

SPS ENGLISH SPINE – YEAR 4

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
MAIN FOCUS	HISTORY <i>How have children's lives changed?</i>	GEOGRAPHY <i>Water</i>	HISTORY (BH3) <i>How hard was it to invade and settle in Britain?</i>	GEOGRAPHY <i>Rainforests</i>	HISTORY <i>How did the achievements of the Ancient Maya impact their society & beyond?</i>	GEOGRAPHY <i>The UK</i>
BIG QUESTION	<i>In the past, was it fair to make children work?</i>	<i>How old is the water we drink?</i>	<i>Why did people want to invade Britain?</i>	<i>How can we protect the rainforests?</i>	<i>Did the Maya really build big cities?</i>	<i>Should migration be allowed?</i>
TOPIC	END OF AN ERA	WATER, WATER EVERYWHERE	SAXON SETTLERS	ENDANGERED	OH MAYA GOODNESS	FEELS LIKE HOME
CORE TEXT	Oliver Twist by Charles Dickens (Usborne Young Reading)	Oliver and the Seawigs by Phillip Reeves	Anglo-Saxon Boy by Tony Bradman	The Great Kapok Tree by Lynne Cherry	Rain Player by David Wisniewski	The boy at the back of the class by Onjali Q. Rauf
EXTRA TEXTS	Fagin's Girl Hetty Feather	A River Flotsam	Beowulf	There's a rang-tan in my bedroom The Explorer	What was it like to be an Ancient Maya?	The Arrival My name is not refugee
WRITING PURPOSE & TASKS	WRITING EXPECTATIONS (FIRST WEEK)	WRITING TO INFORM <i>Non-Chronological Report - Sea Creatures</i> <i>GS PVPG MODEL TEXT – Weird creatures of the deep</i> GS UNIT GUIDE (Extinct animals) <i>Use this as a basis for the lesson foci but change the theme to 'sea creatures'..</i>	WRITING TO ENTERTAIN <i>Recount – Magnus' Diary</i> <i>GS MODEL TEXT – Battle with Boudicca</i> GS UNIT GUIDE (Charlie & The Chocolate Factory) <i>Use this as a basis for the lesson foci but change the theme to 'Anglo-Saxon Boy'..</i>	WRITING TO PERSUADE <i>Persuasive Letter – Save the Kapok Tree</i> <i>GS MODEL TEXT – The Great Kapok Tree</i> GS UNIT GUIDE (Save Our Beautiful Bees) <i>Use this as a basis for the lesson foci but change the theme to 'Great Kapok Tree'.</i>	WRITING TO EXPLAIN <i>Explanation - How chocolate is made</i> <i>GS MODEL TEXT – How Chocolate Is Made</i> GS UNIT GUIDE (How Do Bees Make Honey?) <i>Use this as a basis for the lesson foci but change the theme to 'Great Kapok Tree'.</i>	WRITING TO ENTERTAIN <i>Diary Entry – First day at school</i> <i>GS MODEL TEXT- New Boy At School</i> GS UNIT GUIDE (Charlie and the Chocolate Factory) <i>Use this as a basis for the lesson foci but change the theme to 'refugee'.</i>
	PVPG LESSONS	POETRY <i>Kenning Poems (Free theme)</i>	WRITING TO INFORM <i>Instructions – How to raid a village</i> <i>GS MODEL TEXT – How To Raid An Anglo-Saxon Village</i> GS UNIT GUIDE (How To Raid An Anglo-Saxon Village) <i>Follow Whole Unit Guide</i>	POETRY <i>Tetractys (Rainforests)</i>	WRITING TO ENTERTAIN <i>Narrative – Hero Twins Story</i> <i>GS MODEL TEXT – Hero Twins</i>	POETRY <i>Clerihews / Rhyming Couplets (People)</i>
Wider Curriculum Writing Possibilities	Diary Entry for Oliver Twist (History) Description of vertebrate animals (Science)	Explain how the Water Cycle works (Geography) Evaluate Anglo-Saxon purse (DT)	Explain how an electrical circuit works (Science) Diary entry for a child during Passover (RE)	Describe the layers of the Rainforest (Geography) Report on a Rainforest animal (Geography)	Instructions for leading a good life (RE) Explain how a food chain works (Science)	Writing aspirations for the future (PSHE) Arguments for/against migration (Geography)

SPS WRITING PROGRESSION – YEAR 4

NC 2014 PROGRESSION

Y4	Transcription	Handwriting	Composition	Vocabulary, Grammar & Punctuation
	<ul style="list-style-type: none"> ▪ Use further prefixes and suffixes and understand how to add them: <ul style="list-style-type: none"> - prefixes: <i>anti-, inter-</i> to form nouns - prefixes: <i>in-, im-, ir-, il-</i> to form antonyms - prefixes: <i>un-, dis-, mis-, ex-, non-</i> - suffixes: <i>-ing, -er, -en, -ed</i> - suffix <i>-ly</i> ▪ Spell further homophones ▪ Spell words that are often misspelt: <ul style="list-style-type: none"> - 'gu' words, <i>-sure, -ture, -cian, -sion, -ssion, -tion, 'sc' words, -ous</i> - plural nouns ending in 'o' - plural nouns ending in 'y': change 'y' to 'i' and add 'es' - verbs ending in 'y': change 'y' to 'i' and add 'es' ▪ Place possessive apostrophe accurately in words with regular plurals e.g. <i>girls' boys'</i> and in words with irregular plurals e.g. <i>children's</i> ▪ Use apostrophe correctly for further contracted forms ▪ Use the first 2 or 3 letters of a word to check its spelling in a dictionary ▪ Create word families based on common words: e.g. <i>sign ~ signal ~ unsigned ~ assign ~ resign ~ design</i> ▪ Apply rules from Spelling Progression – Y4 ▪ Write from memory simple sentences dictated by the teacher 	<ul style="list-style-type: none"> ▪ Confidently use diagonal and horizontal strokes to join letters and understand which letters, when adjacent to one another, are best left unjoined ▪ Increase the legibility, consistency and quality of their handwriting: ▪ Ensure that the downstrokes of letters are parallel and equidistant 	<ul style="list-style-type: none"> ▪ Discuss writing similar to that which they are planning to write in order to understand and learn from its structure, vocabulary and grammar ▪ Discuss and record ideas ▪ Compose and rehearse sentences orally progressively building a varied and rich vocabulary and an increasing range of sentence structures ▪ Organise paragraphs around a theme. ▪ Create settings, characters and plot ▪ Use simple organisational devices e.g. <i>headings and sub-headings</i> ▪ Assess the effectiveness of their own and others' writing and suggest improvements ▪ Propose changes to grammar and vocabulary to improve consistency, including the accurate use of pronouns in sentences ▪ Proofread for spelling and punctuation errors ▪ Read writing aloud, to a group or the whole class, using appropriate intonation and controlling the tone and volume so that the meaning is clear ▪ Awareness of 'The Reader' and adapt writing accordingly 	<ul style="list-style-type: none"> ▪ Punctuation: <ul style="list-style-type: none"> ○ full stops ○ capital letters (titles and languages) ○ exclamation marks ○ question marks ○ commas for lists ○ apostrophes for contracted forms and singular possession. ○ inverted commas for direct speech ▪ Correct use of 'a' or 'an' according to whether the next word begins with a consonant or vowel e.g. <i>a rock, an umbrella</i> ▪ Extend the range of sentences with more than one clause by using a wider range of conjunctions, including 'when', 'if', 'because', 'although'. ▪ Use the present perfect form of verbs in contrast to the past tense e.g. <i>He has gone out to play contrasted with He went out to play.</i> ▪ Choose nouns or pronouns appropriately for clarity and cohesion and to avoid repetition. ▪ Express time, place and cause using: <ul style="list-style-type: none"> - conjunctions: as, since, unless, however, even though - adverbs: here, therefore, frequently, everywhere - prepositions: underneath, against, atop, from, towards ▪ Use fronted adverbials + comma

SPS PROGRESSION

Y4	Sentence Structure	Vocabulary	Sentence Openers	Building Cohesion	Verb Tense
	<p>Simple & Compound:</p> <ul style="list-style-type: none"> ▪ Vary long and short sentences for effect. <p>Complex:</p> <ul style="list-style-type: none"> ▪ Use a range of subordinating conjunctions to join sentences. <p>Phrases/Clauses:</p> <ul style="list-style-type: none"> ▪ Use adverbial phrases, noun phrases and prepositional phrases ▪ Use a drop-in clause with an '-ing' verb e.g. <i>Tom, smiling secretly, hid the magic potion book</i> <p>Adding detail:</p> <ul style="list-style-type: none"> ▪ Use expanded noun phrases: <ul style="list-style-type: none"> - determiner + adjective + noun + phrase e.g. <i>the strict teacher with the grey beard.</i> ▪ Use prepositions and prepositional phrases e.g. <i>underneath, against, atop, from, towards, across</i> ▪ Use adjectives ending in -ed e.g. <i>frightened, scared etc</i> ▪ Use a sentence that gives three actions e.g. <i>Tom slammed the door, threw his books on the floor and slumped to the ground.</i> ▪ Use specific determiners: their, whose, this, that, these, those, which ▪ Use a mixture of nouns and pronouns to avoid repetition e.g. <i>John, Mr Price, he, his, him ~ The labyrinth, the maze, it, its</i> ▪ Know that a preposition requires an object and an adverb does not. <p>Exciting sentences:</p> <ul style="list-style-type: none"> ▪ Verb, person ~ The more..., the more... ~ 2 pairs ~ Ad, same Ad 	<ul style="list-style-type: none"> ▪ Use sophisticated language ▪ e.g. <i>abundant, menacingly</i> ▪ Use of further specific/technical vocabulary to add detail e.g. <i>variety, species, feline</i> ▪ Use synonyms and antonyms of verbs e.g. <i>said ~ announced ~ whispered and walk ~ trudged ~ galloped</i> ▪ Tier 2 Vocabulary – Y4 	<ul style="list-style-type: none"> ▪ Use conjunctions e.g. <i>Although it was raining heavily, they still went to play in the park.</i> ▪ Use fronted adverbials followed by a comma: <ul style="list-style-type: none"> - Prepositions e.g. <i>Behind the shed, the spider was silently waiting for his prey</i> - '-ing' words e.g. <i>Worrying about his mum, Tom slowly walked to school.</i> <p style="text-align: center;">SPACE</p>	<p>Coordinating:</p> <ul style="list-style-type: none"> ▪ and, but, or, so, for, nor, yet (FANBOYS) <p>Subordinating:</p> <ul style="list-style-type: none"> ▪ after, although, as, while, when, until, because, before, if, since (A WHITE BUS) <p>Correlative:</p> <ul style="list-style-type: none"> ▪ both ... and <p>Adverbials of time:</p> <ul style="list-style-type: none"> ▪ e.g. already, meanwhile, once 	<p>Present perfect</p> <ul style="list-style-type: none"> ▪ 'has/have' + past participle ▪ To show something happens at an unspecified time e.g. <i>He has walked to school (every day this week)</i> <p>Past perfect</p> <ul style="list-style-type: none"> ▪ 'had' + past participle + -ing ▪ To show something happened at an unspecified time e.g. <i>He had been walking to school</i> <p>Modal verbs</p> <ul style="list-style-type: none"> ▪ Used for possibility, ability and permission: <ul style="list-style-type: none"> - can, can't - could, couldn't - may, might, might not ▪ Used for advice: <ul style="list-style-type: none"> - should, shouldn't

SPS READING PROGRESSION – Y4

SPS ENGLISH SPINE	BOOK	FORMAT	DATE WRITTEN	GENRE	PAGES
	Oliver Twist	Hardback – Chapter Book	19 th Century	Classic - Adventure	64
	Oliver And The Seawigs	Paperback – Chapter Book	2013	Humour	208
	Anglo-Saxon Boy	Paperback – Chapter Book	2017	Historical - Adventure	240
	The Great Kapok Tree	Paperback – Picture Book	2000	Cultural	40
	Rain Player	Paperback- Picture Book	1991	Historical – Myth	32
	The Boy At The Back Of The Class	Paperback – Chapter Book	2018	Adventure – Asylum	256
Poetry Types: Kennings, Tetractys and Diamond, Clerihews					

WORD READING:

Y4	Phonics & Decoding	Common Exception Words	Fluency
NC 2014	<ul style="list-style-type: none"> Read most words fluently and attempt to decode any unfamiliar words with increasing speed and skill Apply growing knowledge of root words and prefixes both to read aloud and understand the meaning of new words they meet: <i>in-, -im-, -ir-, il-, un-, dis-, mis-, ex-, non-, anti-, inter-</i> Apply growing knowledge of root words and suffixes/word endings both to read aloud and understand the meaning of new words they meet: <i>-ing, -er, -en, -ed, -ly, -ation, -ous, -sure, -ture, -sion, -ssion, -tion, -cian</i> 	<ul style="list-style-type: none"> Accurately read the words on the NC Y3/4 word list: <i>accident(ally), actual(ly), address, answer, believe, bicycle, build, calendar, caught, centre, consider, continue, eight, eighth, enough, exercise, experience, experiment, favourite, guard, guide, height, imagine, increase, island, knowledge, library, material, medicine, mention, naughty, occasion(ally), ordinary, particular, peculiar, position, possess(ion), probably, quarter, regular, reign, remember, separate, strength, suppose, though, although, thought, through, various, weight</i> 	<ul style="list-style-type: none"> Read age-appropriate (Lime) texts at 90+ words per minute Begin to use appropriate intonation and volume when reading aloud Reading Level(s): Book Bands – Lime, Brown <p><i>Fluency is developed using echo reading, cloze reading, paired reading</i></p>

COMPREHENSION:

Y4	Pleasure ~ Performance	Retrieval ~ Fluency	Words: Meaning ~ Choices	Infer ~ Interpret ~ Predict	Sequence ~ Summarise	Respond ~ Explain
NC 2014	<ul style="list-style-type: none"> Listen to and discuss a wide range of fiction, poetry, plays, non-fiction and reference books or textbooks Reading books that are structured in different ways and reading for a range of purposes Increase familiarity with a wide range of books and retell some of these orally Prepare poems and play scripts to read aloud and to perform, showing understanding through intonation, tone, volume and action Recognise different forms of poetry 	<ul style="list-style-type: none"> Check that the text makes sense to them, discussing their understanding Ask questions to improve their understanding of a text Retrieve and record information from non-fiction Participate in discussion about both books that are read to them and those they can read for themselves, taking turns and listening to what other say Confidently skim and scan texts to locate key words and phrases. Generate a variety of literal questions. 	<ul style="list-style-type: none"> Use dictionaries to check the meaning of word they have not read Discuss words and phrases that capture the reader's interest and imagination Explain the meaning of words in context Find the meaning of new words using the context of new sentences. Link new words to other words they already know. 	<ul style="list-style-type: none"> Draw inferences such as inferring character's feelings, thoughts and motives from their actions, and justifying inferences with evidence Predict what might happen from details stated and implied in the text Use relevant prior knowledge/details from the text to form inferences and predictions and justify them. Consolidate the skill of justifying predictions using a specific reference point in the text. Learn how to monitor predictions and compare them with the text as they read on. Generate a variety of inferential questions about the deeper meaning of a text. 	<ul style="list-style-type: none"> Identify main ideas drawn from more than one paragraph and summarise these Write a brief summary of the main points, identifying and using important information. 	<ul style="list-style-type: none"> Identify themes and conventions in a wide range of books Identify how language, structure and presentation contribute to meaning Refer to authorial style, overall themes and features Further develop the idea of story 'themes' e.g. <i>loneliness, friendship, family, fear,</i>

Y4 RESPONSES TO READING

Y4	Pleasure ~ Performance	Retrieval ~ Fluency	Words: Meaning ~ Choices	Infer ~ Interpret ~ Predict	Sequence ~ Summarise	Respond ~ Explain
QUESTION STEMS	<ul style="list-style-type: none"> ▪ What is your favourite book? ▪ Who is your favourite author? ▪ Which character would you most like to meet? Why? ▪ What would you say to ... if you met them? ▪ How does the structure of this book differ to the other books you have read? ▪ Why has the author chosen these chapter headings? ▪ Which words do you like best in this book? Why? 	<ul style="list-style-type: none"> ▪ Who had ...? ▪ Who did ...? ▪ What happened to ...? ▪ What does ... do? ▪ When was ...? ▪ When ... happened, what did ...? ▪ Where was ... when ...? ▪ How often ...? ▪ How ... is ...? ▪ Who are the key characters in the story? ▪ What is happening at this point in the story? ▪ Through whose eyes is the story told? ▪ Where in the book would you find ...? ▪ Where does the story take place? 	<ul style="list-style-type: none"> ▪ Can you find and highlight the word that is closest in meaning to ...? ▪ What is the meaning of the word ... in this sentence? ▪ Can you circle a word that means the same as ...? ▪ What other words could the author have used? ▪ Which word is a synonym / antonym of ...? ▪ What does this phrase ... mean? ▪ Which words give us the impression that the main character is ...? ▪ Which words give us the impression that the setting is ...? ▪ Which words give us the impression that the mood is ...? ▪ Why did the author use the word ... to describe ...? ▪ How do these words make the reader feel ...? 	<ul style="list-style-type: none"> ▪ Which words give you the impression that ...? ▪ How does this paragraph suggest ...? ▪ How do the descriptions of ... show ...? ▪ How can you tell that ...? ▪ How do you think ... feels about ...? ▪ What can you tell about ... from their appearance? ▪ Why do you think the author chose this setting? ▪ How does the front cover give us clues about the text? ▪ What does this paragraph suggest will happen next? What makes you think this? ▪ How do you think ... will react to this situation? ▪ What do we need to know in order to ...? ▪ What do you think is likely to happen when ...? 	<ul style="list-style-type: none"> ▪ What is the main point in this paragraph? ▪ Can you describe what has happened in this chapter? ▪ Can you describe what happened in three sentences? ▪ Is there anything you know now that you did not know before? ▪ What moment do you remember most from ...? ▪ Which of the following would be the most suitable summary of the whole text? ▪ Based on what you have read, what does the last paragraph suggest might happen next? 	<ul style="list-style-type: none"> ▪ The mood of the character changes throughout the text. Find and copy the phrases which show this. ▪ What is the theme underneath the story? Does this story have a moral / message? ▪ Which is the most important part of the story? Justify your choice. ▪ Compare how the characters are reacting to this problem. Who deals best with the situation? ▪ What does the author want you to feel after reading this story? ▪ What is the author's point of view? ▪ How does the author engage the reader? ▪ How has the author organised the text? Why? ▪ How does the structure of this text help us? ▪ In what ways do diagrams, photographs or illustrations help us to enjoy/understand the text
ANSWER STEMS	<ul style="list-style-type: none"> ▪ I would say ... ▪ My favourite ... is ... due to the fact that ... ▪ In my opinion ... ▪ This is my preferred choice as ... ▪ I would recommend ... to ... because ... 	<ul style="list-style-type: none"> ▪ The answer is ... ▪ This tells me ... ▪ It is important because ... ▪ The story is ... ▪ He/she is ... ▪ It was ... 	<ul style="list-style-type: none"> ▪ This word suggests that .. ▪ This word tells you that ... ▪ This sentence means ... ▪ This phrase means ... ▪ This description shows me that ... 	<ul style="list-style-type: none"> ▪ I think ... because ... ▪ This suggests ... ▪ I know this because ... ▪ I can tell that ... due to ... ▪ The impression I get is ... as it says ... ▪ In the text it says ... which makes me think ... ▪ The evidence suggests that ... 	<ul style="list-style-type: none"> ▪ In this text ... ▪ This text is about ... ▪ The main event is ... ▪ This story involves ... 	<ul style="list-style-type: none"> ▪ I believe that ... ▪ In my opinion ... ▪ Using evidence from the text, I would suggest that ... ▪ It would appear that ... ▪ The impression I get is ... because
POSSIBLE TASKS	<ul style="list-style-type: none"> ▪ Book Review ▪ Writing answers in thought bubbles ▪ Amazon book reviews ▪ Write a letter to the author ▪ Drawing favourite book cover 	<ul style="list-style-type: none"> ▪ Write 3 facts about a character / setting. ▪ Complete the table of facts / events ▪ Create / answer a 'True of False' grid about the book ▪ Write 5 quiz questions to ask someone about the book. ▪ Match the picture to the description 	<ul style="list-style-type: none"> ▪ Order the synonyms based on the strength of the emotion that the word evokes ▪ Substitute the highlighted words from the text with synonyms/antonyms ▪ Copy an adverb from the text and list actions that can be done in this way. ▪ Annotate a drawing from the story with words and phrases it depicts. 	<ul style="list-style-type: none"> ▪ Reader thought bubble showing how an event makes the reader feel ▪ Tick the choice of words to finish a character's sentence ▪ Write three alternative titles for the story - explain why you have chosen them. ▪ Complete a 'show not tell' grid for a character. ▪ Character feelings wheel. 	<ul style="list-style-type: none"> ▪ Multiple choice questions to select the main topic / theme / point of a paragraph. ▪ Number of boxes to write in to sum up a paragraph or whole story (e.g. 20 boxes = 20 words) ▪ Photograph template to record the moment remembered the most with reasons why 	<ul style="list-style-type: none"> ▪ List events of the story in pyramid from top to bottom (first choice to last choice) ▪ Scroll template to record what the moral or message of the story is ▪ Organisational features matching game. ▪ Annotate an example of the text type to show the organisational features.

SPS SPOKEN LANGUAGE PROGRESSION – YEAR 4

Y4	Listen & Respond	Question, Reason, Explain & Discuss	Develop Vocabulary	Performance, Presentation & Evaluation
Objectives	<ul style="list-style-type: none"> ▪ Listen to longer, more complex texts and identify key messages. ▪ Respond with informed comments, questions, and reflections. ▪ Infer meaning and recognise nuances or implied information. ▪ Participate confidently in discussions, expressing opinions and justifying ideas. ▪ Begin to evaluate the effectiveness of what they hear (e.g., clarity, persuasiveness). ▪ 	<ul style="list-style-type: none"> ▪ Ask questions that challenge or probe deeper understanding. ▪ Provide clear reasons to justify opinions or ideas. ▪ Explain ideas using evidence from texts, experiences, or observations. ▪ Discuss topics in groups, listening to and building on others' ideas. 	<ul style="list-style-type: none"> ▪ Use new vocabulary confidently across subjects. ▪ Understand figurative and idiomatic language. ▪ Explain the meaning of words using context. 	<ul style="list-style-type: none"> ▪ Present confidently to a larger group or class. ▪ Use tone, volume, expression, and body language effectively. ▪ Evaluate performances critically, giving reasons and suggestions. ▪ Begin to make connections between text, audience, and purpose.
Activity ideas	<ul style="list-style-type: none"> ▪ Listening to a persuasive speech or advertisement and evaluating its impact. ▪ Drama or role-play to explore characters' feelings or decisions. ▪ Group discussion: "Would you make the same choice? Why/why not?" ▪ Identifying facts vs opinions in spoken texts. 	<ul style="list-style-type: none"> ▪ Debate Preparation: Children ask questions about a topic, then form arguments with evidence. ▪ Cause & Effect Discussions: Discuss why events happened in a story or historical context. ▪ Role Play: Act out scenarios and discuss characters' choices with reasoning. ▪ Evidence Hunt: Listen or read a text, find evidence to support answers, then explain reasoning. 	<ul style="list-style-type: none"> ▪ Context Clues: Identify meaning of unfamiliar words in stories or non-fiction texts. ▪ Metaphor & Simile Hunt: Find examples in poetry or texts and explain them. ▪ Word Challenges: Encourage children to use a "Word of the Day" in writing or discussion. ▪ Debates & Discussions: Use precise vocabulary to justify opinions. 	<ul style="list-style-type: none"> ▪ Narrative Drama: Perform a short play, adapting language for the audience. ▪ Persuasive Presentations: Present an argument or viewpoint to the class. ▪ Scripted Poetry or Dialogue: Perform with expression and appropriate pacing. ▪ Evaluation Circles: Provide constructive, evidence-based feedback on performances.
Sentence Stems	<ul style="list-style-type: none"> ▪ "I think ... means that ..." ▪ "I believe ... because ..." ▪ "The speaker wants us to ..." ▪ "I would/would not ... because ..." 	<ul style="list-style-type: none"> ▪ "I believe ... because the text/example shows ..." ▪ "This is important because ..." ▪ "I wonder what would happen if ..." ▪ "Another perspective is ..." 	<ul style="list-style-type: none"> ▪ "I think ... means ... because ..." ▪ "This word shows ..." ▪ "I could also describe it as ..." ▪ "In this sentence, ... means ..." 	<ul style="list-style-type: none"> ▪ "I presented ... clearly by ..." ▪ "I used ... to show ..." ▪ "I liked ... because ..." ▪ "I could improve ... by ..."