

Academy Closure – July 2021

Please remember to submit all completed learning to the Remote Learning account of the Academy, the email address is:

- Remote-Learning@twapa.co.uk

KS4 English

Alongside the four individual lessons, you need to ensure you are keeping up with your reading. Please access all the free resources available on the links below:

<https://library.thenational.academy/>

[eBooks Library - The Leeds Library | The Leeds Library](#)

[50,000+ Free eBooks in the Genres you Love | Manybooks](#)

I look forward to hearing your reading recommendations.

Lesson 1

Lesson Objective: To identify and understand different types of language used within the extract.

Success Criteria:

Bronze: I can identify at least three different devices within the extract

Silver: I can identify a range of different devices and I am beginning to consider the effect of these. I am aware of tone and purpose of the extract.

Gold: I can confidently identify a range of different devices and can explain why the writer has used these. I am aware of the tone and purpose of the extract and can suggest the purpose of these.

This week we will be continuing to focus the effect of language within texts.

Read Extract A – Environmental Costs of Fast Fashion. Remember to use your decoding skills: First, SOUND out words new to you. Use simple phonics to attempt a pronunciation. You might recognize the word when you hear it.

Next, examine the STRUCTURE. Look for familiar word parts.

Then look at the CONTEXT. Guess at the word's meaning from the way it is used in the sentence. You may be able to tell the meaning by the way the passage continues. Check the DICTIONARY.

This extract describes the huge impact fashion has on the environment. There are lots of interesting articles on this to support your reading; Google environmental impact of fast fashion. Answer the questions following the extract. You need to answer all questions in full sentences using correct punctuation. When answering question 3, you need to use PEE paragraphs. Make sure you include a short quotation from the extract.

Exercise A — Environmental Costs of Fast Fashion

Extract A — Abridged from 'The Environmental Costs of Fast Fashion' by Patsy Perry, from *The Conversation*, 2017

Dr Patsy Perry is a senior lecturer in Fashion Marketing at the University of Manchester. She has researched the impact fashion can have on the environment and ways of making it more sustainable.

It's tough to love our clothes and keep wearing them for longer when we are faced with a tempting array of newness on offer in the shops. But before you head out into the January sales for those irresistible deals, spare a thought for the impact of fast fashion on the environment.

5 Fast fashion focuses on speed and low costs in order to deliver frequent new collections inspired by catwalk looks or celebrity styles. But it is particularly bad for the environment as pressure to reduce cost and the time it takes to get a product from design to shop floor means that environmental corners are more likely to be cut. Criticisms of fast fashion include its negative environmental impact, water pollution, the use of toxic chemicals and increasing levels of textile waste.

10 Vibrant colours, prints and fabric finishes are appealing features of fashion garments, but many of these are achieved with toxic chemicals. Textile dyeing is the second largest polluter of clean water globally, after agriculture. Greenpeace's* recent Detox campaign has been instrumental in pressuring fashion brands to take action to remove toxic chemicals from their supply chains, after it tested a number of brands' products and confirmed the presence of hazardous chemicals.

Hunger for newness

15 Textile waste is an unintended consequence of fast fashion, as more people buy more clothes and don't keep them as long as they used to. The international expansion of fast fashion retailers exacerbates* the problem on a global scale. Wardrobes in developed nations are saturated*, so in order to sell more products, retailers must tempt shoppers with constant newness and convince them the items they already have are no longer fashionable.

20 Increasing disposable income levels over recent generations means there is less need to "make do and mend", as it's often cheaper and more convenient to buy new than have an item repaired. Busy lifestyles make many people more time-poor than previous generations, and with the loss of sewing and mending skills over time, there is less impetus* to repair our garments. The rise of supermarket fashion that can be purchased alongside the weekly shop and the regular occurrence of seasonal sales make clothing seem "disposable" in a way it didn't used to be.

25 There is interest in moving towards a more circular model of textile production which reuses materials wherever possible, yet current recycling rates for textiles are very low. Despite a long-established national network of charity shops and increasing numbers of in-store recycling points in UK high-street stores, three-quarters of Britons throw away unwanted clothing, rather than donating or recycling it.

What shoppers can do

30 So, can consumers reduce the environmental cost of fast fashion when out shopping? Choosing an eco-friendly fabric is complex as there are pros and cons to all fibre types. Garments which are labelled as being made from natural fibres are not necessarily better than synthetic, as fibre choice is only one part of a complex picture. Fibres still have to be spun, knitted or woven, dyed, finished, sewn and transported – all of which have different environmental impacts.

35 For example, choosing organic fabrics is better than choosing non-organic fabrics in terms of the chemicals used to grow the fibres, but organic cotton still requires high amounts of water and the impact of dyeing it is higher than the impact of dyeing polyester.

Recycled content is often best of all, as it reduces the pressure on virgin resources and tackles the growing problem of waste management.

40 The Love Your Clothes initiative from the charity WRAP gives information for consumers on each stage of the purchase process, from buying smarter, to caring for and repairing items, to upcycling or customisation, and finally responsible disposal. Ultimately, the best thing we can do is to keep our clothing in use for longer – and buy less new stuff.

Glossary:

Greenpeace — an organisation that promotes environmental awareness
exacerbates — makes something worse
saturated — full
impetus — encouragement to act

1. In paragraph three, how does the writer use language to describe the effects of fast fashion on the environment?
2. What is it likely that clothing manufacturers do not prioritise methods that are good for the environment? Use evidence from the text to support your argument.
3. “Patsy Perry doesn’t sympathise with people who buy fast fashion.” To what extent do you agree with this statement? Explain why, using examples to support your views.
4. What is the purpose of this text? Why do you think this?
5. How does the writer use language to achieve this purpose? Give examples from the text.

Lesson 2

Lesson Objective: To explore the effect of different language devices on the reader

Success Criteria:

Bronze: I can identify at least three different devices within the extract

Silver: I can identify a range of different devices and I am beginning to consider the effect of these

Gold: I can confidently identify a range of different devices and can explain why the writer has used these and the impact on the reader

Today we are looking at another extract. Remember to refer to the glossary at the bottom of the page to help with any words and phrases which are unfamiliar.

Read Extract B – A Volume of Chit-Chat About Men, Women, and Things. While you are reading, highlight the words you do not understand. Use the techniques we use in school to help you decode these words. Re-tell or summarise the extract to check your understanding.

This is an extract from 1872 so some of the words will be unfamiliar. Use the decoding strategies and do not panic if you cannot understand all the words.

Exercise B — Caper-Sauce

Extract B — Adapted from ‘Caper-Sauce: A Volume of Chit-Chat About Men, Women, and Things’ by Fanny Fern, 1872

Fanny Fern was an American novelist and the highest paid newspaper columnist in America in 1855. The book this extract is from is the sixth and last collection of columns she released.

It is curious with what different eyes human beings look upon new clothes, at different stages of existence. Youth, which least needs these auxiliaries*, is generally the most clamorous* for incessant change. Young men are as likely to be caught acting in this regard as their female counterpart. The new coat may squeeze; the new collar may strangle; the new boots may pinch; the new hat may leave its red mark on the throbbing forehead, but perish the thought of not wearing either! From the days when our foremothers had their heads built up in turrets by the hurried hair-dresser, the night previous to some great festive occasion, and sat bolstered upright in bed all night, for fear of tumbling them — down to the present day of ladies’ “hair-crimpers,” human nature has held its own in this respect.

Middle age, with few exceptions, looks upon new clothes with abated* interest. Old clothes, like old customs, fit easy. *Comfort*, anyhow, says middle age — appearances as the gods please; so new shoes lie on the shelf unworn for weeks, for fear of stiff heels or squeaky soles; and new clothes look and feel so spick-and-span and glossy, that middle age can not do a natural thing in them — middle age resents this petty, fretting intrusion on its much-loved quiet. It is irritable, till new clothes begin to *feel* easy, which is not generally the case till some seam grows threadbare, or some treacherous gap horrifies the easy wearer with renewed visions of innovating fashions and fabrics.

Now this is very natural to a certain extent; but middle age sometimes forgets that something is due to affectionate young eyes, which take a proper pride in seeing “father” or “mother” neatly and becomingly dressed, according to their age and station in life.

It is a harrowing reflection how much money is “sunk” every day in new clothes, in which the blissfully unconscious wearers look none the better, but rather the worse. Still, if everybody had good taste in this matter, there would be no foil* to the well-dressed; and I am afraid the heartless dry-goods* merchants care little whether blondes dress in orange color, or brunettes in sky-blue, so that their bills are paid.

But new clothes for the “baby.” Ah! that is something worth while. I ask you, did love ever find fabric soft enough, or nice enough, or pretty enough, for “*the baby*”? Fathers and mothers may wish to make as many economical decisions as they please; but why, if they mean to carry them out, do they linger at the shop-window where that dainty little satin bonnet stares them innocently in the face, with that pert little rosette, cocked upon one side, that “would look so cunning* on baby.” Why do they contemplate the rows of bright little red boots, or the embroidered little sacques* and frocks? Why don’t they cross right over and travel home out of the way of temptation?

Surely, no pink could rival the rose of baby’s cheek; no crimson the coral of its lips; no blue the sapphire of its eyes. For all that, out comes the purse and home goes the bonnet, or cloak, or frock. Just as if shopkeepers didn’t know that babies will keep on being born, and born pretty; and that fathers and mothers are, and will be, their happy slaves all the world over to the end of time!

Glossary:
 auxiliaries — helpers
 clamorous — loud or demanding
 abated — lessened
 foil — someone who contrasts a person to highlight particular qualities in the other person
 dry-goods — US term for clothing and textiles
 cunning — cute or appealing
 sacques — US term for a baby’s jacket

1. Summarise what Fern says about fashion in the first paragraph.
2. How is language used to describe the opinions of the young and middle-aged people different? Explain the effect this has.
3. How does Fern present merchants and parents? Use evidence from the extract in your answer.

Lesson 3 – Macbeth

**Lesson Objectives: To recap the main events of the play
To recap the main characters in the play**

Success Criteria:

Bronze: I can explain the main events in the play

Silver: I can clearly explain the main events in the play. I am beginning to explain characteristics of Macbeth and Lady Macbeth

Gold: I can confidently explain the main events in the play. I can confidently explain the characteristics of Macbeth and Lady Macbeth

We have covered Macbeth several times over the past year. You need to make sure you can clearly explain the plot and the main characters. The videos below are a good way to begin your recap. Make sure you watch the ones linked to the characters of Macbeth and Lady Macbeth. If you have time, the others are very useful and will support further learning.

[Macbeth - Oak National Academy \(thenational.academy\)](https://www.thenational.academy)

Read Macbeth's letter below:

Today the Scottish army fought bravely and destroyed our foes for the glory of King Duncan. All hail the great and good King! The battle was long and hard but I struggled by side with my best friend, Banquo, and together we overcame the odds. We truly are brothers at arms.

As the battle came to an end, we travelled across the broken landscape of the battlefield. A storm mysteriously approached with unnatural speed and we were caught up in the centre, the very eye of the storm! Fighting to keep control of our horses, we felt almost as much fear as on the battlefield. Something didn't feel right. The hairs on our arms were raised and the horses were unusually nervous ...

Then as a crack of lightening lit the scarred landscape, we saw them. Horrible creatures. They called themselves 'the weird sisters'. The three horrors started to chant and made a prediction: I would be Thane of Glamis, then Thane of Cawdor then after that, the King!

As quickly as they appeared, they vanished. Banquo was suspicious of these devils, but I must admit I was shocked by both their appearance and their predictions.

After the disturbing events of the day, we both hurried away from the battlefield and were glad to be greeted by a friendly face: Ross, a nobleman. He explained that word of my heroic deeds on the battlefield has already begun to sweep Scotland and I have been granted another title. I am now the Thane of Cawdor! The witches' prediction has come true! Now I am nobleman just as they said!

Am I to be King? Could it be true? What about Duncan? I am his loyal servant ... but imagine ... ruling an entire country! Imagine what I could do for Scotland. Dare I even imagine the crown upon my head? What will be, will be. I must not interfere with fate.

Answer the questions based on the letter:

1. What do we learn about Macbeth in the first paragraph
2. What type of atmosphere is created in the second paragraph? How does this relate to the genre of 'tragedy'?
3. What relationship do Macbeth and Banquo have?
4. What reputation does Macbeth have? Why is his reputation important?
5. What encourages Macbeth to think about becoming King?
6. How does Macbeth feel about becoming King?
7. Why is important that Macbeth writes to his wife? What could this show about their relationship?
8. Overall, how do you feel about Macbeth from what you have read?

Lesson 3 – **Macbeth**

Lesson Objective: To recap the main events of the play

To recap the main characters in the play

Success Criteria:

Bronze: I can explain the main events in the play

Silver: I can clearly explain the main events in the play. I am beginning to explain characteristics of Macbeth and Lady Macbeth

Gold: I can confidently explain the main events in the play. I can confidently explain the characteristics of Macbeth and Lady Macbeth

We have covered Macbeth several times over the past year. You need to make sure you can clearly explain the plot and the main characters. The videos below are a good way to begin your recap of the character of Lady Macbeth.

[Lady Macbeth \(thenational.academy\)](https://www.thenational.academy)

Read the letter below from Lady Macbeth

I am proud to be Macbeth's wife: he is loyal, brave and loving. But there is one thing missing: the desire for more! I love our life of luxury as Lord and Lady of this magnificent castle. I love the servants and the feasts and the beautiful gowns. But it isn't enough. Life is short and it can be cruel – so why settle for anything less than the absolute best? People think 'she's only a woman'. People think 'she should count herself blessed'. Blessed? I spit on the word! *Only* a woman? The fools! I'll show them all! People only see the surface but underneath, deep inside me, is great power. I have what most people don't: a burning desire and the will to see it through.

My husband has written a letter to me. He explains that three witches have predicted that he will be King! He has already been promoted and the crown is next! Finally, now is my moment to strike ...

Spirits give me strength! I don't want to be weak – make me strong and give courage to turn my thoughts into actions. My husband and I can take a short cut to power. We can take the crown and have it all. It's easy really, get rid of Duncan and the path to greatness is clear for us.

My husband and I are both alike: we want the best in life. But we are also both different: my wonderful husband is too focused on honour. From being a soldier on the battlefield, all he knows is how to do right and fight fair. But the deeds I am planning are anything but fair...

He needs my strength, my cunning, my hunger. Let him come to me and I'll plant the idea in his head through a little 'poison' in the ear. Together we are unstoppable.

Soon we will have what we deserve. Soon the crowns will be ours...

Answer the questions based on the letter from Lady Macbeth:

1. What do we learn about Lady Macbeth in the first paragraph?
2. How does Lady Macbeth feel about other people's opinions?
3. Why does Lady Macbeth use the word "strike"? What does that suggest about her?
4. How does Lady Macbeth feel about her husband?
5. What is the "poison" Lady Macbeth mentions?
6. What is Lady Macbeth's "burning desire"?
7. What does the letter show about attitudes to women in Shakespeare's time? How might Macbeth's letter to his wife show their relationship is different?
8. Overall, how do you feel about Lady Macbeth from what you have read?

KS4 Maths

Lesson 1

LO: Understand how to find a side length using Pythagoras Theorem

Success Criteria:

- Some will be able to find the hypotenuse (longest side)
- Some will be able to find a shorter side

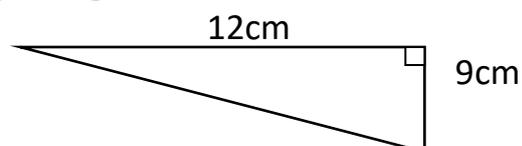
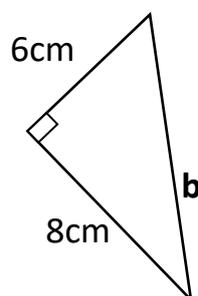
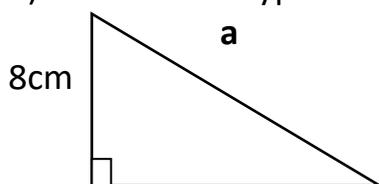
We are going to continue with the excellent work that we have done so far this term on Pythagoras Theorem. At this point you should all be familiar by the formulas to find both the longest (the hypotenuse) and a short side. For those that have forgotten see page 99 in your Revision Guide. Please complete the work on Pythagoras Theorem on page 97. This will be supported as above, by page 99 in your Revision Guide.

If you do not have the Revision Guides/Workbooks then there is a worksheet below

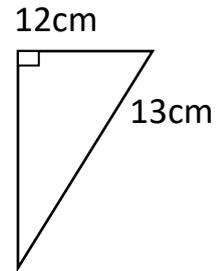
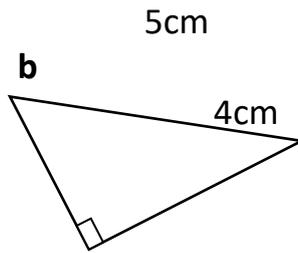
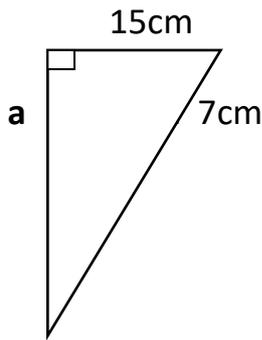
For help and support please see here: <https://classroom.thenational.academy/lessons/pythagoras-finding-right-angled-triangles-6wr3gr?step=2&activity=video>

Pythagoras Theorem Worksheet

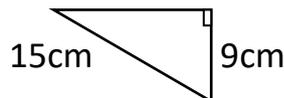
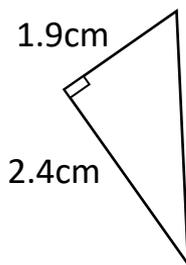
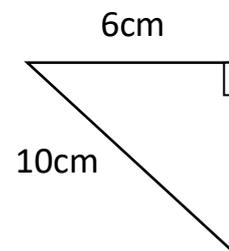
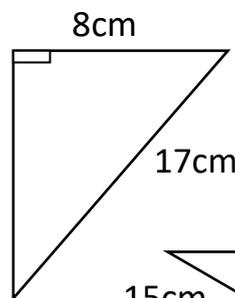
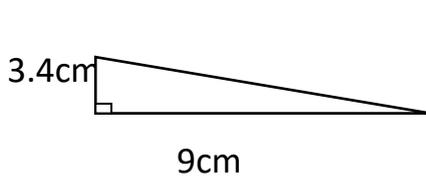
1) Find the hypotenuse of the following triangles.



2) Using Pythagoras, find the lengths of the sides labelled with letters.



3) Find the missing lengths of the triangles below. If necessary, round answers to 1 decimal place.



Lesson 2

LO: Understand how to apply Pythagoras to complex worded questions

Success Criteria:

- Some will be able to solve two-step problems applying Pythagoras Theorem
- Some will be able to solve three step problems applying Pythagoras Theorem

Taking what we have learnt from lesson one, we are now going to apply Pythagoras theorem in different contexts. You will need to recognise when to use which formula or problem solve to enable you to apply Pythagoras Theorem. We have done this in class so this should be a case of consolidating on what we have done.

Please complete the worksheet below.

Extension: Click the link below. It will take you to a series of questions where you can apply Pythagoras Theorem. Please complete the booklet from Q5 onwards. <https://www.mathsgenie.co.uk/resources/4-pythagoras.pdf>

1. To wash a window that is 8 metres off the ground, Ben leans a 10 metre ladder against the side of the building. To reach the window, how far from the building should Ben place the base of the ladder?
2. A rectangular swimming pool is 21 metres wide and 50 metres long. Calculate the length of the diagonal to 1 decimal place.
3. Miss Barker is teaching a 5th grade class. She is standing 12 feet in front of Jim. Francisco is sitting 5 feet to Jim's right. How far apart are Miss Barker and Francisco?
4. A triangle has sides with lengths of 10 metres, 16 metres and 20 metres. Is it a right

angled triangle? Explain your reasoning.

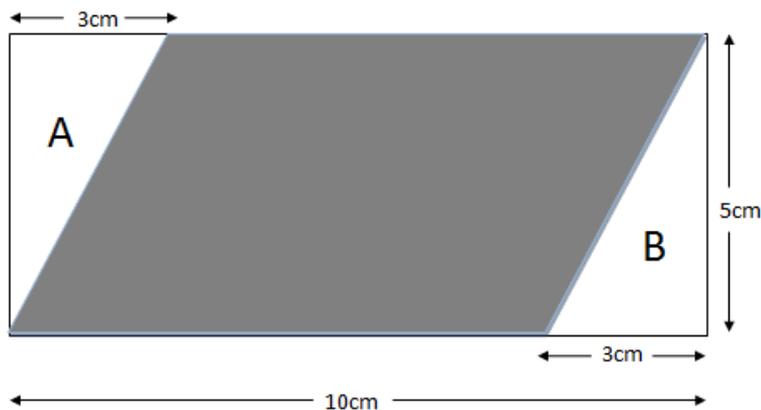
5. One side of a right angled triangle is 10cm. The other two are both of length x . Calculate x to 2 decimal places.

Find the perimeter of the triangle in part a)

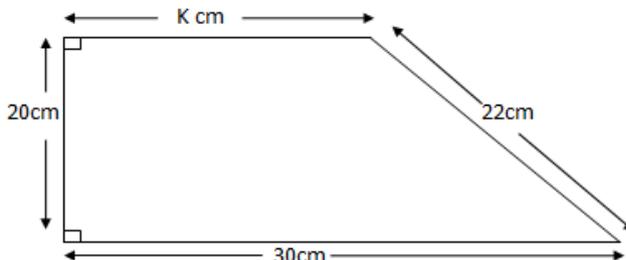
6. Find the length of the diagonal of a square of side 4cm to 2 decimal places.

Extension questions

- 12) The diagram below shows a shaded parallelogram drawn inside a rectangle. Using Pythagoras, find the hypotenuse of triangle A and the hypotenuse of triangle B to 1 decimal place.



- 13) Here is a trapezium, use Pythagoras' Theorem to find the value of k to 1 decimal place.



Lesson 3

LO: To understand how to apply 'SOHCAHTOA'

Success Criteria:

- Some will be able to label the sides of a triangle
- Some will be able to apply the correct formula for sine, cosine and tangent
- Some will be able to solve the interior angle in a shape using SOHCAHTOA

Building on from Pythagoras Theorem we are now going to delve into the basics of Trigonometry.

Initially, I just want you to be able to label the sides of a triangle. You will label them:

Hypotenuse – You know this is the longest side opposite the right angle

Adjacent – Alongside an interior angle

Opposite – Opposite an interior angle

From this you will learn how to apply Sine, Cosine and Tangent.

Your worksheet that you need to complete is below.

For further help and support please see: <https://teachers.thenational.academy/lessons/know-tangent-sine-and-cosine-6mvk4d>

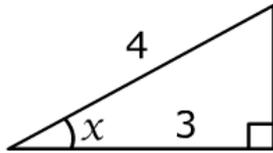
Extension: <https://www.mathsgenie.co.uk/resources/5-SOHCAHTOA.pdf>

Label the sides of the triangle: opposite, hypotenuse or adjacent

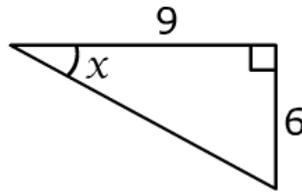
Extension: If you can, try to find the missing angle.

Find the angle marked x .

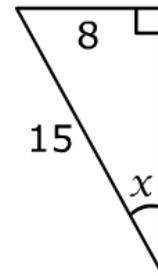
Give your answers correct to 1 dp.



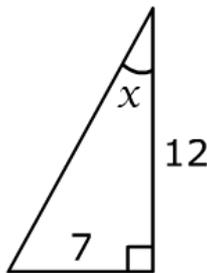
$x = \square^\circ$



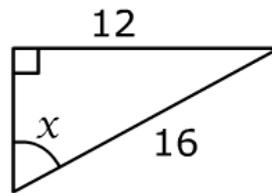
$x = \square^\circ$



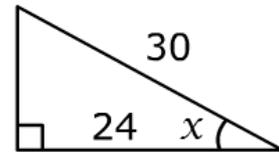
$x = \square^\circ$



$x = \square^\circ$



$x = \square^\circ$



$x = \square^\circ$



Plant Hormones

Hormones control important processes like germination, flower opening, dropping leaves, phototropism, and geotropism. We use plant hormones in weedkillers, and to make seedless fruit and root cuttings.

Lesson 1

Plant Hormones

LO: To describe what Auxin is

All	Know what Auxin is
Most	Describe how Auxin affects plant growth
Some	Explain how Auxin make plants grow

Hormones promote growth within plants. Plant hormones are unequally distributed throughout the stems and roots, which results in parts of the plant growing in a particular direction.

Auxins are a family of plant hormones. They are mostly made in the tips of the growing stems and roots, which are known as apical meristems, and can diffuse to other parts of the stems or roots.

Auxins control the growth of plants by promoting cell division and causing elongation in plant cells (the cells get longer).

Stems and roots respond differently to high concentrations of auxins:

Cells in stems grow more.

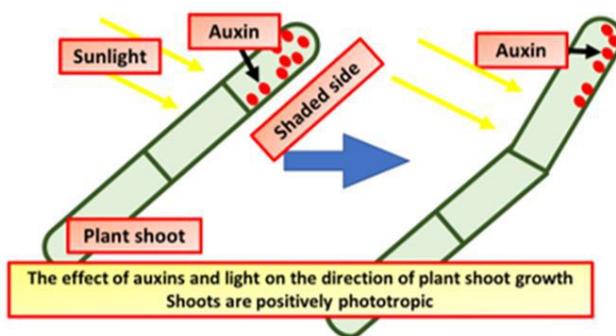
Cells in roots grow less.

This video lesson below explains more about Auxin:

<https://classroom.thenational.academy/lessons/plant-hormones-ctj3ct>

Describe how plant shoots and roots respond to light

- Key information to include:**
- What is phototropism
 - What effect does light have on auxin
 - Why do plants grow towards the light



Lesson 2

Investigating Plant Growth

LO: To plan an experiment investigation plant growth

All	Know that light affects plant growth
Most	Plan a simple experiment testing the effect of light on plant growth
Some	Describe the variables within the experiment

The effect of light intensity on photosynthesis can be investigated in water plants. Use Cabomba or Elodea, which are sold in aquarium shops.

The plants will release bubbles of oxygen – a product of photosynthesis – which can be counted.

A lamp with an LED bulb is set up at different distances from the plant in a beaker of water

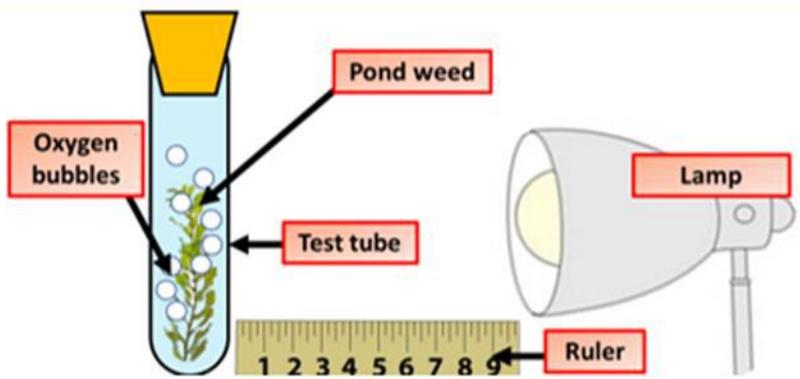
This video lesson below explains more about this experiment:

<https://classroom.thenational.academy/lessons/photosynthesis-required-practical-cmrk4t>

<https://classroom.thenational.academy/lessons/photosynthesis-required-practical-results-c4tp4t>

Describe how we can measure the rate of photosynthesis against light intensity using the equipment below

- Key information to include:**
- Summarise how the equipment is used
 - What is the independent, dependent & control variables
 - Why do you repeat it 3 times
 - What might cause errors in the results
 - How could the method be improved



Lesson 3

Commercial Uses of Plant Hormones

LO: To understand the uses of plant hormones in agriculture

All	Know how plant hormones are used in agriculture
Most	Describe the uses of weedkillers and rooting powder
Some	Explain why plant hormones are used in agriculture

There are many types of plant hormones. They are used in agriculture and horticulture to have a specific effect.

Auxins were the first class of plant hormones to be discovered. Their main function is to help plants grow and auxin stimulates plant cells to elongate. The apical meristem of a plant is one of the main places where auxin is produced. The apical meristem is also the location that all other parts of a plant grow from - the stem, leaves, and flowers.

This video lesson below explains more about plant hormones in agriculture:

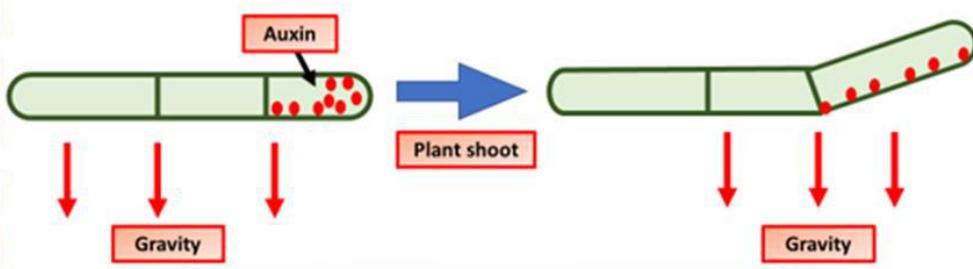
<https://classroom.thenational.academy/lessons/plant-hormones-ctj3ct>

https://classroom.thenational.academy/lessons/required-practical-plant-hormones-part-1-cgrkje?activity=intro_quiz&step=1

Describe how plant shoots and roots respond to gravity.

Key information to include:

- What is geotropism
- What effect does gravity have on auxin
- Describe the growth of plants in response to gravity

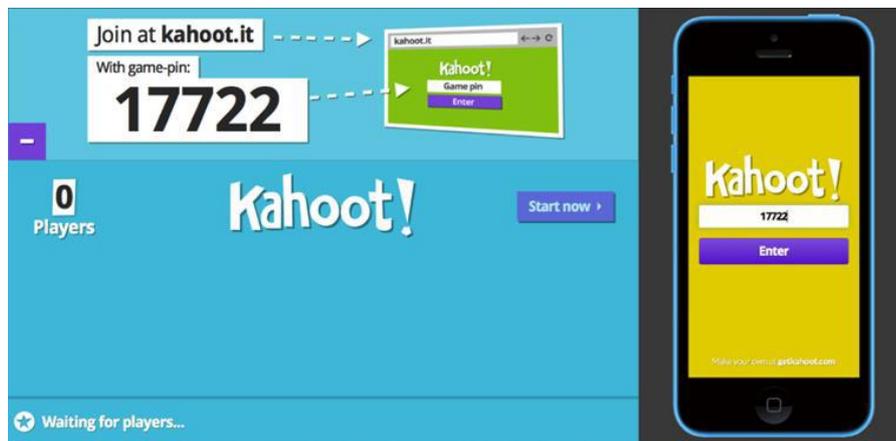


The effect of auxins and gravity on the direction of plant shoot growth
Shoots are negatively geotropic

Wider Learning

BBC bitesize has a variety of different videos, tests and games that will test your knowledge. Please watch all the videos on plant hormones.

<https://www.bbc.co.uk/bitesize/guides/zc6cqhv/revision/1>



Game Pins

Plant Hormones

Game PIN: **003852304**

Careers

Game PIN: **003422935**