

An Introduction to Twinkl Phonics

for Parents and Carers



Effective Phonics, Done Simply



BUILDING BLOCKS OF SUCCESSFUL READING

Did You Know...?

There are **26 letters** in the alphabet but there are **44 sounds** and over **100 different ways of spelling them.**

This is why English is one of the most complex languages to learn!

Whole Scheme Sound Mat

| | | | | | | | | | |
|-------------------------|--|----------------------|--------------------|-------------------|----------------------------|---------------------------------------|-----------------------------------|----------------------------------|-----------------------------|
| a a | e e ea | i i | o o | u u oo o | ai ai ay a_e a | ee ee y ie e_e ey e | igh igh i ie y i_e | oa oa ow o_e oe o | oo oo ue u_e ew |
| ar ar | or or ore aw al au a | ur ur er ir | ow ow ou | oi oi oy | ear ear eer | air air are ear | ure ure | u_e u_e ue u ew | b b |
| c c ck k ch | ch ch tch | d d | f f ff ph | g g | h h | j j dge g ge | l l el ll al il | m m mb | n n gn kn |
| ng ng | p p | qu qu | r r wr | s s ss c | sh sh ch | t t | th th | th th | v v |
| w w wh | x x | y y | z z zz s | zh s | tion tion | ture ture | | | |



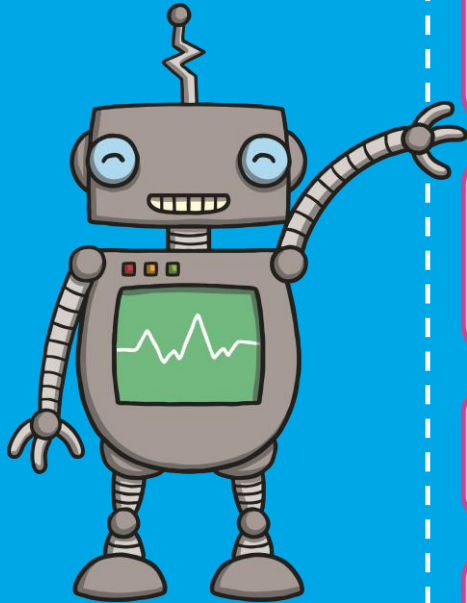
Phonics Terminology

Here is some of the terminology you might hear as your children begin to learn phonics.

| | |
|--|---|
| Phoneme | the smallest unit of sound in words |
| Grapheme | the written representation of a sound |
| GPC (Grapheme-Phoneme Correspondence) | being able to match a phoneme with the correct grapheme and vice versa |
| Blending | joining individual speech sounds together to read a word |
| Segmenting | breaking down words into individual speech sounds to spell a word |
| Digraph | two letters making one sound e.g. 'sh' |
| Trigraph | three letters making one sound e.g. 'igh' |
| Split Digraph | two letters making one sound which are divided by a consonant e.g. the i_e sound in the word 'side' |
| Tricky/Common Exception Words | words that are not fully decodable such as 'the' and 'was' |
| Sound buttons | circles or spots that can be written underneath a sound to support reading |
| Sound bars | lines that can be written underneath digraphs or trigraphs to show that the letters make one sound |
| Mnemonic | a visual prompt to help children remember a sound |

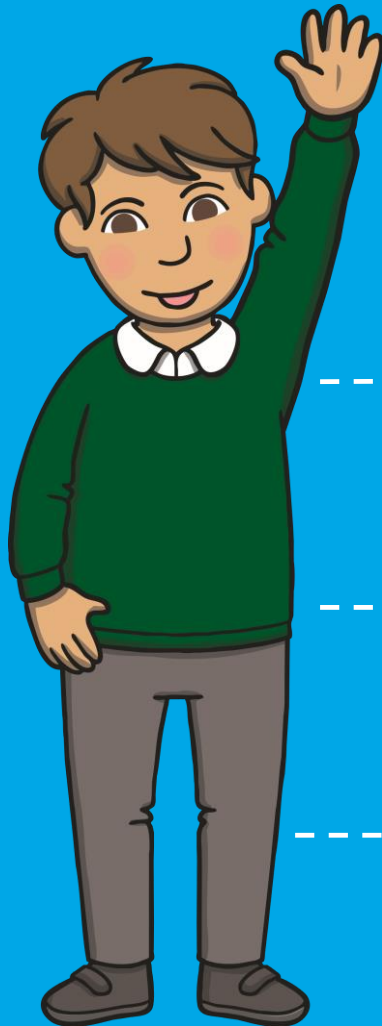


What Is Synthetic Phonics?



- Synthetic phonics is a method of teaching reading and writing, in which words are broken up into their smallest units of sound or 'phonemes'.
- Children learn to associate a written letter or group of letters, known as 'graphemes', with each phoneme.
- Sounds are then joined or 'blended' together into words for reading or, conversely, whole words are broken down or 'segmented' into their sounds for writing.
- It is the UK's most preferred method of teaching phonics.
- Sounds are taught in a prescribed order starting with s, a, t, p, i, n, as this allows for the most words to be made from the start, such as 'sat,' 'tap' and 'pin'.

What Are the Benefits of Synthetic Phonics?



Children progress through the stages as they are ready.

Planning ensures progression and coverage.

Children can attempt new words working from sounds alone.

Reading and writing become practices that are developed hand in hand.

What Is Taught and When?

| Twinkl Phonics Level | Number of Teaching Weeks | Recommended Year Group (UK schools) | Age of Children |
|----------------------|--------------------------|-------------------------------------|-----------------|
| Level 1 | 36 | Nursery/Preschool | 3-4 years |
| Level 2 | 7 | Reception | 4-5 years |
| Level 3 | 12 | Reception | 4-5 years |
| Level 4 | 5 | Reception | 4-5 years |
| Level 5 | 30 | Year 1 | 5-6 years |
| Level 6 | 30 | Year 2 | 6-7 years |

Level 1 continues to be taught alongside the other levels.

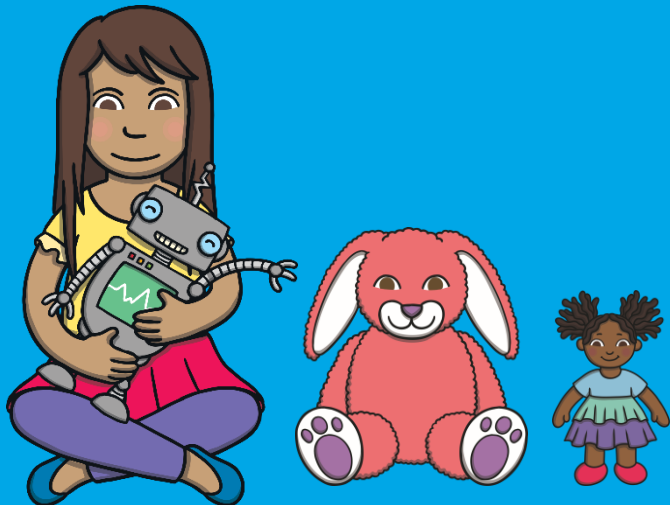
This is just an overview. We understand that every child progresses at their own pace.

Level 1



Level 1 is taught in Nursery/Preschool.

By the end of Level 1, children will have had the opportunities to:



○ listen attentively;

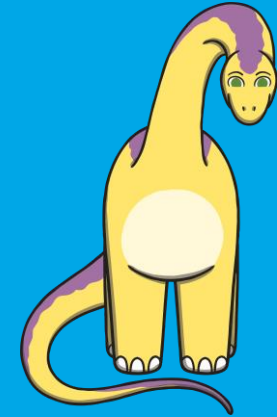
○ enlarge their vocabulary;

○ speak confidently to adults and other children;

○ discriminate different sounds including phonemes;

○ reproduce audibly the phonemes they hear in words;

○ orally segment words into phonemes.



These learning opportunities are presented through 7 Aspects.

What Are the 7 Aspects of Level 1?

Aspect 1: Environmental Sounds

- ✓ Develop listening skills and awareness of sounds in the environment
- ✓ Identify and remember the differences between sounds
- ✓ Talk about sounds in greater detail

Aspect 2: Instrumental Sounds

- ✓ Develop awareness of sounds made with instruments
- ✓ Listen to and appreciate the differences between sounds made with instruments
- ✓ Use a wide vocabulary to talk about instrument sounds

Aspect 3: Body Percussion

- ✓ Develop awareness of sounds and rhythms
- ✓ Distinguish between sounds and remember patterns of sound
- ✓ Talk about sounds we make with our bodies and what the sounds mean

Aspect 4: Rhythm and Rhyme

- ✓ Experience and appreciate rhythm and rhyme and develop awareness of rhythm and rhyme in speech
- ✓ Increase awareness of words that rhyme and develop knowledge about rhyme
- ✓ Talk about words that rhyme and produce rhyming words greater detail

Aspect 5: Alliteration

- ✓ Develop understanding of alliteration
- ✓ Listen to sounds at the beginning of words and hear the differences between them
- ✓ Explore how different sounds are articulated

Aspect 6: Voice Sounds

- ✓ Distinguish between the differences in vocal sounds
- ✓ Explore speech sounds
- ✓ Talk about the different sounds that we can make with our voices

Aspect 7: Oral Blending & Segmenting

- ✓ Develop oral blending and segmenting of sounds in words
- ✓ Listen to sounds within words and remember them in the order in which they occur
- ✓ Talk about the different sounds that make up words



Level 2



Level 2 is taught in Reception.

By the end of Level 2, children will have had the opportunities to:

Level 2 Coverage

In Level 2, children will learn the first 24 GPCs (19 letters, 4 digraphs and an alternative pronunciation) and the first 5 tricky words for reading.

| Teaching Week | GPCs | Tricky Words for Reading |
|---------------|-----------------------------|--------------------------|
| 1 | s a t p | |
| 2 | i n m d | |
| 3 | g o c k | |
| 4 | ck e ur | to, the |
| 5 | h, b, f, l | no, go, l |
| 6 | ff, ll, ss, 's' saying /z/ | all level 2 tricky words |
| 7 | Recap of all Level 2 sounds | all level 2 tricky words |



- identify the phoneme when shown any Level 2 grapheme;
- identify any Level 2 grapheme when they hear the phoneme;
- orally blend and segment CVC words such as, 'sat' and 'pat';
- blend sounds to read VC words such as, 'if', 'am', 'on' and 'up';
- segment VC words into their sounds to spell them (using magnetic letters);
- read the tricky words (words that cannot be sounded out): the, to, l, no, go.



Level 2 Actions and Mnemonics

| | | | | | |
|---|---|--|--|--|---|
| <p>s</p>  <p>Make a snake's head with your hands and wiggle your body like a snake!</p> | <p>a</p>  <p>Pretend to bite into a crunchy apple.</p> | <p>t</p>  <p>Pretend to stir a teaspoon around a teacup.</p> | <p>p</p>  <p>Make one hand into a puppy's head and pat it with your other hand.</p> | <p>i</p>  <p>Flap your hands like an insect's wings.</p> | <p>n</p>  <p>Make your fist into a nut and tap it.</p> |
| <p>m</p>  <p>Yummy! Rub your tummy.</p> | <p>d</p>  <p>Pretend to play your drum kit.</p> | <p>g</p>  <p>Pretend to wrap your scarf like Gabi.</p> | <p>o</p>  <p>Pretend to squeeze a juicy orange.</p> | <p>c</p>  <p>Wiggle your finger like a caterpillar.</p> | <p>k</p>  <p>Pretend to spread your hand like a kite and fly it in the air.</p> |
| <p>ck</p>  <p>Make a duck's beak with your hands and pretend to pick up sticks.</p> | <p>e</p>  <p>Make an egg with one hand and tap it with the other.</p> | <p>u</p>  <p>Make one hand into an umbrella and sprinkle rain on it.</p> | <p>r</p>  <p>Move your arms like a robot.</p> | <p>h</p>  <p>Pretend to open the door of the house.</p> | <p>b</p>  <p>Pretend to throw and catch a ball.</p> |
| <p>f</p>  <p>Pretend to wave a magic wand.</p> | <p>l</p>  <p>Pretend to lick an ice lolly.</p> | <p>ff</p>  <p>Pretend to switch off the light.</p> | <p>ll</p>  <p>Pretend to ring a bell.</p> | <p>ss</p>  <p>Blow a kiss.</p> | |

Every sound has a corresponding action and mnemonic which helps children to remember them. You can support your child by modelling the same sounds and actions at home.

Level 3



Level 3 is taught in Reception.

By the end of Level 3, children will have had the opportunities to:

Level 3 Coverage

In Level 3, children continue to learn 28 new GPCs (6 letters, 17 digraphs, 3 trigraphs and 2 alternative pronunciations) and 12 tricky words for reading. They also learn the spelling of the Level 2 tricky words.

| Teaching Week | GPCs | Tricky Words for Reading | Tricky Words for Spelling |
|---------------|-------------------------------------|--------------------------|---------------------------|
| 1 | j, v, w, x | all level 2 tricky words | |
| 2 | y, z, zz, qu, ch | he, she | the, to |
| 3 | sh, th, th, ng | we, me, be | |
| 4 | ai, ee, igh, oa | was | no, go, l |
| 5 | oo, oo, ar, or | my | |
| 6 | ur, ow, oi, ear | you | |
| 7 | air, ure, er | they | |
| 8 | all level 3 GPCs | here | |
| 9 | all level 3 GPCs | all, are | |
| 10 | trigraphs and consonant digraphs | was, my (recap) | |
| 11 | recap j, v, w, x and vowel digraphs | we, they (recap) | |
| 12 | all level 3 GPCs | all level 3 tricky words | the, to, no, go, l |

- say the phoneme when shown all or most Level 2 and Level 3 graphemes;
- find all or most Level 2 and Level 3 graphemes, from a display, when given the phoneme;
- blend and read CVC words (single-syllable words consisting of Level 2 and Level 3 graphemes) such as 'chop' and 'night';
- segment and make phonetically plausible attempts at spelling CVC words (single-syllable words consisting of Level 2 and Level 3 graphemes) such as 'paid' and 'seed';
- read the tricky words - he, she, we, me, be, was, my, you, her, they, all, are & spell the tricky words - the, to, l, no, go;
- write each letter correctly when following a model.



Level 3 Actions and Mnemonics

| | | | | | |
|---|---|--|---|---|--|
| <p>j</p>  <p>Sweep your hand up like a jumbo jet taking off.</p> | <p>v</p>  <p>Draw a v shape on your chest to show the V-neck of the vest.</p> | <p>w</p>  <p>Make waves with your hand.</p> | <p>x</p>  <p>Hold one hand like a map and draw an x on it.</p> | <p>y</p>  <p>Pretend to raise and lower a yoyo.</p> | <p>z</p>  <p>Draw the zigzag path in the air.</p> |
| <p>qu</p>  <p>Give a royal wave.</p> | <p>ch</p>  <p>Use your thumb and forefinger to make a chick's beak.</p> | <p>sh</p>  <p>Put a finger to your lips.</p> | <p>th</p>  <p>Put your forefingers on your head and wiggle your moth's feelers.</p> | <p>th</p>  <p>Stroke your hand on your cheek like a soft feather.</p> | <p>ng</p>  <p>Tap your ring finger.</p> |
| <p>ai</p>  <p>Draw a spiral snail's shell.</p> | <p>ee</p>  <p>Make mouse whiskers.</p> | <p>igh</p>  <p>Hold one arm across your body as if holding a shield and pat it with your other hand.</p> | <p>oa</p>  <p>Pretend to row your boat.</p> | <p>oo</p>  <p>Point at the moon.</p> | <p>oo</p>  <p>Pretend to open a book.</p> |
| <p>ar</p>  <p>Make twinkly star fingers.</p> | <p>or</p>  <p>Pretend to press a car horn.</p> | <p>ur</p>  <p>Pretend to open a purse.</p> | <p>ow</p>  <p>Pretend to squeeze the squirty flower on your coat.</p> | <p>oi</p>  <p>Flick your thumb as if tossing a coin.</p> | <p>ear</p>  <p>Cup your hand around your ear.</p> |
| <p>air</p>  <p>Hold a chair, move it in and out from a desk.</p> | <p>ure</p>  <p>Swing your arm like a pirate.</p> | <p>er</p>  <p>Pretend to sneeze!</p> | | | |

It is really important that children learn to form the letters using the correct letter formation when writing. As they are introduced to a new sound, children are taught how to write it correctly. It would be great if you could also model this at home.

Level 4



Level 4 is taught in Reception.

By the end of Level 4, children will have had the opportunities to:

- give the phoneme when shown any Level 2 or Level 3 grapheme;
- find any Level 2 or Level 3 grapheme when given the phoneme;
- blend and read words containing adjacent consonants as well as segment and spell words containing adjacent consonants, such as 'sand', 'bench' and 'flight';
- read the tricky words - some, one, said, come, do, so, were, when, have, there, out, like, little, what & spell the tricky words - he, she, we, me, be, was, my, you, here, they, all, are;
- write each letter, usually using the correct formation;
- orally segment words into phonemes.

Level 4 Coverage

In Level 4, children are introduced to adjacent consonants, 14 new tricky words for reading and the Level 3 tricky words for spelling.

| Teaching Week | GPCs | Tricky Words for Reading | Tricky Words for Spelling |
|---------------|----------------------------------|--------------------------|---------------------------|
| 1 | CVCC Words | said, so | he, be, we, she, me |
| 2 | CVCC Words | have, like, come, some | was, you |
| 3 | Adjacent Consonants | were, there, little, one | they, are, all |
| 4 | Adjacent Consonants | do, when, out, what | my, here |
| 5 | three-letter adjacent consonants | all level 4 words | all level 4 words |

Use Level 4 to consolidate Level 3 sounds, especially recognising and using digraphs and trigraphs.

No new sounds are taught in Level 4.

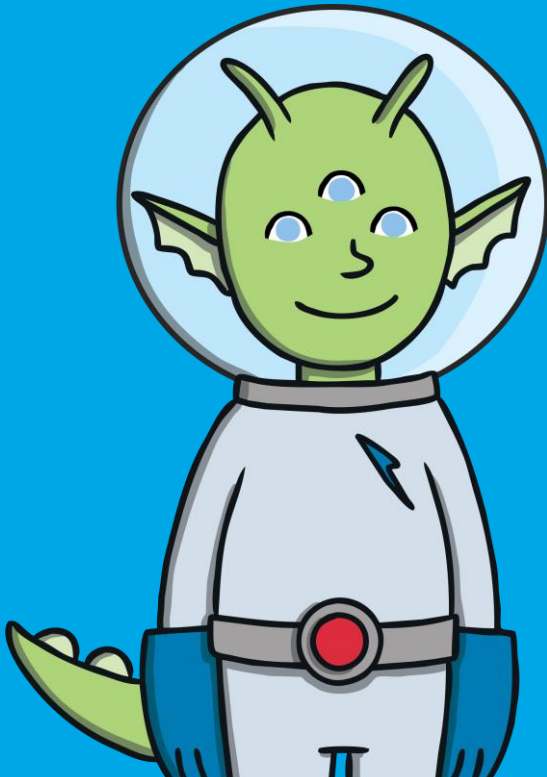


Level 5










Level 5 is taught in Year 1.

By the end of Level 5, children will have had the opportunities to:



- give the phoneme, when shown any grapheme that has been taught;
- for any given phoneme, write the common graphemes;
- apply phonics knowledge and skills as the primary approach to reading and spelling unfamiliar words that are not completely decodable;
- read and spell phonically decodable two-syllable and three-syllable words such as 'dolphin' and 'parachute';
- read automatically all taught tricky and common exception words;
- accurately spell all the Level 2, 3 and 4 tricky words and most of the common exception words for reading;
- form each letter correctly;
- use alternative ways of pronouncing and representing the long vowel phonemes.

Level 5 Mnemonics

| | | | | | | | |
|--|--|---|---|---|--|--|---|
| ay  pray | oy  boy | ie  tie | ea  leaf | a_e  cake | i_e  slide | o_e  bone | u_e  cube |
| u_e  flute | e_e  trapeze | ou  mouth | a  acorn | e  equal | i  lion | o  hotel | u  unicorn |
| ch  chef | ch  Christmas | ir  girl | ue  statue | ue  glue | y  sunny | aw  saw | au  autumn |
| ow  window | oe  toe | wh  wheel | c  city | g  gem | ph  dolphin | ea  bread | ie  shield |
| tch  witch | are  bare | ear  pear | ore  core | ew  screw | ew  stew | | |

The new sound is displayed within a word linked to the mnemonic for Level 5.



Level 5 Overview

| Teaching Week | GPCs | Common Exception Words for Reading | Common Exception Words for Spelling | Teaching Week | GPCs | Common Exception Words for Reading | Common Exception Words for Spelling |
|---------------|--|------------------------------------|-------------------------------------|---------------|----------------------------------|------------------------------------|-------------------------------------|
| 1 | 'ay' saying /ai/ | could should | said so | 16 | 'ow'/'oe' saying /oa/ | once, please | thought through |
| 2 | 'oy' saying /oi/ | would want | have like | 17 | 'wh' saying /w/ | live, coming | work house |
| 3 | 'ie' saying /igh/ | oh their | some come | 18 | 'c' saying /s/ 'g' saying /j/ | Monday, Tuesday | many laughed |
| 4 | 'ea' saying /ee/ | Mr Mrs | were there | 19 | 'ph' saying /f/ | Wednesday, brother | because different |
| 5 | 'a_e' saying /ai/ | love your | little one | 20 | 'ea' saying /e/ | more, before | any eye |
| 6 | 'i_e' saying /igh/ 'o_e' saying /oa/ | people looked | do when | 21 | 'ie' saying /ee/ | January, February | friend also |
| 7 | 'u_e' saying (y) /oo/ and /oo/ 'e_e' saying /ee/ | called asked | what could | 22 | adding -ed (root word unchanged) | April, July | once please |
| 8 | 'ou' saying /ow/ | water where | should would | 23 | adding -s and -es | scissors, castle | live coming |
| 9 | Long Vowel Sounds | who why | want their | 24 | adding -er and est (adj) | beautiful, treasure | Monday Tuesday |
| 10 | 'ch' saying /c/ 'ch' saying /sh/ | thought through | Mr Mrs | 25 | 'tch' saying /ch/ | door, floor | Wednesday brother |
| 11 | 'ir' saying /ur/ | work house | love your | 26 | adding -ing and -er (verbs) | bought, favourite | more before |
| 12 | 'ue' saying (y) /oo/ and /oo/ | many laughed | people looked | 27 | 'are'/'ear' saying /air/ | autumn, gone | January February |
| 13 | 'ew' saying (y) /oo/ and /oo/ | because different | asked called | 28 | 've' saying /v/ | know, colour | April July |
| 14 | 'y' saying /ee/ | any eye | water where | 29 | 'ore' saying /or/ | other, does | scissors castle |
| 15 | 'aw'/'au' saying /or/ | friend also | who why | 30 | adding un- | talk, two | beautiful treasure |



Level 6



Level 6 is taught in Year 2.

By the end of Level 6, children will have had the opportunities to:

At this stage, children can read hundreds of words automatically. They are now reading for pleasure and reading to learn rather than learning to read.




- read accurately most words of two or more syllables;
- read most words containing common suffixes;
- read most common exception words;
- read most words accurately, in age-appropriate books, without overt sounding and blending, fluent enough to allow them to focus on their understanding rather than on decoding individual words;
- sound out most unfamiliar words accurately, without undue hesitation;
- segment spoken words into phonemes and represent these by graphemes, spelling many of these words correctly and making phonetically plausible attempts at others;
- spell most common exception words correctly.

Level 6 Overview

| Teaching Week | Spelling Pattern | Common Exception Words for Spelling | Grammar Focus | Teaching Week | Spelling Pattern | Common Exception Words for Spelling | Grammar Focus |
|---------------|-------------------------------------|-------------------------------------|---|---------------|--|-------------------------------------|--|
| 1 | 'y' saying /igh/ | door, floor | Capital Letters and Full Stops | 16 | 'mb' saying /m/ | famous, shoe | Using a Dictionary 1 - Finding Definitions |
| 2 | 'dge' saying /j/ 'ge' saying /j/ | bought, favourite | Proper Nouns (Names) | 17 | 'al' saying /or/ | pretty, neighbour | Coordinating Conjunctions |
| 3 | -es to words ending in y | autumn gone | Plural nouns | 18 | -ing, -ed to CVC, CCVC words | England, tongue | Irregular Past Tense |
| 4 | 'gn' saying /n/ | know colour | Alphabetical Order (1) - First/Second Letter | 19 | 'o' saying /u/ | group, country | Exciting Words (1) - alt words for said |
| 5 | 'kn' saying /n/ | other does | Alphabetical Order (2) - Second/ Subsequent Letters | 20 | 'ey' saying /ee/ | heart, dangerous | Exclamation Marks (to show emotion/shouting) |
| 6 | -ed, -ing to words ending in y | talk two | Verbs | 21 | -er, -est, -y to CVC, CVCC words | special, enough | Improving Sentences (1) Adjectives and Nouns |
| 7 | 'wr' saying /r/ | four, eight | Adverbs | 22 | contractions | aunt, father | Contractions |
| 8 | -le | world work | Common Nouns (Revision) | 23 | 'war' saying /wor/ 'wor' saying /wur/ | prove, improve | Subordinating Conjunctions |
| 9 | -er, -est to words ending in y | poor, great | Adjectives and Expanded Noun Phrases | 24 | suffixes -ment, -ness | hour, move | Improving Sentences (2) - Verbs and adverbs |
| 10 | -el | break, steak | Commas in Lists | 25 | 's' saying /zh/ | sure, sugar | Exciting Words (2) Using a Thesaurus |
| 11 | -al, -il | busy, clothes | Capital letters for place names | 26 | 'wa' saying /wo/ 'qua' saying /quo/ | half, quarter | Possessive Apostrophe |
| 12 | -ed, -er to words ending in e | whole, listen | Regular Past Tense | 27 | tion | straight, touch | Improving Sentences (2) - when, if, because |
| 13 | 'eer' saying /ear/ | build, earth | Regular Present Tense | 28 | suffixes -ful, -less, -ly | caught, daughter | Speech Marks |
| 14 | ture | delicious, fruit | Question Marks and Commands | 29 | homophones/near homophones | journey, area | Commas in Speech |
| 15 | -est, -y to words ending in e | learn, search | Exclamations and Statements | 30 | prefix dis- | heard, early | Using a Dictionary 2 - Checking Spellings |



Level 6 Mnemonics

| | | | | |
|--|---|--|---|---|
| <p>y</p>  <p><u>fly</u></p> | <p>dge</p>  <p><u>bridge</u></p> | <p>ge</p>  <p><u>fringe</u></p> | <p>gn</p>  <p><u>gnome</u></p> | <p>kn</p>  <p><u>knife</u></p> |
| <p>wr</p>  <p><u>wrist</u></p> | <p>le</p>  <p><u>table</u></p> | <p>eer</p>  <p><u>deer</u></p> | <p>ture</p>  <p><u>picture</u></p> | <p>mb</p>  <p><u>thumb</u></p> |
| <p>al</p>  <p><u>walk</u></p> | <p>a</p>  <p><u>walnut</u></p> | <p>o</p>  <p><u>glove</u></p> | <p>ey</p>  <p><u>monkey</u></p> | <p>war</p>  <p><u>warm</u></p> |
| <p>wor</p>  <p><u>world</u></p> | <p>s</p>  <p><u>treasure</u></p> | <p>wa</p>  <p><u>watch</u></p> | <p>qua</p>  <p><u>squash</u></p> | <p>tion</p>  <p><u>station</u></p> |



Oxford **OWL**



How to pronounce
pure sounds

Consonant Vowel Consonant Words



Year 1 Phonics Screening Check

In June, all year 1 children are expected to complete the Year 1 Phonics Screening Check.

The aim is to check that a child is making progress in phonics. They are expected to read a mixture of real words and 'nonsense' words. (Nonsense words can also be referred to as 'pseudo' or 'alien' words)

For more information why not take a look at the [Twinkl Phonics Year 1 Screening Check Guide for Parents](#)

If a child has not reached the expected standard, schools must give additional support to help the child to make progress in year 2.

Children who have not passed the check in year 1 will have the opportunity to retake it in year 2.



How You Can Help Your Child at Home

Work on listening skills, taking turns and encouraging your child to look at you when you are speaking.

Practise segmenting and blending words.

Look for familiar sounds and words in the world around you. Such as, when in the supermarket, can your child find words on your shopping list or recognise letters on food packaging?

When outside, can they recognise letters on street names or on car number plates?

When in the house, can they recognise letters or words in magazines or letters you receive?



How You Can Help Your Child at Home

Practise the new sounds and graphemes your child brings home using the Parent Information Sheets. Remember to use 'pure' sounds when pronouncing the sounds and model the correct letter formation as is taught in school.

Support your child to complete any homework they bring home.

Read to and with your child **every day**.

Finally, remember to ask your child's class teacher if you are unsure about any aspect of your child's phonics learning. A consistent approach is important.

This week, we have been learning to read and spell words containing **dge** and **ge** saying /j/.



Level 6

The /j/ Sound Family

dge This spelling is used when the /j/ sound comes at the end of a word and after a short vowel sound. (Short vowels are spoken as a pure sound).

badge
bridge

ge This spelling is used when the /j/ sound comes at the end of a word and after a long vowel sound, a vowel digraph or a consonant. (Long vowels are spoken like letter names.)

huge
barge
orange
challenge

g This spelling is sometimes used when the /j/ sound is followed by e, i or y.

gem
gymnast
giant

j This spelling is used when the /j/ sound is at the start or in the middle of words.

jump
jelly
injury



BUILDING BLOCKS OF SUCCESSFUL READING

Any Questions?





Effective Phonics, Done Simply