Holy Trinity Church of England Academy
Termly Plan: Turrets Towers and Tunnels
Year Group: 2

Focus + Area of Curriculum e.g. Engage, Develop, Express Innovate	***Objectives***	***Activity and lesson outline***	***Differentiation***	***Resources/ Key Questions***	***Next Steps/ Necessary Skills***
Engage History	To be able to identify the different parts of a castle	Introduce the new topic – Turrets, Towers and Tunnels and explain that we are going to start by looking at a building that can have all of these things – castles. What were castles for? Identify that they were used to protect the people inside – what features can we see that help them to do this? Look at some examples of ways that castles were attacked and use these to help explain some of the defensive features of castles. Look at images of different castles and identify some of the key features e.g. turrets, towers, arrow loops, etc. Identify what they are for.	SEN: match up and label images with the vocabulary. LAPs: label different parts of the castle. Word mat to support MAPs: label parts of the castle HAPs: identify how some of the features help to defend the castle	<u>Resources</u> images of different castles. Close-ups of different parts of castles. images of siege weapons. <u>Key Questions</u> What features can you see? What do you think they are for?	Follow –up with visit to a real castle to identify some of these features.
Engage History	Order events in a period of history studied and begin to recall the dates of important festivals or celebrations. **To be able to put castles in**	Look at pictures of castles from different periods, from the earliest Saxon ditch and rampart castles to later motte and bailey and stone castles. Order the castles from oldest to newest and explain their sequence. If possible, include images from Alnwick Castle– where does the castle we will visit fit on this timeline?	SEN: sequence pictures in order. LAPS: include some additional pictures. MAPs: Children to add a simple sentence explaining how they know which castle is the oldest. HAPs: add a simple sentence explain how	<u>Resources</u> Pictures of Iron Age hill forts, Saxon ditch and rampart castles, Norman motte and bailey castles, stone keep and curtain wall castles, concentric circle and courtyard	

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	chronological order.	Children to complete smaller timelines in their topic books Sequence images on a timeline as a class, discussing how we can tell which castles are older (simpler designs, condition of the castle)	they know which castle is the oldest and which is more recent.	castles and medieval fortified manor houses. <u>Key Questions</u> Which castle is the oldest? How can we tell? Which castle comes next?	
Engage Science	Relate a material's physical properties to its uses (e.g. describe or demonstrate how a material can be unsuitable for a given task due to its ability to be changed by squashing and bending). **To investigate which material is best to use to attack a castle**	Show children different Seige weapons identify that most ways of attacking castles involved throwing things at the walls using trebuchets etc. Today we are going to be human trebuchets and investigate how the weight of a projectile affects how good it is at knocking down a castle wall. Build a simple wall using wooden blocks. Test using projectiles such as balls of scrunched paper, play dough, rubber or hollow plastic. Count the number of blocks knocked off the wall after five throws of each projectile type, recording and displaying the data using an appropriate chart or diagram. Assess which projectile did the most damage to the wall and explain why it worked so well. Describe any problems encountered during the investigation. Children to throw the projectiles from a defined position. Before you begin, set very clear guidelines to ensure everyone's safety.	SEN: Use cloze procedure to help with recording the prediction. Record results with support as needed. LAPS: write prediction using ideas shared in whole class discussion. MAPs/HAPs: complete recording independently with investigation layout sheet to support.	<u>Resources</u> Wooden Blocks, a selection of projectiles e.g. foam balls, plastic balls scrunched up paper etc. <u>Key Questions</u> Which projectile do you think will work best? Why? Which projectile worked the best? How can we tell? If you needed to attack a castle what sorts of things would you have been able to throw?	
Engage – Memorable Experience		Visit to Newcastle Keep Children to take part in a tour of the castle and a Knights Quest Workshop learning about what it was like to train as a knight.			Write up a brief evaluation of visit in books. Ensure photos from

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					visit are available for follow up lessons about Knight training.
Engage History/English	To be able to think about what it was like to be a knight. To be able to write an information text about a Knight's training	Look at images from our Castle Visit, focus especially on the Knight Training Workshop. What did we learn? What was it like to train as a knight? Discuss the experiences and record ideas about what we did on the board. Children to write information about the stages of training as a knight, using their experience of knights quest to help them.	SEN: cloze procedure LAPs: provide with some key vocabulary to support. MAPS: provide some sentence starters to support. HAPs: Children to complete information independently.	Resources Key vocabulary word mats/sentence starters Key Questions What did you have to do to train as a knight? When did boys start training? What sorts of things did they have to do?	
Develop History/ English	To know what it was like to live in a castle. To identify what jobs people in castle had to do. To be able to compare then and now	Recap the knights training from Newcastle Keep. What other people will have lived in a castle? What sorts of jobs might they have had? Briefly look at some examples of different jobs and identify which ones children think were from a castle. Look at some different roles within a castle and what they had to do. Which job do we think is most important? Which job would you like best? Children to complete some simple information in the style of a non-chronological report about castle jobs. Plenary In mixed ability groups diamond rank the castle jobs in order of what the children think is most important – encourage children to explain their reasoning.	SEN: select one or two jobs and write about them. Shared writing. LAPs: provide children with a simple structure to help them format their work and key phrases MAPs: write about at least 3 different jobs. Provide with sentence starters to support. HAPs: provide with some key vocabulary to support writing.	Resources images/cards of castle/not castle jobs Information PowerPoint about different castle jobs. key word mats/ sentence starters Key Questions what jobs were there in a castle? What sorts of things did a servant have to do? What did soldiers do? Which job would you like to have done? Which job do you think is most important? Why?	

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Develop History	To be able to compare then and now To be able to compare life in Medieval England to now	Recap some of the jobs that people did in castles. Why did the Lords and Ladies need so many servants? Draw attention to the fact that life was very different then – no electricity etc. Look at some examples of things that were different then and now e.g. how people cooked, went to the toilet, washed clothes and entertained themselves. Children to record their comparisons of then and now.	SEN: Cut and stick examples into 2 columns, Medieval England and now. LAPs: sort examples and write them in the correct column MAPs and HAPs: write simple sentences comparing Medieval England to now	Resources Images of medieval jobs Sentence starters Key Questions What sorts of jobs did people who lived in the castle have? Do we still have hose jobs now? Why not? What has changed?	
Develop Geography	To be able to use compass directions and directional language to describe the locations of features on a map	Show the children a map of an area. Explain that next lesson we are going to be using these maps to help us decide where it would be best to build a castle but first we are going to look at some of our map skills. Recap the 4 compass points. Then use the key on the map to identify some of its features e.g. marsh, river, towns etc. Ask the children to use compass points and directional language to identify where certain features are in relation to potential castle building sites.	SEN/LAPs: simpler questions about the location of features. AC to support SEN as needed. MAPs/HAPs: more complex questions about the location of features, including identifying more than one feature.	Resources Maps Question sheets Key Questions What feature is North of site A? Which castle site is the furthest south?	
Develop Geography/ History	To be able to explain why castles were built. To be able to identify the best place to locate a castle.	Why were castles built? Give the children a selection of reasons for building a castle and in groups ask them to put them in a diamond ranking. Discuss the reasons they thought were most important and why. Explain that William the conqueror and the Normans were the first people to build castles	SEN: compare sites using 2 or 3 simple criteria. AC to support LAPs: compare sites using 2 or 3 simple criteria. MAPs: compare sites using more criteria. HAPs: compare sites using different criteria.	Resources Diamond Ranking cards – reasons to build a castle. Maps of potential castle sites. Sheets with features to judge a site on. Key Questions	

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	To use maps and symbols	and they built them because they had invaded Britain and needed to show that they were in charge. Explain to chn that they are the conquerors and will need to decide where to build their next castle by looking at a map and deciding where it should go. We will be looking at the physical features shown on the map and using them to identify where would be the best place to put a new castle. **Plenary** Ask the children to feedback where they chose and to give their reasons why? Look at which site was the most popular.	Encourage children to think about which criterion is the most important and why	What do you think is the main reason someone may have built a castle? Why? Which other reasons are important? What things do we need to think about when we build our castle? What will the castle need to be near?	
Engage/ Develop Computing	To be able to use technology to create digital content.	Draw a castle using suitable drawing software. Use shapes to form the basic castle form, adding colours and textures to improve its appearance.	Children to complete independently, supported by other chn and AC as needed	<u>Resources</u> Access to ICT suite 2Simple Drawing software Key Questions What do these tools do? How can we make our castle the correct shape? How can we change the colour of our castle?	
Develop Towers D&T	Improve structures by making them stronger, stiffer and more stable.	Look at some towers from towers from around the world. What sorts of shapes are they? Why might they be in these kinds of shapes? Explain that today we are going to practise building towers and we are going to be thinking	Children to work in mixed ability groups to make the towers. Evaluations:	<u>Resources</u> construction toys e.g.LEGO and KNEX paper card artstraws masking tape	

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		about how we can make our towers as strong as possible. We also want to make them tall enough to be able to see from, just like they would need to be in a castle. Look at different building materials and experiment with ways to make towers stronger. Initially look at construction materials such as LEGO and KNEX in small groups to identify which shapes are stronger, then move on to using art straws and masking tape or paper. Discuss what we have found out as a class and record simple evaluations.	SEN: identify which tower was the best and give a simple reason (AC to support) LAPS: identify what made a tower successful MAPS: identify which tower worked best and give reasons. Also think about which towers did not work as well and why. HAPs: compare the towers and identify what made the towers more/less successful.	<u>Key Questions</u> How can we make our towers stronger? How can we make our towers taller? What shapes make our towers stronger? What other methods help to strengthen our towers e.g. bracing. What happens if our tower is wider at the bottom?	
Develop Towers Design and Technology/ Science	Improve structures by making them stronger, stiffer and more stable. To be able to measure using standard units	Remind the children about what we have learnt so far about how to make towers stronger – discuss what the real towers from around the world looked like. Explain that today we are going to work in small groups to make towers using sugar cubes. How can we make the tallest tower? Stack sugar cubes to make towers. Using standard units, measure and record the height of each to discover who can build the highest tower. Then try to build a taller tower using a different approach, such as starting with a wider base, again measure and record the height using standard measures. Report back on their findings, including the height of their	Children to work in mixed ability groups AC to support SEN with measuring and recording the heights of their towers	<u>Resources</u> Sugar cubes Rulers Tables for recording height <u>Key Questions</u> How can we measure our towers? How can we make the towers taller? What makes a tower stable?	

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		tallest tower and the best strategies for tower building and why.			
Develop Tunnels D&T	Build structures, exploring how they can be made stronger, stiffer and more stable.	Look at some examples of tunnels from around the world. Look at tunnelling machines and discuss whether or not the children think it is easy to make sure that the tunnel meets up. Use wet sand to try this in small groups. Provide children with paper and card and ask them how we could use this to reinforce a tunnel. What happens when we make a tunnel wider? Children to record their discoveries in their topic books	Children to work in mixed ability groups when making tunnels. SEN: cloze procedure to record findings LAPS: sentence starters to support when recording findings MAPs: key vocabulary to support HAPs: complete independently	<u>Resources</u> Sand tray Wet sand Card Paper <u>Key Questions</u> What do you need to make your tunnel strong? What happens if you make the tunnel wider?	
Develop Tunnels Geography	Describe and compare human and physical features seen in their local environment and other places in the world. **To be able to describe and compare tunnels around the world.**	Discuss some of the tunnels we looked at in the last session. In what ways are they similar? In what ways are they different? How do they compare to a tunnel which is local to us – the Tyne Tunnel? Identify similarities and differences in terms of what they are built for, when they were built, how, where etc. Children to record their comparisons.	SEN: sort ideas about ways the tunnels are similar/different. LAPs: provide with some ideas for comparing the tunnels but ask children to suggest some of their own. MAPs: children to compare Tyne tunnel to another tunnel around the world of their choice. HAPS: children to compare the Tyne Tunnel to another tunnel around the world.	<u>Resources</u> Information about different tunnels around the world. similarities and differences between the Tyne Tunnel and Laerdale Tunnel <u>Key Questions</u> What are these tunnels made from? Why were they made? How are these tunnels similar? How are these tunnels different?	

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Develop Tunnels Science	Define the terms 'habitat' and 'microhabitat', giving examples and animals that live in each place. **To identify how some animals are suited to their habitat.**	Explain that not all tunnels are made by humans – many animal like to make and live in tunnels. Learn about tunnelling animals such as moles, rabbits, worms, ants and badgers. Focus on moles, look at key facts about their lifecycles and how tunnelling helps them. Find out whether these animals spend all, or just part of their time in their tunnels and which physical features help them to dig. Look at BBC underground footage of animals tunnelling http://www.bbc.co.uk/programmes/b03bfjrj/clips Children to record key information about these tunnelling animals in fact files in the style of a non-chronological report.	SEN: focus on moles, labelling a mole with the features that help it to live underground. LAPs: focus on moles, identifying what features help them to live underground. MAPS; create mini non-chronological reports about how moles are adapted for tunnelling. Provide with writing frame to support HAPs: create mini non-chronological reports about how moles are adapted for tunnelling.	Resources images/ presentation about tunnelling animals images of moles to label images from a mole life cycle to sequence. Key Questions What animals live underground? How are they suited to living underground? What helps them to tunnel? Do Moles always stay underground?	
Develop Bridges Geography	To be bale to use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features	Look at a map and identify symbols for bridges. Identify bridges in the local area e.g. Newcastle bridges What are the different bridges for? What are they made from and what shapes are they? Look at an aerial view of Newcastle and together identify the bridges and the river. What other human and physical features can we identify? Model how to label these Children to label some key features on the aerial view and identify whether they are human or physical features	SEN: label bridges and river with support and identify if they are human and physical LAPs: label bridges and river and identify if they are human or physical MAPs/HAPs: label bridges and rivers and challenge children to identify some other human and physical features and label these.	Resources Maps/aerial views of Newcastle Google Earth Key Questions What is this feature? Is it a human feature or a physical feature?	

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Develop Bridges Geography	Use basic geographical vocabulary to refer to key human features, including: city, town, village, factory, farm, house, office, port, harbour and shop.	Recap the bridges we looked at in the previous lesson. What are the different bridges in Newcastle used for? Identify that some have roads, otherers are footbridges and some are railway bridges. Look at the different shapes and compare them. What is similar about the bridges? What is different? Identify some of the different ways the bridges are used.	SEN: complete a simplified fact file on 2 of the bridges, identifying what they are like and what they are used for. LAPs:complete a fact file on 2 of the briges, identifying what they are like and what they are used for. MAPs/Haps: complete a fact file about 3 different bridges, comparing their uses and what they are made from	Resources Fact Sheets for children to complete Information sheets about the different bridges. Key Questions What is this bridge for? What is it made from? Ho is it used?	
Develop Bridges Geography	Describe and compare human and physical features seen in their local environment and other places in the world.	Look at images of other bridges around the world and identify what they are made from and what they are for. Sort the bridges in different ways, discussing their similarities and differences.	SEN: compare two bridges - one local and one from another area in the world. Identify similarities and differences. Provide with word cards to sort. LAPs: compare two bridges – one local and one from another area of the world. MAPs: compare two bridges using a venn diagram HAPs: compare two bridges using a venn diagram.	Resources images of bridges venn diagrams word cards to sort. Key Questions What is similar about these bridges? What is different? What helps to make the bridges stronger? What shapes can we see in the bridges? What obstacles do the bridges span? Who or what uses these bridges?	
Develop Bridges D&T	Improve structures by making them stronger, stiffer	Recap the different bridges we have looked ar. Introduce the marshmallow and spaghetti bridge challenge. Construct a bridge, to span a specified width, using marshmallows and dried spaghetti! Explore	Children to work in mixed ability groups to make the bridges. Evaluations:	Resources spaghetti marshmallows pennies	

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	and more stable.	different ways of connecting and structuring, with each group using the same amounts of spaghetti and marshmallows. Use digital cameras to record bridge variations and then, using pennies as weights, test the load each bridge can support before it collapses. Record the number of pennies for each bridge on a class table or chart. When all the bridges have been tested, discuss with the children their observations about the strongest ones. Did the shapes used in the bridges make a difference? What was the best way to use the spaghetti and the marshmallows? How could you make the bridge span a greater distance using the same materials?	SEN: identify which bridge was the best and give a simple reason (AC to support) LAPS: identify what made a bridge successful MAPS: identify which bridge worked best and give reasons. Also think about which bridges did not work as well and why. HAPs: compare the bridges and identify what made the towers more/less successful.	images of spaghetti bridges. <u>Key Questions</u> Which bridge worked best? Why? Did the shapes used to make the bridges make a difference?	
Innovate Design Technology	To be able to design a fortress.	Show the children a letter from a Lord asking them for help. How could we make them a fortress to protect him and his family? Work in groups to discuss what a fortress might need. Look back at images of castles for ideas. Together agree on design criteria (e.g. the Castle/fortress must be big enough for all the family to live in, it must have a tower to keep watch, it should have a drawbridge to go over the moat. Discuss what materials it might be best to make the fortress from. How could we help to make the fortress stronger? Remind the children about different ways that castles might be attacked and show them a	Children to work in mixed ability groups. Encourage call children to participate in the designing of the fortress and labelling it with appropriate materials.	<u>Resources</u> Planning sheets images of castles.	Gather the materials needed to build the fortresses, based on the children's plans. NOTE: place restrictions on the materials the children can use, based on assessment from the previous sessions

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		model trebuchet. Explain that the fortresses must be strong enough to withstand attack from the trebuchet. Remind the children about the different structures we have already made as part of this unit and how we can use these skills to make our castle strong. Children to work in small groups to design their own fortress, Their designs should include a picture of the fortress, labels and a list of materials to build their fortress with.			involving building structures.
Innovate Design Technology (This lesson will need to be a full afternoon)	To be able to work as part of a group. To be able to build a fortress using my design.	Remind the children of their designs for their fortresses. Provide each group with their materials and some space in the classroom to build their fortress. Encourage children to work as part of their group and resolve any issues as they go. At the end of the lesson attack each fortress with the trebuchet to check whether or not they are strong enough. Allow each group to fire at their own fortress. Note: Recap Science investigation where we pretended to be trebuchets and allow children to be human trebuchets to fire on their own castles. (May need to test castles in a different lesson)	Children to work in small mixed ability groups. (approx. 3-4) If needed assign children roles to help ensure that all children take part.	<u>Resources</u> Building materials based on children's plans Model trebuchet plastic balls/other 'rock' substitutes	
Express D&T	Explain how closely finished products meet their design criteria and say what they could	Look at images from our castle testing from the previous sessions. In what way did our castles meet the design criteria? How well did our castles stand up to attack?	SEN: record a simple evaluation in response to questions. LAPs: identify what went well and how they	<u>Resources</u> images of castles the children made. Evaluation recording sheets.	

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	do better in the future.	What would make the castles better in the future? What worked well? Children to complete evaluations of their castles.	could improve their castle. MAPs: identify what went well and how to improve the castle. HAPs: compare their castles against the design criteria, identifying in which ways they met the criteria and how they could be improved.	Key Questions What worked well on your castle? What would you improve? Did your castle meet the design criteria? If you had to complete this challenge again what would you change?	
Express Art	To be able to design a heraldic shield. To use materials creatively. To be able to develop skills in using colour.	Show the children a letter from the Lord – he is so pleased with our work on our castles he wants us all to become knights. We will need our own heraldic shields. These helped knights to be identified in battle. Look at examples of shields and identify the kinds of designs that were common. Look at colour choices and the animals that appear on the shields. Give the children a template to design their own shield on. These will then be copied onto large card shields and painted.	Allow children to choose their own designs, using ideas from real heraldic shields. Encourage children who find art more challenging to select simpler designs.	Resources card shields Paper shield shape designs. Images of heraldic shields. Key Questions What animal will you use on your shield? What colours? Which pattern might you use?	
Express English - Speaking and Listening	Present ideas, results and findings to the class.	Create a mini gallery of our castle pictures from computing, the shields and any castles that are still remaining. In small groups prepare information about each section and record it using ipads or voice recorders.	Children to work in mixed ability groups to prepare their recordings	Resources Examples of children's work from the unit. voice recorders/ipads. Key Questions What have you learned in this topic? What do you want to share with your parents?	ensure letters to parents go out with plenty of notice.

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		Invite parents/another class to view the gallery and share the children's recordings about each part of the gallery.		What will they need to know? What features are there on our castles?	