

## Year 5: Home Learning - Week 8

08.06.20

Welcome to week 8 of your home learning from the Year 5 teachers!

We hope you are all still keeping well. We continue to be so impressed with the resilience you are showing after all this time. We know it's not easy still being at home - your attitudes are making us teachers very proud – well done. This week we will continue to make our phone calls home as well as posting and reading regular messages via Class Dojo. Thank you all for continuing to keep in touch and do let us know if we can help in any way.

Purple Mash is still proving an invaluable way to make contact and is the best way to share your home learning with your teacher.

Keep sending in your home learning via Purple Mash – preferably one lesson in each Purple Mash email. We're going to continue keeping in touch with you all by regular phone calls. Don't forget you can send us a message on Dojo or Purple Mash if you need extra help.

### Daily

1. Read for at least 20 minutes daily - independently or with an adult. Remember to make a note of what you are reading/ how much you have read in your Reading Record books.
2. Use TT Rockstars and Spelling Shed daily for at least 20 minutes – use your login card to access these every day. We will be updating *the assignment* on Spelling Shed every Monday so that you can practise different spellings each week. If you want some further challenge with your times tables, here is a link to a self-generating torture square website. At school, we set it to 'Type 10 by 10' and 'Difficulty 2'. Try to beat your score or your time!  
[http://www.maths-starters.co.uk/tables\\_torture.html](http://www.maths-starters.co.uk/tables_torture.html)
3. Choose words from the Y5 spelling list (found in your Reading Record Books) to practise each day (aim for 5 words per week).

### Weekly

There is one main activity for English, maths, science and project.

You are probably in a routine now where you know when is the best time to do these activities, dependent on your family's situation. You and your grown-ups can decide when is the best time to do your home learning so that it fits in around your family life. The challenges are there if you would like to spend more time on any of this week's topics. This week there are some extra learning links for maths if you'd like to spend more time on this subject. There is no need to print the sheets – you can complete the activity or record your answers on some paper and take a photo to send to your teacher, or type it on a word document. Please continue to send in your work to your class teacher, via the Purple mash email.

## English

Many of you have told us how passionately you feel about the problems plastics are causing in our world – and how much you want to make a difference. The persuasive letters you are writing are one way you can change the world for the better.

In last week's learning activity you:

1. Chose who you are going to write your persuasive letter to
2. Made a list of facts about the problem of plastic waste
3. Noted down some ideas in a grid

This week, we'd like you to write your own persuasive letter. It might be a good idea to refresh your memory by reading through your notes from last week. Have them next to you as you write.

We have included a table of phrases, below, that you might find helpful when making sure your sentences have an impact upon the reader. Check it out! Finally, here's some Top Tips to help you with each section:

**1. Introduction:** In this paragraph, sum up why you are writing this letter as clearly and concisely as possible. *What specific problem are you highlighting? Why are you writing to this person / company - what does the problem have to do with them?* Aim at 2-3 high quality sentences in this paragraph, avoiding details.

**2. Main body:** Aim at a short paragraph for each of your main arguments. *How many features of persuasive writing can you use to make your letter effective?*

- Rhetorical questions
- Emotive language
- Facts grouped into paragraphs
- Opinions
- Strong argument
- Repeated words

**3. Conclusion:** In this paragraph, appeal to the person to take action. State the consequences of not doing so. *Can you end with a rhetorical question or a short sentence for a powerful impact?*

Word Bank and Helpful Phrases		
Introductory phrases	Supporting phrases	Concluding phrases
In my opinion...	Some believe that...	For the reasons above...
I believe...	I maintain that...	As you can see...
It is my belief that...	In my opinion...	As I have noted...
There is no doubt that...	Therefore...	In other words...
From my point of view...	Moreover...	On the whole...
It seems to me that...	For this reason...	Without a doubt...
I question whether...	For this reason...	Obviously...
I (dis)agree with...	I feel that...	Undoubtedly...
	Surely...	In any case...
	It is certain that...	

## Maths

This week we are finishing our angles unit.

1. Watch the following videos:

Angles in a Full Circle Video – watch until 3:38 <https://corbettmaths.com/2012/08/10/angles-in-a-full-circle/>

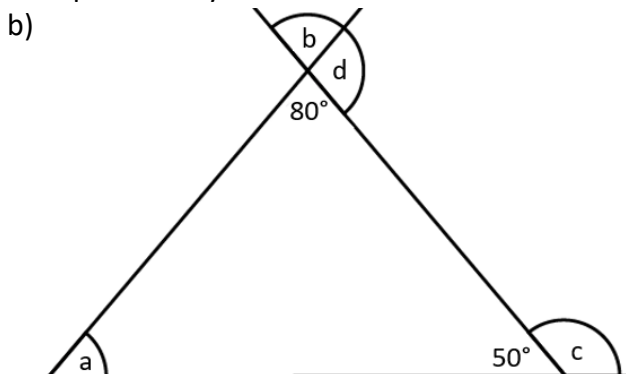
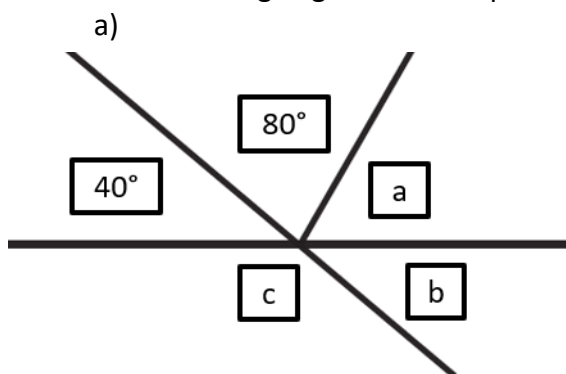
Angles: Straight Line Video – <https://corbettmaths.com/2013/12/19/angles-straight-line-video-35/>

2. Complete the 'Week 8's Maths Activity Sheet' and then mark it using the 'Week 8's Maths Activity ANSWER Sheet' both at the bottom of this document.



## Maths Challenges:

1. Calculate the missing angles on these pictures and explain how you worked them out:



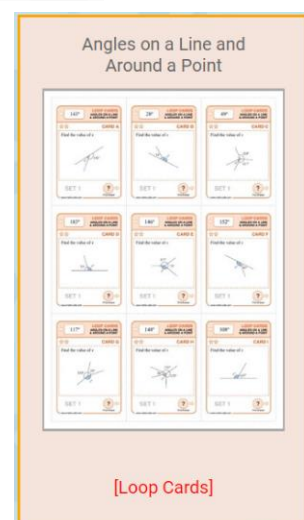
2. Print out these angles on a line and around a point loop cards (you will need to scroll down to find them – click on the loop cards and then click on the **Download** button in the top right-hand corner).

If you don't have a printer you could draw them out by hand.

<https://www.maths4everyone.com/skills/finding-the-unknown-angle-s-4733.html>

The aim is to make a loop using all of the loop cards:

- a) Start with any card and work out the value of  $x$ .
  - b) Find the card with the answer (in the top left-hand corner in the white square) and have the side of the card with the answer touching the side of the question card which says, 'Find Answer'.
  - c) Continue until you arrive back at the first card you started with and have constructed a loop.
3. 'Triangles All Around' - <https://nrich.maths.org/2850>



## Extra Learning Links:

- 5-a-day (aim for silver) <https://corbettmathsprimary.com/5-a-day/>
- Maths games on all of the KS2 topics <http://www.sheppardsoftware.com/math.htm>
- Some maths games <http://www.iseemaths.com/maths-games/>
- **A multi-level KS2 maths game designed to cover all of the maths areas**  
<https://www.bbc.co.uk/bitesize/topics/zd2f7nb/articles/zn2y7nb>

## Angles – Week 8's Maths Activity Sheet

1. Find three different sets of three numbers that have a sum of 360.

110	270	135	130
245	120	60	30
65	25	90	160

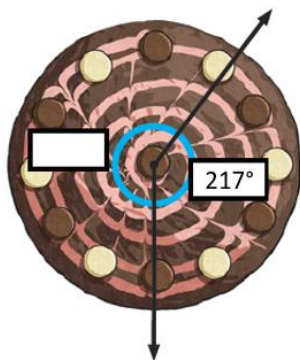
Set 1:

Set 2:

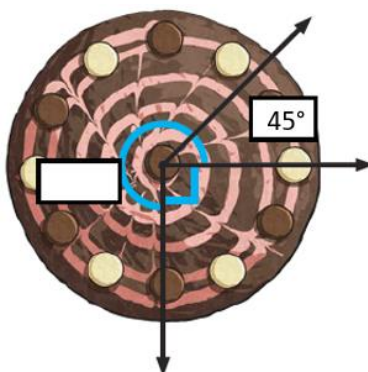
Set 3:

2. Calculate the missing angles:

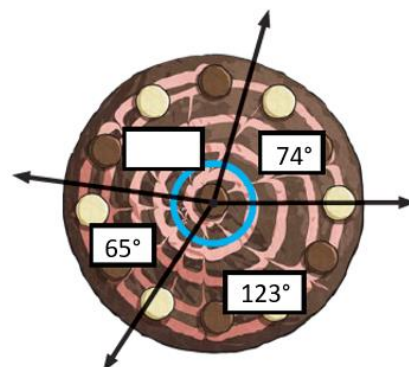
a)



b)



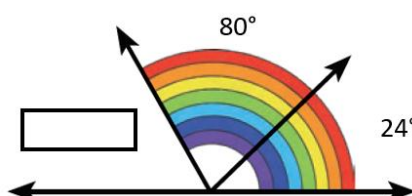
c)



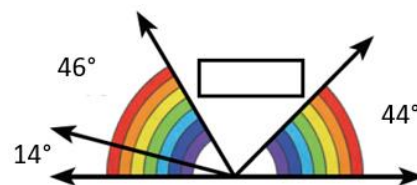
d)



e)



f)



3. Abdul is facing north.

He turns clockwise  $135^\circ$ , then another  $90^\circ$ .

How many more degrees clockwise does Abdul need to turn to return to north?



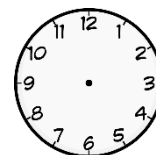
4. True or false? Explain your reasoning for each statement.

		T	F
a	Four right angles make a full turn.		
b	A third of a full turn is a reflex angle.		
c	You can make one whole turn with three acute angles.		

5. Jenna says, "If I turn from facing 2 on a clock to facing 8 on a clock, this is a half turn -  $180^\circ$ ".

Is Jenna correct? Prove it!

What other turns can you identify on a clock face that would be the same value of  $180^\circ$ ?



6. Florian is describing angles on a straight line for his friend to draw. He says one of the angles is  $32^\circ$ , another is a right angle and the final angle is  $68^\circ$ .  
Is Florian correct? Convince him!

7. A circle is divided into quarters by two-diameter lines (black).

Are the statements below true or false?

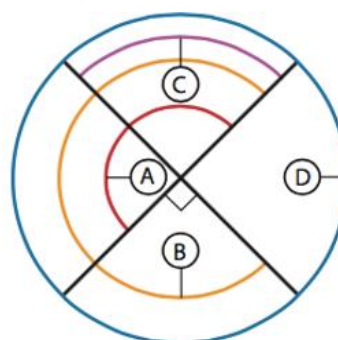
Angle C (purple) is the smallest angle.

Angle B (orange) is a right angle.

Angle A (red) is a straight angle.

Angle D (blue) is the largest angle.

Explain your reasoning for each statement.

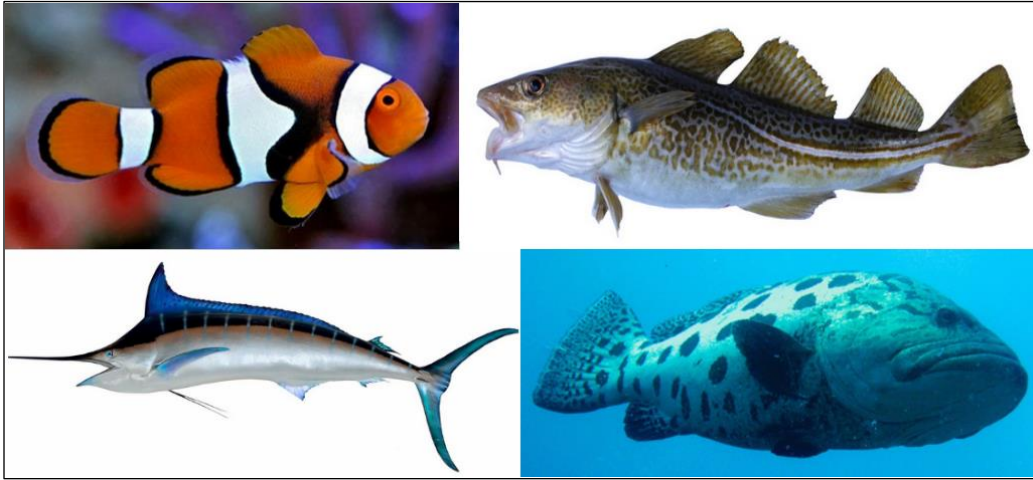


## Science

This week, we're going to revisit a brilliant topic we looked at in the autumn term: air resistance and water resistance. First, watch this video to remind yourselves what these two forces are:

<https://www.bbc.co.uk/bitesize/topics/zsxxsbk/articles/zxw6gdm>

Now, using what you know about water resistance, *which one of these fish do you think can swim the fastest? Why? How many possible reasons can you think of?*



*Clownfish, Cod, Grouper, Sailfish*

Next, watch this video, stopping at 2:04: <https://www.bbc.co.uk/teach/class-clips-video/science-design-and-technology-ks2-investigating-air-and-water-resistance/z4m6nrd>

- Have a go at the investigation described in the video. Using two pieces of clay of identical size, *what is the fastest and the slowest shape you can make?* Test them out by racing them against each other. Think about the shapes of fast fish, ships, planes, cars, birds...
- Choose a creative way to explain what happened. (Make sure you use your scientific vocabulary!) You could include a photograph, a labelled diagram of your two shapes - or even a slow-mo video in your explanation.

**Word Bank:** force, water resistance, motion, drag, oppose, streamlined

Now watch to the end of the video. *How did your findings compare with the results they found?*

## Science Challenge

See if you can find out if it is only the front end of a shape that affects how much water resistance it has. *Does the shape of the back matter? What do you notice about fast fish, boats, planes, birds etc?*



## Project

So far, we've investigated the problems plastic can cause. This week we want to consider how we can tackle the problem. Watch this video to find out what a girl called Lilly is doing to make a difference in her own community in Thailand:

<https://www.youtube.com/watch?v=LNzTea4Wy5U>

Following Lilly's example, conduct an investigation into how big a problem plastic is in your own community. Start by simply taking a walk around your streets, or a park or local beauty spot. Make sure:

1. a parent or carer says it's OK – or even goes with you
2. you don't touch any waste with your hands.

Questions you could ask:

- How much plastic litter is there? What types?
- What effect has it had on your area? (e.g. Spoiled its beauty? Blocked a drain? Harmed a creature?)
- How did it get there? (Blown by the wind? Dropped carelessly? Dumped deliberately?)
- Why do people sometimes not dispose of plastic correctly?



How does what you have seen make you feel? Think of a way to record your experience. For example, you could create a poster displaying the effect plastic litter is having on Hedge End. You might decide to create a table with tallies of how many of each item you see, or even create a pictogram from your results.

## Project Challenge

What could you do to make a difference? For example, you could find out if a local beauty spot or your favourite beach has a clear up day – and join in! (Make sure your parents or carers agree!) Be sure to tell us your ideas!

## Angles – Week 8's Maths ANSWER Sheet

1. There are many different possibilities, for example:  $110^\circ$ ,  $120^\circ$  and  $130^\circ$  /  $245^\circ$ ,  $90^\circ$  and  $25^\circ$  /  $270^\circ$ ,  $60^\circ$  and  $30^\circ$ .
2. a)  $360^\circ - 217^\circ = \mathbf{143^\circ}$       b)  $45^\circ + 90^\circ = 135^\circ$ .  $360^\circ - 135^\circ = \mathbf{225^\circ}$       c)  $74^\circ + 123^\circ + 65^\circ = 262^\circ$ .  $360^\circ - 262^\circ = \mathbf{98^\circ}$   
d)  $180^\circ - 39^\circ = \mathbf{141^\circ}$       e)  $80^\circ + 24^\circ = 104^\circ$ .  $180^\circ - 104^\circ = \mathbf{76^\circ}$       f)  $14^\circ + 46^\circ + 44^\circ = 104^\circ$ .  $180^\circ - 104^\circ = \mathbf{76^\circ}$
3. North – North is a full turn ( $360^\circ$ ).  $135^\circ + 90^\circ = 225^\circ$ .  $360^\circ - 225^\circ = \mathbf{135^\circ}$
4. a) **True**:  $90^\circ \times 4 = 360^\circ$  which is a full turn. There are 4 quarters in a whole.  
b) **False**: a full turn =  $360^\circ$ . A third of  $360^\circ = 120^\circ$  which is an obtuse angle.  
c) **False**: acute angles are less than  $90^\circ$  so the greatest angle that can be made with three acute angles is  $267^\circ$  ( $89^\circ \times 3 = 267^\circ$ ).
5. Jenna is **correct**: turning from facing 2 to facing 5 is a right angle ( $90^\circ$ ) and therefore turning from facing 2 to facing 8 is two right angles ( $180^\circ$ ). Jenna has turned half a turn.  
There are many possibilities: 12 – 6, 1 – 7, 3 – 9, 4 – 10, 5 – 11, 6 – 12, 7 – 1, 8 – 2, 9 – 3, 10 – 4, 11 – 5.
6. Florian is **incorrect**:  $32^\circ + 90^\circ$  (right angle)  $+ 68^\circ = 190^\circ$ . A straight angle is  $180^\circ$  exactly.
7. Angle C (**purple**) is the smallest angle - **true**. Angle C is a right angle ( $90^\circ$ ) and therefore the smallest.  
Angle B (**orange**) is a right angle - **false**. Angle B is three right angles, which is  $270^\circ$ .  
Angle A (**red**) is a straight angle - **true**. Angle A is two right angles, which is a straight angle ( $180^\circ$ ).  
Angle D (**blue**) is the largest angle - **true**. Angle D is four right angles or a whole circle ( $360^\circ$ ) and therefore is the largest.

### Maths Challenges:

d) a)

Angle a =  **$60^\circ$** .  $40^\circ + 80^\circ = 120^\circ$  and along with angle a will make a straight angle.  $180^\circ$  (straight angle)  $- 120^\circ = 60^\circ$ .

Angle b =  **$40^\circ$** .  $80^\circ + 60^\circ$  (angle a)  $= 140^\circ$  and along with angle b will make a straight angle.  $180^\circ - 140^\circ = 40^\circ$ .

Angle c =  **$140^\circ$** . Angles b and c make a straight angle so therefore  $180^\circ - 40^\circ$  (angle b)  $= 140^\circ$ .

—  
Angle a =  **$50^\circ$** . All angles in a triangle add up to  $180^\circ$ .  $80^\circ + 50^\circ = 130^\circ$ .  $180^\circ - 130^\circ = 50^\circ$ .

Angle b =  **$80^\circ$** . Angle b and d make a straight angle so therefore  $180^\circ - 100^\circ$  (angle d)  $= 80^\circ$ .

Angle c =  **$130^\circ$** .  $50^\circ$  and angle c make a straight angle so therefore  $180^\circ - 50^\circ = 130^\circ$ .

Angle d =  **$100^\circ$** .  $80^\circ$  and angle d make a straight angle so therefore  $180^\circ - 80^\circ = 100^\circ$ .