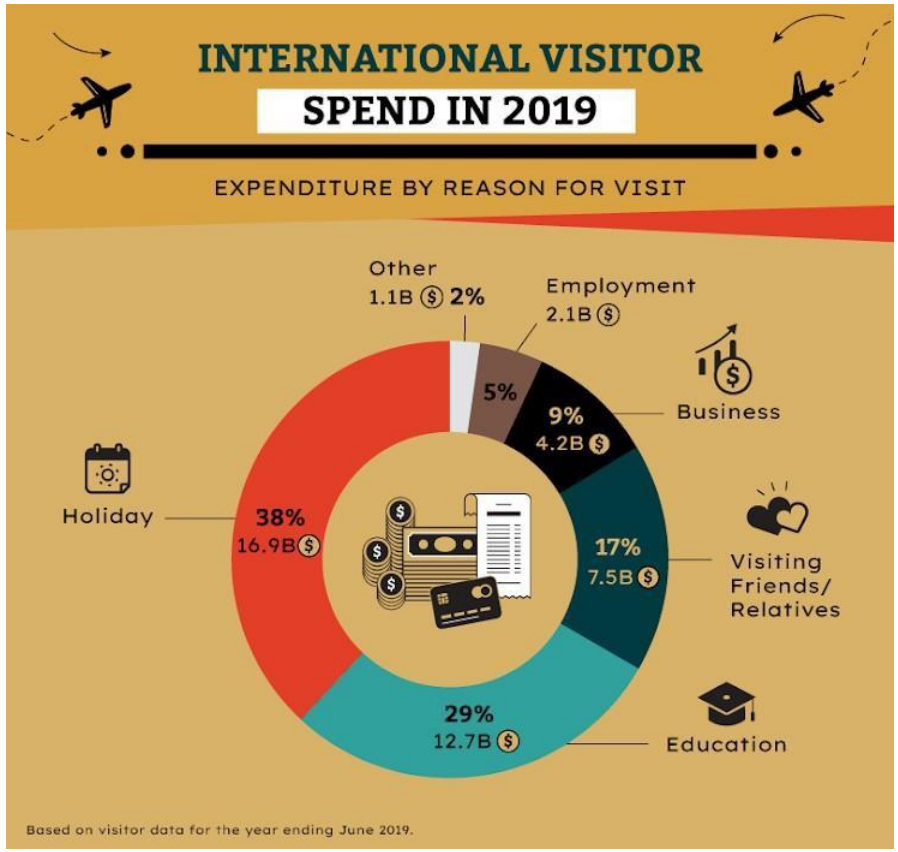
15. 2d. Why is Kakadu National Park so important? * 3 points

16. 2e. What percentage of people visited Australia from an Asian country? Use the infographic below to answer this question. (You may use a calculator) * 1 point

Mark only one oval.

- 27.6%
- 37.0%
- 41.1%
- 46.4%

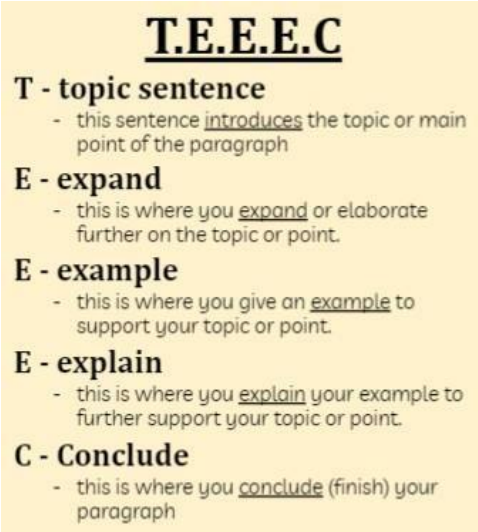
17. 2f. What was the most common reason for people to visit Australia? Use the infographic below to answer this question. * 1 point



18. 2g. Which area could the Australian government improve to attract more international visitors and why? Use the image above to support your answer. * 2 points

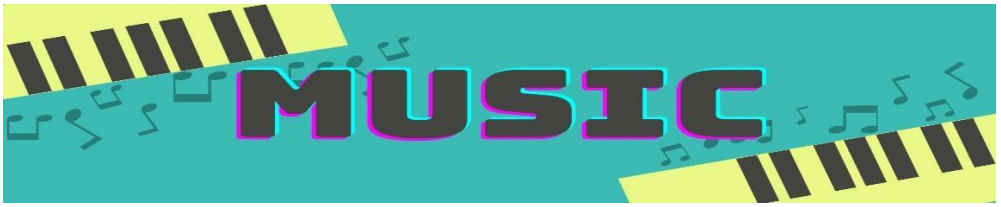
Section 3: Landscapes and Landforms - long response

19. 3a. How have humans positively or negatively altered environments? Give examples of one area that has been altered to support your answer (TEEEC paragraph) * 10 points



BRISBANE WATER SECONDARY COLLEGE | UMINA CAMPUS

Learning from Home: Term 4, Weeks 2 and 3



Year Group: YEAR 7 Music

Student Name: _____

Please Circle Your Team:

1	2	3	4	5	6	7	8	9

Work Overview and Instructions	**Learning Intentions**
Assessment ● Complete the Chrome Music Lab Song Maker Project and the Composition Overview.	● Students will experiment with technology in the composition process ● Students will use different forms of notation in the composition process ● Students musicology and composition skills will be developed
Assessment Overview	**Feedback Instructions**
● Composition and Overview is due end of Week 3 ● See attached task sheet and marking guide for details	● Google Classroom - please submit prior to the due date ● Hard Copy - if you are unable to submit via Google Classroom, please return completed hard copy work to the Front Office prior to the due date

Student Feedback

_____

_____

_____

_____

BRISBANE WATER SECONDARY COLLEGE | UMINA CAMPUS

STUDENT NAME:	**STUDENT CLASS: Year 7 Music**
SUBJECT: Music	**WEIGHTING: 40%**
DATE TASK RECEIVED:	**DATE TASK DUE:** Term 4, Week 3

OUTCOMES TO BE ASSESSED:

4.5 notates own compositions applying forms of notation appropriate to the music selected for study
4.6 uses different forms of technology in the composition process

TASK NAME: Alternative Movie/TV Theme Composition

TYPE OF TASK: Composition

TASK DESCRIPTION:

Brief overview:

This task has TWO sections: *Alternative Movie/TV Theme Composition* and the *Reflection Page.*

A) ALTERNATIVE THEME COMPOSITION 30%:

Using Google Chrome Music Lab Song Maker (https://musiclab.chromeexperiments.com/Song-Maker/), students are to compose an alternative Theme for their favourite movie or TV show. It must:

i) Must have a clear **melodic tune** that is catchy or memorable.

ii) Be 8 bars long

iii) Demonstrate clear connections to the Reflection Page

B) REFLECTION PAGE 10%:

Using the supplied Google document found on Google Classroom, complete all of the questions relating to your Alternative Movie Theme Composition.

STUDENT CHECKLIST

- ☐ Is this my final edited copy?
- ☐ Have I included all requirements of the task?
- ☐ Have I checked my work against the marking rubric?
- ☐ Have I presented my work in a neat, logical and organised manner?

WHAT AM I BEING ASSESSED ON?

SUBJECT: Music	**TASK NAME: Alternative Movie/TV Theme Composition**
STUDENT NAME:	**STUDENT CLASS:** Year 7 Music

MARK	**10**	**8**	**6**	**4**	**2**	**0**	
	OUTSTANDING	**HIGH**	**SOUND**	**DEVELOPING**	**LIMITED**	**UNSATISFACTORY**	**MARK**
CRITERIA: **<u>Alternative Theme</u>** 4.6 uses different forms of technology in the composition process	• Project demonstrates comprehensive knowledge of the concepts of music and production skills.	• Project demonstrates detailed knowledge of the concepts of music and elements of production skills are evident.	• Project demonstrates sound knowledge of the concepts of music but some inconsistencies lie within the final product.	• Project demonstrates developing knowledge of the concepts of music. Final product is incomplete.	• Project demonstrates limited knowledge of the concepts of music. Final product is incomplete.	• Does not attempt project component of composition	/10 30%
CRITERIA: **<u>Reflection Page</u>** 4.5 notates own compositions applying forms of notation appropriate to the music selected for study	• Reflection successfully represents the chosen ideas, with consistent entries and clear understanding of the concepts of music.	• Reflection maintains consistent entries and a focus on the concepts of music.	• Reflection maintains a focus on the concepts of music.	• Reflection shows a developing focus on the concepts of music.	• Reflection shows a limited focus on the concepts of music.	• Does not attempt reflection component of composition	/10 10%
						TOTAL:	**/20**

Chrome Music Lab Composition Assessment 10%

PART B) REFLECTION PAGE

Please note: Before you begin this section you will need to have completed Part A) ALTERNATIVE THEME COMPOSITION.

Answer the following questions about your *'Chrome Music Lab Alternative Theme'* project?

1) What Movie/TV show theme have you recreated? _____

2) What are the key elements that you can hear in the original theme? (for example: Bright melody/fast tempo/lots of notes/few notes/similar sounds/etc)_____

3) What elements of the theme remain the same? (for example: same notes used, same tempo, same beat, etc) _____

4) What elements of the theme have been changed? (for example: different shaped melody, different tempo, different choice of instruments, etc) _____

Student Name:_____. Teacher Name:_____.

BRISBANE WATER SECONDARY COLLEGE | UMINA CAMPUS

Personal Development Health and Physical Education

Yr 7 Health

Term 4

Week 2 & 3

UNIT: Keeping Myself Safe

Finished booklets may be submitted to google classroom (digital copy submission) or, they may be handed to your teacher (hard copy submission).

In this unit you will learn about the skills and strategies that can be used to manage change, challenges and seek help.

You will explore the positive actions that can contribute to the health, safety, wellbeing and participation in physical activity levels of yourself and the wider community.

Importantly, you will learn how young people can keep themselves and others safe in relation to beach safety, water safety, sun safety, road safety and online safety and promote these safe behaviours targeting potentially unsafe situations. You will also learn the DRSABCD procedures and apply these principles to a variety of scenarios.

Lesson Topic: Risk taking and safety in the home

EQ: What is risk taking? How can we promote safe behaviours in potentially unsafe situations in and around the home?

RISK TAKING

It is normal for teenagers to push boundaries and take risks. Teenage risk taking is an important part of their journey in finding their identities and becoming independent young adults.

Risk taking can be conscious (you have thought about what you are doing) or unconscious (you don't realise what you are doing is risky). The result or outcome is uncertain, you are not sure what will happen. The result could be positive or negative to you or others - physical, economical, socially or mentally.

POSITIVE RISK TAKING	**NEGATIVE RISK TAKING**
Positive risk-taking is about learning new things and exploring unfamiliar territory. The risk is positive because, while it still gives you a feeling of uncertainty or fear, you develop a new skill or there's a possibility of something good happening.	Negative risks can have harmful consequences on your health, safety and wellbeing. They are the kind of risks that can cause harm, injury or make you upset.

The outcomes can not only affect you, but also the people you care about and those close to you, like friends and family.

Activity 1: Risk Taking

Identify as many types of positive and negative risk taking scenarios as you can.

Positive Risk Taking	**Negative Risk Taking**
E.g. Talking to someone new at school	E.g. Beach swimming at night

HAZARDS IN THE HOME

The home is the most common location for injury to occur, especially to young people.

There can be many hazards in the home which can lead to injuries from falls, drowning, burns & scalds, choking & suffocation, electrocution, toys, animal bites, poisons and more.

Activity 2: Alpha Box

Take a walk around your home (inside and out) and complete an alpha box identifying at least one risk for each letter A - Z.

A ……. ?	**Bleach**	**C……..?**	**Driveway**

PROMOTING SAFE BEHAVIOUR IN THE HOME

At home we feel comfortable and safe, however sometimes our homes may not be as safe as we believe it to be. The most common place for any injury to occur is the home.

Each year about **150** Australian children (aged 0-14 years) die and **68,000 hospitalised** as a result of unintentional injuries – the kind often referred to as 'accidents'. Many of these can be prevented.

It is often children who are most at risk. About one third of children aged between 0 and 14 years old, presenting to a hospital with an injury, are younger than five years old.

1. Spot the Hazards

The first step in preventing accidents is to be able to spot the hazards.

2. Decide how to deal with any hazards or dangers

Try to remove the hazard or guard against the hazard, if you are unable to remove it.
This could be by moving the hazard, placing a barrier around the hazard or educating your household about what to do in dangerous situations.

Activity 3: Quick Write

Follow the example below and complete a quick write to answer the topic.

I was injured at home one time when …… (3 lines to answer)

One thing I could have done to prevent this was…… (2 lines to answer)

This has never happened again because……(3 lines to answer)

Lesson Topic: Water Safe

EQ: How can we promote safe behaviour in and around water?

WATER SAFETY

Water and water activities are often associated with fun, recreation and adventure, however, there are important things we should know and understand about water and the consequences for not promoting safe behaviour in and around water.

In Australia in 2017-18, 27 children aged 0-14 drowned with 66% of those under the age of 5. Drowning is the leading cause of death for children under 5 years of age. The leading location for drowning in this age group was swimming pools.

The law across most states and territories requires four sided fencing which is well maintained and has a self-closing, self-latching gate. Barriers should also meet Australian Standards.

Activity 1: Mindmap

Create a mindmap identifying areas both around the home and in public places that could be potential water hazards. Drownings can occur in a few centimeters of water.

Safety Posters

Activity 2: Safety Campaigns

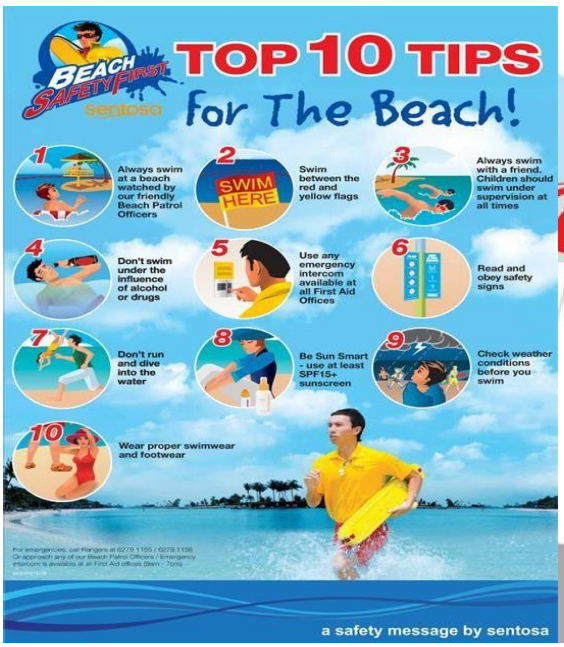
If you have internet access complete the table below. If you do not, complete the poster activity instead.

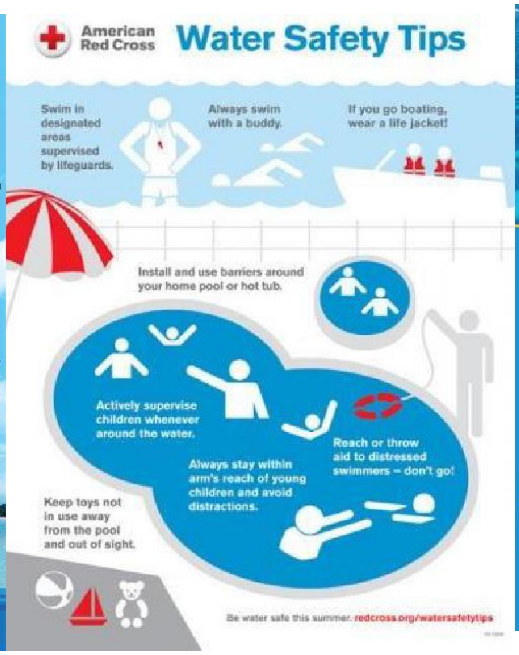
Watch the following safety campaigns from Royal Life Saving Australia. For each situation, record 3 of the main safety points for that specific water activity.

Rivers & Lakes	The Pool	At Home
https://youtu.be/vyBr9vtffgU	https://www.youtube.com/watch?v=rKBasdphXXM	https://www.youtube.com/watch?v=FvGV62gXHqY
1 2 3	1 2 3	1 2 3

OR (non-internet based activity)

Look at the 3 safety posters and identify 3 main safety messages for each.





OPTIONAL EXTENSION ACTIVITIES - OWN CHOICE

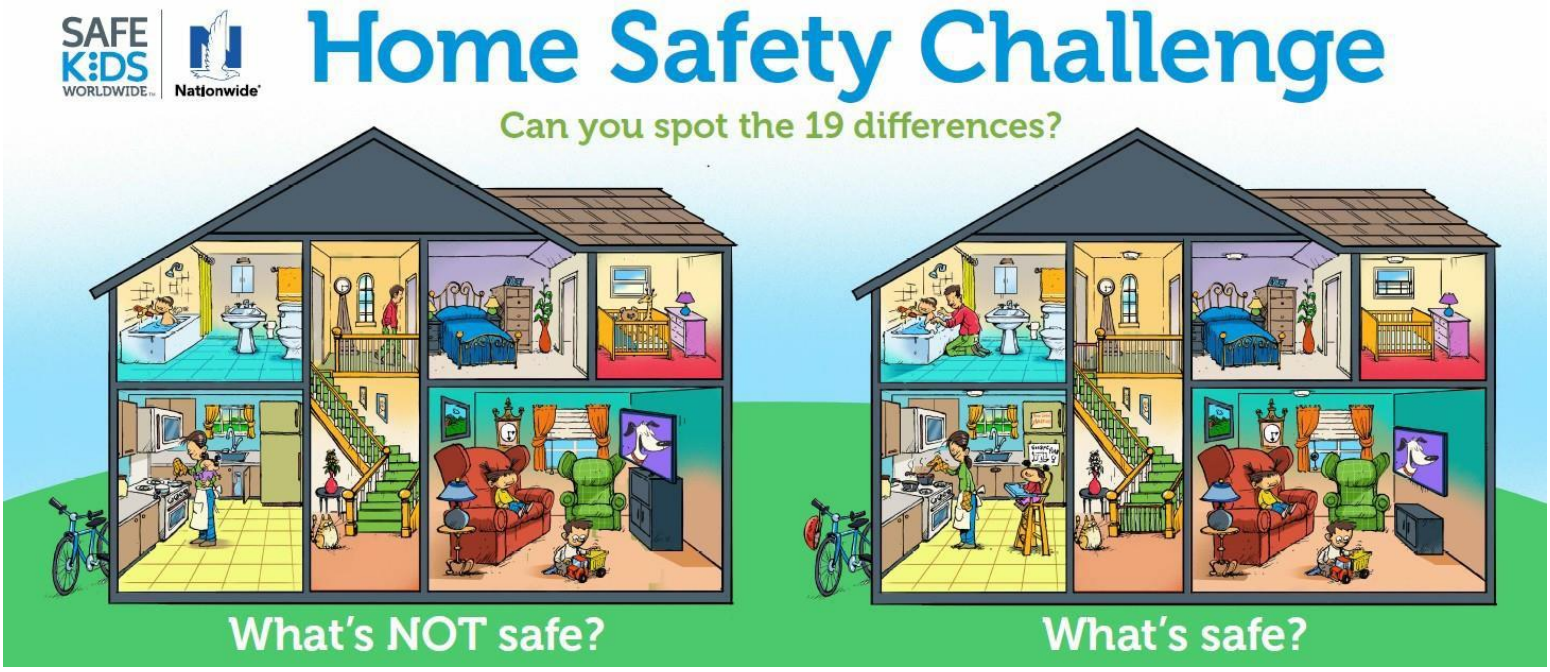
a) Complete the additional safety campaign activity on the previous page.

b) Create your own safety campaign poster to be water safe.

c) Write down 5 risks you have taken that have resulted in something **positive** happening in your life. Write down 5 risks you have taken that have resulted in something **negative** happening in your life.

d) Homes can be particularly dangerous for young children, how safe is your home for a young child who might visit? Identify 5 hazards in your home and what you could do to make it safe for a young child.

e) Spot the difference, find 19 differences between the unsafe and safe home.



BRISBANE WATER SECONDARY COLLEGE | UMINA CAMPUS

Learning from Home

Term 4 Weeks 2&3

Key Learning Area: **MATHEMATICS**

Year Group: **Year 7 Enrichment**

Student Name: _____

Please Circle Your Team:

1	2	3	4	5	6	7	8	9

Work Overview and Instructions

1. Write the EQ in your workbook.
2. Write down the notes and examples in your workbook.
3. **Read** the notes carefully and **follow the steps provided** in the examples
4. Attempt / complete the set questions in your workbook
5. **Mark your work** by checking the answers at the back of this document.
6. Try your best to correct any answers that you may have got incorrect.
7. Attempt / complete the set MathsOnline lessons related to the EQ.

Learning Intentions

1. **What are the divisibility tests?**
2. **What are the factors of a number and how do we find the Highest Common Factor?**
3. **What does prime factorisation mean?**
4. **Can I complete these alternate factor trees?**
5. **What are indices and how can an expression be written in index notation?**

Assessment Overview *(If required)*

1. Complete the weekly quiz questions to test your understanding. This can be done by submitting online or completing a similar MathsOnline Task
2. Submit your work by returning the booklet, taking Photos/Scans of your work or completing the assigned google classroom

Feedback Instructions

1. Contact your teacher if you're unsure where you made your mistake.
2. Watch the clips provided found on MathOnline/YouTube and in Google Classroom
3. Take photos/scan your work and submit it on google classroom when you complete a lesson
4. All tasks are due within the two weeks

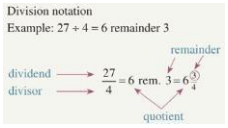
Student Feedback:

Lesson 1

Week: 2	Topic: INDICES

EQ: What are the divisibility tests?

- Copy notes into workbook
- Write task questions and solutions in your workbook



Text References

New Century 7

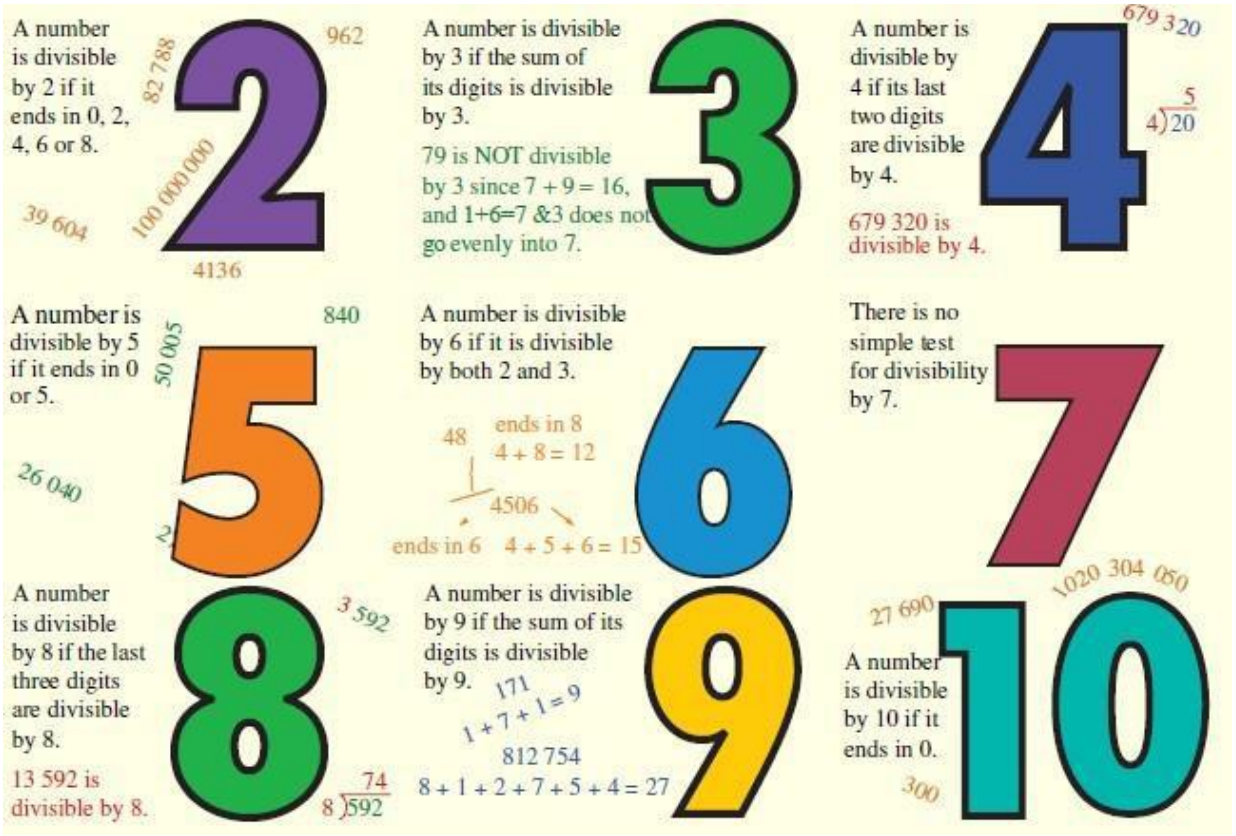
Chapter 3

Whole Numbers

Exercise 3.04

TESTS for DIVISIBILITY

It is often useful to know if a number is divisible by another number. Here are some simple divisibility tests to help you.



Example: Applying divisibility tests

Determine whether or not the following calculations are possible without leaving a remainder.	
a) 54 327 ÷ 3 Digit sum = **2+1=3** **5 + 4 + 3 + 2 + 7 = 21** **3 is divisible by 3.** Yes, 54 327 is divisible by 3.	**b) 765 146 ÷ 8** Check whether the last three digits are divisible by 8. $8\overline{)14\,6}$ rem. 2 (18) No, 765 146 is not divisible by 8.

Task 1

1) Give a reason why:

a. 8631 is not divisible by 2
b. 31 313 is not divisible by 3
c. 426 is not divisible by 4
d. 5044 is not divisible by 5
e. 87 548 is not divisible by 6
f. 214 125 is not divisible by 8
g. 3 333 333 is not divisible by 9
h. 56 405 is not divisible by 10

2) Without using a calculator, determine whether the following calculations are possible without leaving a remainder.

a. 23 562 ÷ 3
b. 39 245 678 ÷ 4
c. 1 295 676 ÷ 9
d. 213 456 ÷ 8
e. 3 193 457 ÷ 6
f. 2 000 340 ÷ 10
g. 51 345 678 ÷ 5
h. 215 364 ÷ 6
i. 9543 ÷ 6
j. 25 756 ÷ 2
k. 56 789 ÷ 9
l. 324 534 565 ÷ 5

Lesson 2

Week:2	Topic: INDICES

Continuing the divisibility tests from Lesson 1

- Copy notes into workbook
- Write task questions and solutions in your workbook

New Century 7

Chapter 3

Task 2

1 Test whether each number is divisible by 3.

a 140	**b** 612	**c** 315	**d** 928
e 209	**f** 525	**g** 132	**h** 1652

2 Test whether each number is divisible by 2.

a 117	**b** 205	**c** 6196	**d** 340

3 Test whether each number is divisible by 6. Note that the numbers in parts **a** to **d** have already been tested for divisibility by 3 in question **1**.

a 140	**b** 612	**c** 315	**d** 928
e 475	**f** 303	**g** 864	**h** 1278

4 Test whether each number is divisible by 4.

a 2040	**b** 518	**c** 365	**d** 242
e 356	**f** 728	**g** 4176	**h** 817

5 Test whether each number is divisible by 9.

a 812	**b** 309	**c** 567	**d** 243
e 837	**f** 462	**g** 6444	**h** 3111

6 Test whether 1964 is divisible by 8.

7 Explain by just looking at the last digit why:

a 409 is not divisible by 4	**b** 316 is not divisible by 5
c 2015 is not divisible by 8	**d** 343 is not divisible by 6
e 472 is not divisible by 10	**f** 511 is not divisible by 12

8 Which number is divisible by both 4 and 5? Select the correct answer **A**, **B**, **C** or **D**.

A 10	**B** 15	**C** 20	**D** 25

9 If a number is divisible by 3 and 4, what other number must it also be divisible by?

10 Write a number between 50 and 100 which is divisible by:

a 3 and 5	**b** 4 and 5	**c** 6 and 7	**d** 2 and 6

11 In this list, circle all the numbers that are divisible by 3:

151, 122, 273, 64, 715

311, 168, 579, 620, 1995

12. In this list, circle all the numbers that are divisible by 6:

312, 528, 238, 874, 911,

3045, 1999, 2730, 700, 1004

13 In this list, circle all the numbers that are divisible by 4:

313, 108, 737, 824, 516,

700, 255, 1542, 1632, 2861

14 In this list, circle all the numbers that are divisible by 8:

245, 618, 848, 360, 924,

1516, 4368, 2032, 3427, 2209

Summary

Lesson 3

Week:2 | **Topic: INDICES**

EQ: What are the factors of a number and how do we find the Highest Common Factor?

- Copy notes into workbook
- Write task questions and solutions in your workbook

Text References

New Century 7
Chapter 3
Whole Numbers

Mathsonline

Factors ***8007***

HCF ***3113***

WATCH: Mathsonline Video : **8007** Factors **1624** - Primes and Composites

The factors of a number are those numbers that divide exactly into it.

Example

Write the factors of 12:	Write the factors of 17:
(hint: list pairs of numbers that multiply to 12) 1x12 2x6 Factors of 12= 1,2,3,4,6,12 3x4 ***12 is a COMPOSITE NUMBER***	1x17 Factors of 17 = 1,17 ***17 is a PRIME NUMBER***

Summary

- A **prime number** has only two factors: 1 and itself
- A **composite number** has more than two factors

Note: The number 1 has only one factor so it is neither prime nor composite.

The **highest common factor** (HCF) of two or more numbers is the **largest** factor that is **common** to all those numbers.

Example

Find the highest common factor of 24 and 30.	The **common** factors of 24 and 30 are: 1, 2, 3 and6.
Solution The factors of 24 are: **1, 2, 3**, 4, **6**, 8, 12, 24 The factors of 30 are: **1, 2, 3,** 5, **6**, 10, 15, 30	The **highest common** factor is 6. ∴ HCF of 24 and 30 = 6

Task 3

1 List all the factors of each number

a 17	**b** 21	**c** 24	**d** 11
e 35	**f** 4	**g** 18	**h** 23
i 25	**j** 9	**k** 3	**l** 19

2 List all the numbers from question **1** that are:

a prime **b** composite

3 Which one of these numbers is not a factor of 45? Select the correct answer **A**, **B**, **C** or **D**.

A 9 **B** 5 **C** 7 **D** 3

4 Find the highest common factor for each of these pairs of numbers: (list factors first)

a 12 and 60 **b** 33 and 22 **c** 132 and 60 **d** 9 and 21

e 45 and 78 **f** 64 and 144

5. 'Every whole number has at least two factors.' Is this true or false? Why?

Lesson 1

Week: 3	Topic: INDICES

EQ: What does prime factorisation mean? **Also known as prime decomposition**

WATCH: Mathsonline Video **3116** – Prime Factor Decomposition

Every number can be written as a product of its prime factors. The prime factors can be found by using a factor tree.

Imagine if we lived on a planet where the only numbers we knew were primes and the only mathematical operator we had was multiplication.

How would we write COMPOSITE NUMBERS?

Example

Write 24 as a product of its prime factors

This is prime factorisation

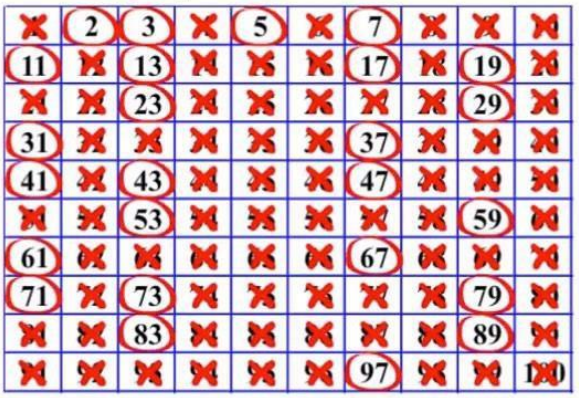
24 = 2x12
= 2x2x6
= 2x2x2x3

$\therefore 24 = 2 \times 2 \times 2 \times 3$

product of *prime factors*

Factor trees become very messy so this is a neater option -should be called factor right triangles

Prime Numbers from 1-100



Always begin with the smallest prime number

Task 1

1. Write as a product of prime factors- Complete the factor tree.

1) 20 = 2x 10 = 2x2x _____ ∴ 20 =	2) 18 = 2x _____ = 2x3x_____ ∴ 18 =	3) 15 = 3x_____ ∴ 15 =
4) 30= 2x_____ = 2x3x_____ ∴ 30 =	5) 21= 3x_____ ∴ 21 =	6) 36 = 2x_____ = 2x2x_____ = 2x2x3x_____ ∴ 36 =

2. Use a factor tree to write each number as a product of its prime factors. (show steps)

a 88 b 63 c 45 d 51 e 132 f 270 g 396 h 218

i 630 j 520 k 275 l 342 ***Remember to use the divisibility tests***

3.

What is 1260 expressed as a product of its prime factors? Select **A**, **B**, **C** or **D**.

A $2 \times 3 \times 3 \times 3 \times 5 \times 7$ **B** $2 \times 2 \times 2 \times 3 \times 5 \times 7$

C $2 \times 2 \times 3 \times 3 \times 3 \times 7$ **D** $2 \times 2 \times 3 \times 3 \times 5 \times 7$

Lesson 2

Week: 3 | **Topic: INDICES**

EQ: Can I complete these alternate factor trees? WATCH: Mathsonline Video 3116 – Prime Decomposition

Text References

New Century 7
Chapter 3
Whole Numbers

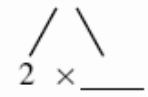
Mathsonline

Complete the questions

Prime Decomposition 3116

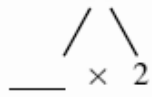
Complete each of the following factor trees and write each number as a product of its prime factors:

1 22



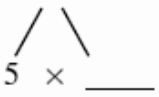
22 = 2 × ___

2 38



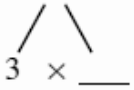
38 = ___ × 2

3 65



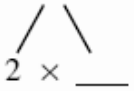
65 = 5 × ___

4 87



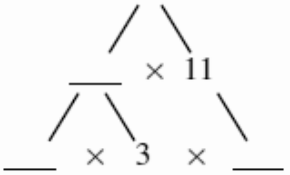
87 = 3 × ___

5 146



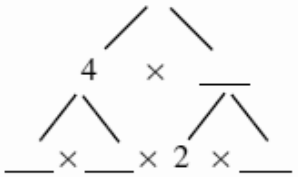
146 = 2 × ___

6 66



66 = ___ × 3 × ___

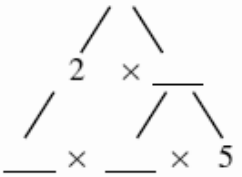
7 104



104 = ___ × ___ × 2 × ___

= ___ ^{3} × ___

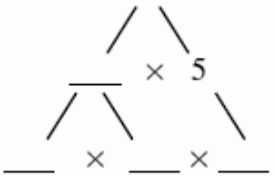
6 50



50 = ___ × ___ × 5

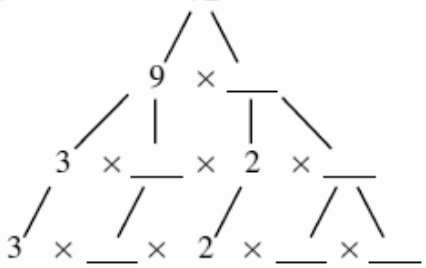
= ___ × ___ ^{2}

9 105



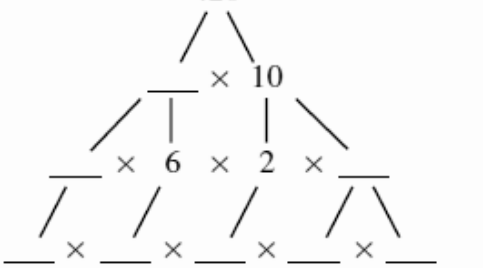
105 = ___ × ___ × ___

10 72



72 = 3 × ___ × 2 × ___ × ___

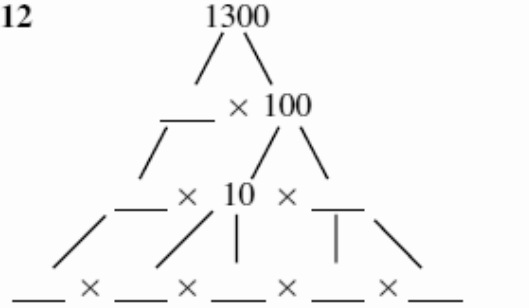
11 420



420 = ___ × ___ × ___ × ___ × ___

= ___ × ___ × ___ × ___

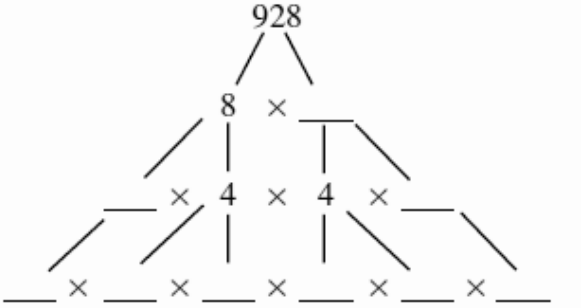
12 1300



1300 = ___ × ___ × ___ × ___ × ___

= ___ × ___ × ___

13 928



928 = ___ × ___ × ___ × ___ × ___ × ___

= ___ × ___

Lesson 3

Week: 3	Topic: INDICES

EQ: What are indices and how can an expression be written in index notation?

- Copy notes into workbook
- Write task questions and solutions in your workbook

Text References

New Century 7 Chapter 3

Index notation

Remember: $4^2 = 4 \times 4$ (4 squared)

$4^3 = 4 \times 4 \times 4$ (4 cubed)

Similarly: $4^5 = 4 \times 4 \times 4 \times 4 \times 4$

This is read '4 to the power 5'. The number 4 is called the **base** and is the factor that is repeated in the multiplication. The small raised number 5 is called the **power** or **index**.

The following is read as '2 to the power 4'.

$2 \times 2 \times 2 \times 2 = 2^4$ (power or index; base)

Example

Write each expression using index notation.

a $6 \times 6 \times 6 \times 6 \times 6 \times 6$ **b** $7 \times 7 \times 7 \times (-2) \times (-2) \times (-2) \times (-2)$

Solution

a $6 \times 6 \times 6 \times 6 \times 6 \times 6 = 6^5$

b $7 \times 7 \times 7 \times (-2) \times (-2) \times (-2) \times (-2) = 7^3 \times (-2)^4$

Task 1

1 Write each of the following in index form:

a $8 \times 8 \times 8 \times 8$	**b** $5 \times 5 \times 5$
c $1 \times 1 \times 1 \times 1 \times 1 \times 1$	**d** $13 \times 13 \times 13 \times 13 \times 13$
e $27 \times 27 \times 27$	**f** $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$
g $4 \times 4 \times 4 \times 4 \times 4$	**h** $10 \times 10 \times 10$
i 2×2	**j** $9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9$

2 Write each of the following in index form:

a $6 \times 6 \times 3 \times 3 \times 3$	**b** $9 \times 9 \times 9 \times 2$
c $4 \times 4 \times 5 \times 5 \times 5 \times 5$	**d** $8 \times 8 \times 8 \times 8 \times 6$
e $7 \times 7 \times 7 \times 2 \times 2 \times 2$	**f** $9 \times 3 \times 3 \times 9$
g $2 \times 5 \times 2 \times 5 \times 2 \times 5$	**h** $10 \times 10 \times 4 \times 4 \times 2 \times 2$

3 Write each of the following in expanded form (for example $2^4 = 2 \times 2 \times 2 \times 2$):

a 2^3	**b** 5^2	**c** 7^5	**d** 6^4
e 10^6	**f** 3^7	**g** $2^4 \times 5^3$	**h** $3^5 \times 6^3 \times 2^2$

4 Evaluate each expression. ***Evaluate means work out the actual value***

a 4^2 b 5^3 c 2^5 d 10^6 e 3^5 f 7^4 g 1^3

5 Complete this *Mathsonline task*

Index Notation 4744

Name_____ Teacher_____ Class_____ Date _____

Term 4 Week 2/3 Yr 7 Enrichment
Quiz

Q1

Write all the factors of 22.

☐ ☐ ☐ ☐

Q2

Write all the factors of 25.

☐ ☐ ☐

Q3

Which number is prime?

33 45 63 43

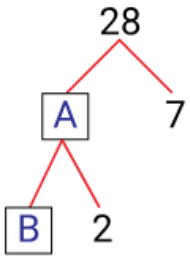
Q4

The highest common factor (HCF) of 6 and 12 is:

18 3 6 12

Q5

For the factor tree below, find A and B.



A = ☐

B = ☐

Q6

Write all the factors of 24.

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Q7

Select ALL the numbers that are prime.

3 4 23 9

Q8

Select ALL the numbers that are composite.

11 8 5 9

Q9

Find the highest common factor (HCF) of 6 and 15.

HCF = ☐

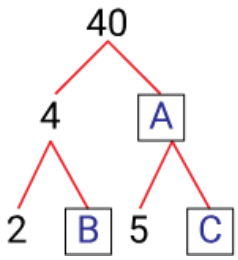
Q10

Find the highest common factor (HCF) of 16 and 24.

HCF = ☐

Q11

For the factor tree below, find A, B and C.



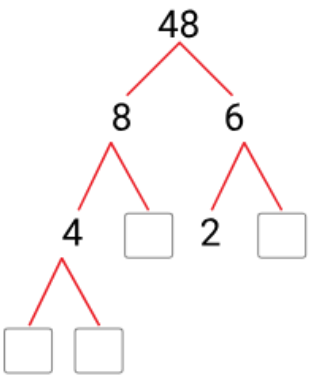
A = ☐

B = ☐

C = ☐

Q12

Complete the factor tree to write 48 as a product of its prime factors.



48 = ☐ × ☐ × ☐ × ☐ × ☐

Q13

Select ALL the numbers that are composite.

71 74 75 79 83

Q14

What are the first four prime numbers?

5 6 2 7 1

9 3 15 4 8

Q15

Find the highest common factor (HCF) of 24 and 32.

HCF = ☐

Q16

Draw a factor tree and use it to write 80 as a product of its prime factors.

80 = ☐

$2^4 \times 5$ $2^3 \times 5^2$

$2^3 \times 5$ $2^4 \times 5^2$

Q17

Draw a factor tree and use it to write 250 as a product of its prime factors.

250 = ☐

$2^3 \times 5^2$ 2×5^3

$2^2 \times 5^3$ $2^2 \times 5$

Q18

From the numbers below, choose ALL the factors of 45.

2 6 1 7 5

45 3 17 35 9

Q19

List ALL the prime numbers between 100 and 120.

102 103 108 101 115

109 107 113 105 117

Q20

Find the highest common factor (HCF) of 21 and 41.

HCF = ☐

Q21

Find the highest common factor (HCF) of 54, 42 and 72.

HCF = $\square$

Q22

Draw a factor tree and use it to write 252 as a product of its prime factors. Order the factors from smallest to largest (for example $2^2 \times 3 \times 5$).

$252 = \square^{\square} \times \square^{\square} \times \square$

ANSWERS WEEK 2

Lesson 1

1 **a** not even
b digits do not sum to a multiple of 3
c 26 is not divisible by 4
d last digit is not 0 or 5
e not divisible by 3 (sum of digits is not divisible by 3)
f 125 is not divisible by 8 and it is not even
g sum of digits is not divisible by 9
h last digit is not 0

2.

i **a** yes	**b** no	**c** yes
d yes	**e** no	**f** yes
g no	**h** yes	**i** no
j yes	**k** no	**l** yes

Lesson 2

1 **a** No	**b** Yes	**c** Yes	**d** No
e No	**f** Yes	**g** Yes	**h** No
2 **a** No	**b** No	**c** Yes	**d** Yes
3 **a** No	**b** Yes	**c** No	**d** No
e No	**f** No	**g** Yes	**h** Yes
4 **a** Yes	**b** No	**c** No	**d** No
e Yes	**f** Yes	**g** Yes	**h** No
5 **a** No	**b** No	**c** Yes	**d** Yes
e Yes	**f** No	**g** Yes	**h** No

7 **a** 9 is not divisible by 2.
b Last digit is not a 0 or 5.
c 5 is not divisible by 2.
d 3 is not divisible by 2.
e Last digit is not a 0.
f 1 is not divisible by 2.

8 C **9** 12

10 **a** 75, 90 **b** 60, 80 **c** 84
d 54, 60, 66, 72, 78, 84, 90, 96

11-14 use calculator to check answers

Lesson 3

1 **a** 1, 17 **b** 1, 3, 7, 21
c 1, 2, 3, 4, 6, 8, 12, 24 **d** 1, 11
e 1, 5, 7, 35 **f** 1, 2, 4
g 1, 2, 3, 6, 9, 18 **h** 1, 23
i 1, 5, 25 **j** 1, 3, 9
k 1, 3 **l** 1, 19

2 **a** 3, 11, 17, 19, 23 **b** 4, 9, 18, 21, 24, 25, 35

3 C

a 12 **b** 11 **c** 12
d 3 **e** 3 **f** 16

ANSWERS WEEK 3

Lesson 1

1. **1) 5** **2) 3** **3) 5** **4) 5** **5) 7** **6)3**

3

$$1260 = 2 \times 630$$
$$= 2 \times 2 \times 315$$
$$= 2 \times 2 \times 3 \times 105$$
$$= 2 \times 2 \times 3 \times 3 \times 35$$
$$= 2 \times 2 \times 3 \times 3 \times 5 \times 7$$

2.

a	**b**	**c**	**d**
$88 = 2 \times 44$	$63 = 3 \times 21$	$45 = 3 \times 15$	$51 = 3 \times 17$
$= 2 \times 2 \times 22$	$= 3x3x7$	$= 3 \times 3 \times 5$	
$= 2 \times 2 \times 2 \times 11$			

e $132 = 2 \times 66$ $= 2 \times 2 \times 33$ $= 2 \times 2 \times 3 \times 11$	**f** $270 = 2 \times 135$ $= 2 \times 3 \times 45$ $= 2 \times 3 \times 3 \times 15$ $= 2 \times 3 \times 3 \times 3 \times 5$	**g** $396 = 2 \times 198$ $= 2 \times 2 \times 99$ $= 2 \times 2 \times 3 \times 33$ $= 2 \times 2 \times 3 \times 3 \times 11$	**h** $218 = 2 \times 109$
i $630 = 2 \times 315$ $= 2 \times 3 \times 105$ $= 2 \times 3 \times 3 \times 35$ $= 2 \times 3 \times 3 \times 5 \times 7$	**j** $520 = 2 \times 260$ $= 2 \times 2 \times 130$ $= 2 \times 2 \times 2 \times 65$ $= 2 \times 2 \times 2 \times 5 \times 13$	**k** $275 = 5 \times 55$ $= 5 \times 5 \times 11$	**l** $342 = 2 \times 171$ $= 2 \times 3 \times 57$ $= 2 \times 3 \times 3 \times 19$

Lesson 2

Check your answers using your calculator

Lesson 3

1 **a** 8^4 **b** 5^3 **c** 1^6 **d** 13^5
e 27^3 **f** 2^8 **g** 4^5 **h** 10^3
i 2^2 **j** 9^7

2 **a** $3^3 \times 6^2$ **b** 2×9^3 **c** $4^2 \times 5^4$
d 6×8^4 **e** $2^3 \times 7^3$ **f** $3^2 \times 9^2$
g $2^3 \times 5^3$ **h** $2^2 \times 4^2 \times 10^2$

3 **a** $2 \times 2 \times 2$ **b** 5×5
c $7 \times 7 \times 7 \times 7 \times 7$ **d** $6 \times 6 \times 6 \times 6$
e $10 \times 10 \times 10 \times 10 \times 10 \times 10$
f $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$
g $2 \times 2 \times 2 \times 2 \times 5 \times 5 \times 5$
h $2 \times 2 \times 3 \times 3 \times 3 \times 3 \times 3 \times 6 \times 6 \times 6$

4. a 16 b 125 c 32 d 1 000 000

e 243 f 2401 g 1