Curriculum pack 1 – Creating a new development

Taylor Wimpey

Creating a new development

This curriculum pack is aimed at key stage 2 pupils and comprises two curriculum-based themed workbooks, focusing on the following areas:

- **Preparing for development**
- **Bringing new homes to life**

Where you see the symbol you may wish to contact a local building industry professional to help you deliver the activity.

Investigations, activities and resources linked to the theme of "Preparing for development"

- **Project 1 -** Exploring the history of housing
- **Project 2 -** Creating a development plan
- **Project 3 -** Presenting the plan

Investigations, activities and resources linked to the theme of "Bringing new homes to life"

- **Project 4 -** Roles and materials
- **Project 5 -** Building a development timeline
- **Project 6 -** Learning about safety

Appendices

- Website links
- Teachers' notes
- Resource sheet answers

Project 1: **Exploring the history of housing**

Activity 1

(Resource sheet 1 – houses from different ages)

- **ARRANGE** the houses so that they are in time order. What are the similarities and differences between houses through history?
- **DISCUSS** the following key questions – Why have houses changed over the years? Where have houses been built over the years? Who builds the houses?
- **CREATE** a display to show the changes over time.
- **DESCRIBE** a house from history – imagine you have just looked at it for a relative who is interested in buying it.

Resource sheet 1

Time sequence

Organise the houses into time order.

Project 1: **Exploring the history of housing**

Activity 2

Housing where I live:

- **CREATE** a “buildings” map of the local area using maps and the internet.
- **VISIT** a small area close to school and make a record of the different types of buildings you can see. Add this information to your “buildings” map.
- **DISCUSS** the following key questions. How old are the buildings? Why were they built and who built them? Why were they built where they are? Who lives/works in them? What are they made from – and why? Present your findings and suggestions as a short slideshow.

Project 1: **Exploring the history of housing**

Activity 3

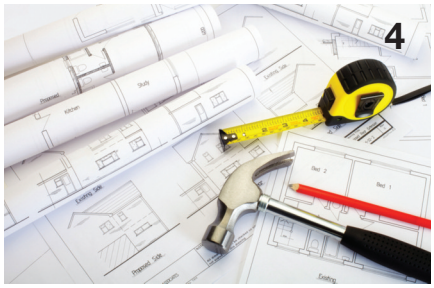
(Resource sheet 2 – improvements picture prompts)

Making our houses better:

- **RESEARCH** how people change their houses to make them better. Picture prompts – DIY store, attic rooms, dormers, extensions, insulation, windows, garages, drives, gardens, fencing, solar panels, knocking walls down, partition walls, etc.
- **ORGANISE** the prompts into groups – explain choices (more space, lower energy bills, environmentally friendly, make it look nicer, external building, internal building.)
- **CREATE** a set of suggestions for improving a house for the following people: a family who need more space, someone who wants to make it nicer, to help someone with a mobility or vision impairment.

Resource sheet 2

Why do people improve old houses and how do they do it?



Project 2: **Creating a development plan**

Activity 1

- **EXPLORE** a map of the county or borough you live in and identify three possible sites for a new housing development, it can be 12 or 50 or 100 new homes.
- **CONSIDER** the positives and the challenges of each site.
- **DRAW** up a check list of positive things you are looking for and things you are looking to avoid and give them a score. See how well your choices score on your scale.

Project 2: **Creating a development plan**

Activity 2

- **EXPLORE** some development plans. A local construction professional may be able to help you with this, or alternatively you could search online for a development plan.
- **PRODUCE** a fact file based on the plans. Include as many details as you can: number of houses, roads, cul-de-sacs, crescents, buildings that are not homes, green areas, open spaces, trees, traffic calming, metres of road, area of the complete development, area of land an average home has, distance from stations, motorways, airports, major supermarkets etc.
- **SELECT** one house from the plan and enlarge that section of the map by an agreed scale factor.

Project 2: **Creating a development plan**

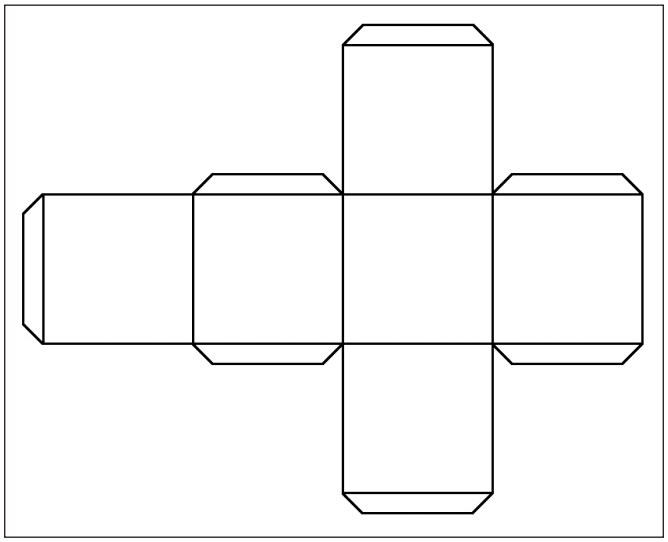
Activity 3

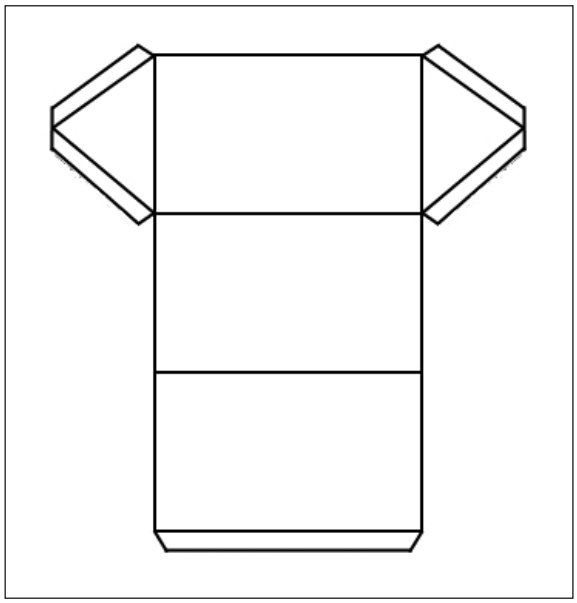
(Resource sheet 3 – examples of nets)

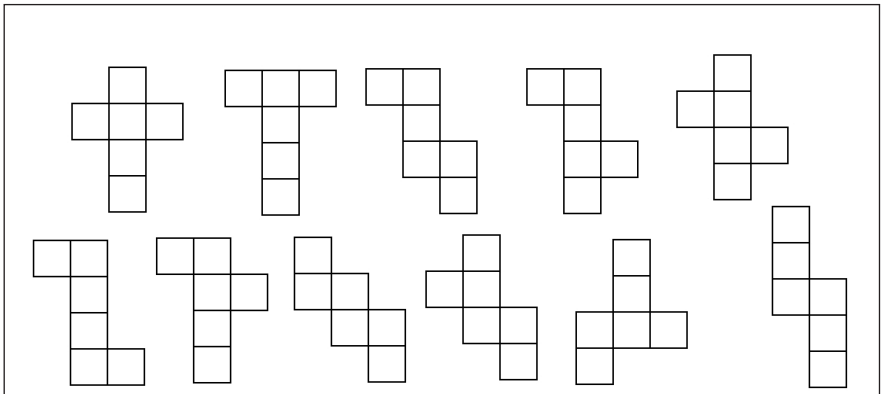
- **DIVIDE** a new development plan into a grid and allocate a section each to groups or individuals. Groups to scale up their section by an agreed scale factor.
- **DRAW** up a development plan bearing in mind the housetypes needed by different types of potential buyers (including families, first-time buyers, retired). Remember to include gardens, roads and community facilities. Add in public transport links, bike routes, footpaths and road safety features. What is the best layout?
- **COLOUR** in all the homes in your section of the map. Measure and work out the base area or "footprint" of each home. Use this information to create "nets" for all the buildings in your section.
- **BUILD** scale models of the homes in your section using the nets you have created. Colour and texture the models to make them more realistic and then add them to your scaled up section of the development plan. Use the original grid to create a complete 3D model of the new development. Take photos from different angles, including an aerial view, and present to a local construction professional!

Resource sheet 3

Examples of nets







The 11 nets for a cube

Project 3:
Presenting the plan

Activity 1

(Resource sheet 4 – link to example promotions from Taylor Wimpey)

- **PREPARE** an argument promoting your development plan idea as a multimedia presentation to present to a representative of the construction industry. Be creative, but ensure it is proofed and checked thoroughly; it is for an external audience and needs to be accurate. You will need to use persuasive and technical language too!

Resource sheet 4

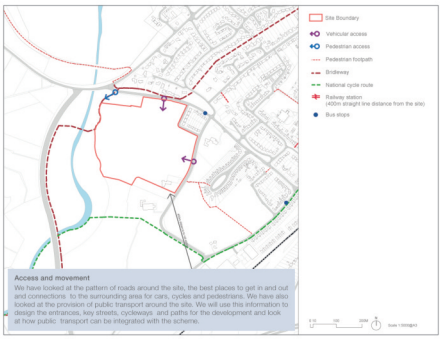
Taylor Wimpey

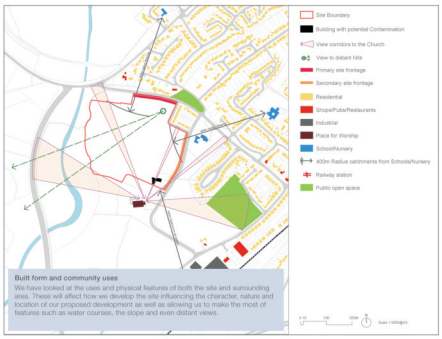
Site considerations

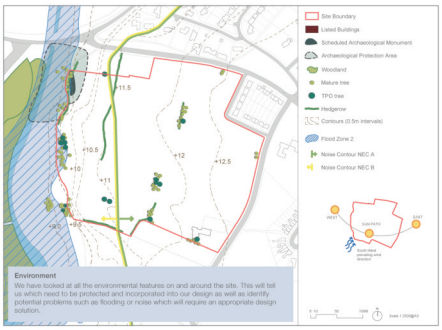
www.taylorwimpey.co.uk/fernhillheath

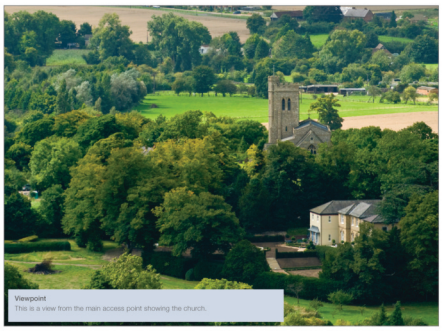
Information about the site we need to take into account

Before we start designing a new scheme, we complete an assessment of the site and the surrounding area as they are at the moment. We record those features we will need to take into account in our design. All of the relevant considerations, whether they fix the way our scheme will have to be designed or give us a real opportunity to make the most of a particular feature, are shown here.









Things to think about	
Stream on the western boundary.	Adjacent primary school.
View of the castle.	Connecting to the nearby dedicated cycle route.
Historic hedgerows.	Steep slope to the western side.

Resource sheet 4

Taylor Wimpey

About Taylor Wimpey

Information about our company, who we are and what we do

Taylor Wimpey was formed by the merger of George Wimpey and Taylor Woodrow in 2007. We are able to draw upon experience and best practice gathered over a history dating back to the 19th Century. Today we are one of the largest homebuilders in the UK, completing over 11,000 homes each year.

Planning sustainable communities
We want our developments to be environmentally, socially and economically sustainable. We understand the importance of stimulating strong, vibrant and healthy communities while protecting and improving the natural, built and historic environment.

More than building homes
We build roads and junctions, sewers and utilities that link our developments with the surrounding areas. Where needed we provide community facilities such as schools, doctor's surgeries, shops and offices, bus stops and even railway stations, as well as much needed affordable homes. Such provision can help meet the day-to-day needs of the people living on, or near, our developments.

Green spaces
We design landscaping and open space to provide an attractive and safe setting for homes, recreational space for residents, and habitats for plants and wildlife. Green spaces could include tree or hedgerow planting, playgrounds or sports pitches.

Energy efficient homes
We look to reduce the energy demand of our homes by improving wall and roof insulation. In some cases we may also fit more complex technologies. This means that residents benefit from energy bill savings while their long term maintenance burden and costs are kept to a minimum.

Engaging with local people
We are committed to working with local people, community groups and local authorities during the planning phase and aim to keep them up to date with our activities and progress during construction. We aim to plan and design developments that balance the demands of our business with providing for the needs of our residents and their communities.

For more information, visit:
taylorwimpey.co.uk

"Our aim is to be the nation's leading residential developer for creating value and delivering quality. We are passionate about working with local people, businesses, local authorities and our customers to build aspirational homes".

Taylor Wimpey lays the foundations for thriving communities

We completed 11,696 homes in 2013, of which 2,124 (about 18%) were affordable homes.

In 2013, through planning obligations, we invested over £225m in the areas in which we built.

We provide public transport, road improvements and education facilities on many developments.

Landscaping and open space, including play areas and sports pitches, provide the structure to many of our developments.

Project 3:
Presenting the plan

Activity 2

- **TEST** your presentation out with a partner or in your group. Run through the presentation with one person playing “devil’s advocate”. This person will raise as many difficult questions as they can and the others must note them down and agree the most convincing reply to them. If necessary, adapt your design or presentation to address any serious problems raised.

Project 3:
Presenting the plan

Activity 3

- **PRESENT** your multimedia argument to a representative of the construction industry – you will have only 60 seconds to convince them that your chosen site is a good one for development.
- **RESPOND** to questions about your presentation.
- **LISTEN** as the representative of the construction industry presents their own plans, and then ask them questions.

Project 4:
Roles and materials

Activity 1

(Resource sheets 5 & 5a – list of jobs and job descriptions to match)

- **LIST** all the people involved in building a new housing development. Think of all the stages from surveying the land to selling the completed houses and try to make the longest list you can.
- **COMPARE** your ideas with others and organise the different workers into different stages of the development (for example, planning – building – marketing).
- **CREATE** a timeline for the creation of a new housing development and add the names of the different workers to it at the right stage of the development. Some workers may appear more than once! You could use a linear timeline, but explore organising the information in other formats too.

Resource sheet 5

Jobs list

Find out more about what they do. Can you add more jobs to the list?

Bricklayer	Quantity Surveyor	General Labourer	Sales Manager
Architect	Site Manager	Legal Manager	Plumber
Design Engineer	Carpenter	Glazier	Roofer
Surveyor	Crane Operator	Security Officer	Concrete and Cement Layer
Geologist	Plasterer	Conveyancing Assistant	Land Manager
Solicitor	Marketing Agent	Electrician	Excavator Digger Operator

https://www.taylorwimpey.co.uk/careers/meet-our-people

Resource sheet 5A

Match the descriptions to the jobs list

Lays bricks, blocks and installs lintels. Completes "pointing" and cleaning of brickwork	Works out the quantities of materials needed so there is just the right amount	Does any non-specialist work: usually carrying materials from one place to another	Sells the houses to house buyers and helps answer customer questions
Responsible for creating the original drawings for the development	Organises all the activity on a building site – the workers, the lorry and machine drivers, and safety	Works on all the legal matters involved including buying the land and selling the houses	Fits water pipes and drains, and installs toilets, sinks, baths and showers.
Develops the architect's drawings by adding technical details and specifications	Adds all the wooden structures to a house, such as the roof joists and floors; also builds shuttering for concrete laying.	Fits windows and doors once the brickwork is complete	Fits the wooden structures that make a roof and fits roof tiles and guttering.
Exactly measures the land, its slopes and contours. Maps out the building plan on the ground	Operates cranes to lift heavy materials from one place to another.	Checks that the building site is secure, safe and that nothing is stolen	Pours concrete to make house foundations and smooths it to make sure it is level
Tests the nature and quality of the soil and rock on the site. Checks for water "table" and "courses"	Covers all the internal walls and ceilings with plaster to leave a smooth finish	Helps make sure all the documents required for selling a house are ready	Looks for good sites for new building developments
Completes all the legal work required from the purchase of the land to the sale of the houses.	Advertises the new houses and makes sure lots of house buyers know about them	Adds all the electrical wiring to each house and checks that it is working safely	Operates a machine that digs holes for pipes and house foundations

Project 4:
Roles and materials

Activity 2

(Resource sheets 6 – worker images)

- **DIVIDE** the different workers equally and allocate a set of workers to each group or individual. Produce a representation of your chosen workers in the act of doing their job. Use the medium of your choice. Mount the picture on card and cut out the profile of your people. Use the profile as a template to produce a blank profile for use in the next activity. Use these cut-out pictures to create a frieze around the classroom showing those involved in the development process and the stage at which they are needed.
- **RESEARCH** your chosen workers further and make notes in your preferred style on the skills and activities they would be involved in. Use the blank profile to summarise your notes beginning with “My job is to…”.
- **TEST** your knowledge with a game! Collect all the job summaries (those written on the blank profiles) together, shuffle them and give them out randomly to everyone in the class. Each job summary is read out in turn while others try to guess the job title of the worker. If the answer is right, the summary is added to the corresponding picture on the wall frieze. If the answer is wrong, move on to the next and come back to it later. Set the timer going and see how quickly the jobs can be identified. Try it again once or twice to see if the earlier time can be beaten!

Resource sheet 6

Worker images

Project 4:
Roles and materials

Activity 3

- **INTERVIEW** a worker from the construction industry about the work they do. Prepare your questions carefully in advance. Use the 5W's approach to help gain a detailed picture (What, Where, When, Why, Who?). Find out what skills they have and the training they needed for the job. Also try to find out about the people they work with, people that work for them and their bosses!
- **CREATE** an artistic wall display or poster to represent your findings about your guest worker or another worker that you have researched that interests you. Produce a recruitment poster for the job.
- **IMAGINE** what it would be like if you were actually doing the job! Write a diary entry, journal or blog describing a typical day at work. Include the work you have done that day, the materials and people you are working with and the ups and downs of the day.

Project 4:
Roles and materials

Activity 4

(Resource sheet 7 – materials list for building a house)

- **LIST** the materials needed to build a house by labelling a picture placed in the centre of a large sheet of paper. Remember to list "materials" rather than parts of the house (i.e. timber, tiles and mortar instead of simply "roof").

- **RESEARCH** house building:
  – see how many more materials you can add to the list.
  – add possible alternative materials that could be used (i.e. thatch, turf or slate, instead of tiles).
  – explore some of the materials and technology that has been used to make houses energy efficient and more environmentally friendly.
  – design and label your own energy efficient and more environmentally friendly house.

- **EXPLORE** the properties of different insulation materials:
  – consider the "snowman problem". Will a snowman with a coat and hat on melt more quickly than a snowman without a coat and hat on?
  – how long can you keep an ice cube from melting once it comes out of the freezer? Take the challenge – everyone receives an ice cube and the winner is the person whose ice cube is the last to melt. Insulate with the material or materials of your choice!
  – research the materials used to insulate houses in the past and how these have changed over time.

- **EXPLORE** some quantity problems. Imagine a house has walls 10m wide by 5m deep by 6m high.
  – how many $1m^2$ slabs would you need to lay a path around the entire house?
  – how many bricks do you need to build the walls? You will need to find out the size of a brick.
  – if you increase one of the dimensions by a metre, how many more bricks would you need?
  – the eight windows are 1m by 2ms each and the two doorways are 1m by 3ms each. How many bricks will this save and what is the new total of bricks needed to build the walls?

Resource sheet 7

Materials for a house

Concrete – foundations
Tiles
Bricks
Breeze blocks
Brick ties
Mortar
Plasterboard
Windows
Doors
Insulation
Mains water pipes
Hot water pipes
Heating system
Partition walls
Gutter system
Drain pipes
Waste pipes
Drains
Gas pipes
Mains power cable
Fuse board
Electric wiring circuits
Plug sockets, lights and light switches
Floorboards
Skirting
Stairs
Stair rails
False ceilings
Fibre optic cabling
Phone socket
Phone cabling
Paint
Facsia

Roofing felt
Breathable roof lining
Corking
Joists
Battening
Door frames
Lintels
Bannisters
Sealant
Attic hatch
Plaster
Sound-proofing
Paths
Gas and electricity meters
Stop-cock
Inspection chambers
Supporting walls
Smoke alarms
Aerial sockets
Aerial cabling
Aerials
Mains water pipes
Hot water pipes
Heating system
Partition walls
Gutter system
Drain pipes
Waste pipes
Drains
Damp course
Ventilation
Chimney
Flue

Project 5: **Building a development timeline**

Activity 1

(Resource sheet 8 – stages from the development time line for cut-out cards)

- **EXPLORE** the development timeline and sequence the cards. Justify your choices and compare with those of others.
- **RESEARCH** the development timeline. Select one card from the sequence and research the stage in detail. Make notes in your preferred style.
- **PRESENT** your findings to the class or to a construction professional. Choose an appropriate format for your 30 second presentation.

Resource sheet 8

The development timeline

Purchase some land	Map out the land	Talk to the community	Build the infrastructure
Create a "design brief"	Plan the infrastructure	Order materials	Build the homes
Design the homes	Work out the cost of the development	Market the new homes	Provide legal "deeds" for homes
Survey the land	Get planning permission	Employ construction workers	Sell the homes

Project 5: **Building a development timeline**

Activity 2

Now it is your turn – build a model development in the classroom/grounds. You could use your model development from "Creating a development plan", Activity 3, or agree a new development plan.

- **CREATE** a timeline for a proposed new housing development.
- **IDENTIFY** a suitable "site" in the school grounds. Complete a site visit to explore the challenges of the site. Make and annotate sketches of the site. Consider access routes and how you are going to keep the site secure and the public safe.
- **CREATE** a site plan based on your sketches and a school map.

Project 5: **Building a development timeline**

Activity 3

(Resource sheet 9 – Checklist for a development plan, role cards for public meeting)

Implement the development process!

- **CREATE** a pack including a set of designs to present to the council for “planning permission”. Ask a local councillor to come in and give feedback on your development plan. Revise your pack in line with feedback received.
- **PREPARE** materials for a public meeting. Use your development pack materials, but also prepare a short speech explaining why the development will be of benefit to the local community.
- **ROLE-PLAY** the public meeting where your development plan is presented!

Resource sheet 9

Checklist for a development plan and role cards for a public meeting

Checklist for public meeting:	
Are you ready	✓
Lots of advance notice	
Development plan	
Artists' impressions of new development	
Location of proposed site on maps	
A venue to hold the meeting in	
Information for the public attending	
Experts to present the plans to the public	
Answers prepared to likely questions	
Evidence of working with the community	
Lots of clear benefits to the community	
A script for the presenters!	

Presenter 1

Presenter 1

Presenter 1

Presenter 1

Local resident 1

You have 3 young children – concerned about safety

Local resident 2

You and your partner are retired – worried about noise

Potential house buyer 1

Commute to work by train, partner but no children.

Potential house buyer 1

You have a young family and are interested in facilities for them

News reporter

Local trader 1

Shopkeeper – will it be good or bad for trade?

Local trader 2

Bus company owner - Have buses been considered in the plans and designs?

Local farmer

Concerned about security and safety in his adjacent fields

Project 6: **Learning about safety**

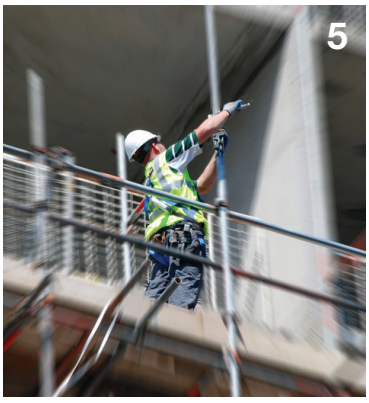
Activity 1

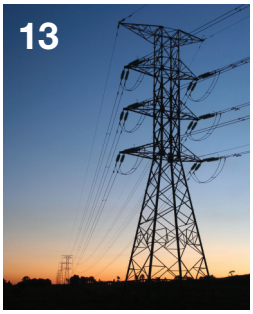
(Resource sheet 10 – Keeping safe – Hazards!)

- **IDENTIFY** health and safety dangers on a building site. Use Resource sheet 10 to get you started.
- **TALK** about why hard hats are compulsory for everyone when on a building site. Why are there different colour hard hats? Why is a hard hat an effective design? What should happen to a worker if they are found without their hard hat? What other special clothing helps keep people safe on a building site?
- **DESIGN** an outfit for a construction worker on a building site. Explain what materials you will use, why you have chosen them, how it will prevent accidents and the type of accidents it will help prevent.

Resource sheet 10

Keeping safe – hazards!





Project 6: **Learning about safety**

Activity 2

- **PREPARE** a short health and safety talk on keeping safe around the building site – or on a single specific item of safety equipment.
- **DELIVER** your talk using a range of presentation devices and props. It could save lives, so make sure it is memorable!

Project 6: **Learning about safety**

Activity 3

- **IMAGINE** a group of children have entered your building site to play. What dangers would they face? How could you reduce the risks and ensure members of the public can't access the site in future?
- **DESIGN** publicity resources aimed at warning children about the dangers of building sites. You may use a range of media.
- **PRESENT** your campaign ideas to the class or a construction professional.

Resources

Websites to support learning about the planning and building process:

https://www.taylorwimpey.co.uk/corporate/corporate-responsibility

http://www.primarytreasurechest.com/role-play/role-play-areas/miscellaneous/construction-site.html

http://www.buildingcareers.org/industry

http://www.english-heritage.org.uk/content/imported-docs/f-j/homes_with_history_2003.pdf (Activity 1)

http://www.screenonline.org.uk/history/id/1092543/

http://www.architecture.com/

Teachers' notes

Links to the National Curriculum

Project 1

Spoken language: articulate and justify answers, arguments and opinions, use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas; **Reading:** retrieve, record and present information from non-fiction; **D&T:** investigate and analyse… products; **Geography:** describe and understand key aspects of… human history, **History:** study of an aspect of social history, address and sometimes devise historically valid questions, **Computing:** Use search technologies effectively, use and combine a variety of software and a range of digital devices and create a range of… content that accomplish given goals, including collecting, analysing, evaluating and presenting data.

Project 2

Spoken language: articulate and justify answers, arguments and opinions, use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas; **Reading:** retrieve, record and present information from non-fiction; **Writing:** plan, draft, evaluate, edit; proof-read; **Number:** Solve number problems and practical problems, **Ratio and proportion:** Solve problems involving similar shapes where the scale factor is known or can be found, **D&T:** generate, develop and model, perform practical tasks, **Geography:** use maps…and digital/computer mapping.

Project 3

Spoken language: articulate and justify answers, arguments and opinions, use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas, consider and evaluate different viewpoints, attending to and building on the contributions of others, select and use appropriate registers for effective communication; **Reading:** retrieve, record and present information from non-fiction; **Writing:** plan, draft, evaluate, edit; proof-read; **D&T:** evaluate their ideas and products... consider the views of others to improve their work, **Geography:** use maps… and digital/computer mapping.

Project 4

Reading: retrieve, record and present information from non-fiction; **Writing:** plan, draft, evaluate, edit; proof-read; **Number:** solve number problems and practical problems, solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes, solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign; **Measurement:** measure, compare, add and subtract: lengths, mass, volume/capacity, measure the perimeter of simple 2-D shapes, measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres, find the area of rectilinear shapes by counting squares, **Science:** work scientifically, take measurements using a range of scientific equipment, compare and group together everyday materials on the basis of their properties; **Art and Design:** improve their mastery of art and design techniques; **Computing:** use search technologies effectively; **D&T:** perform practical tasks, investigate and analyse... products evaluate their ideas and products... consider the views of others to improve their work.

Teachers' notes

Project 5

Spoken language: participate in discussions, presentations, performances, role play, improvisations and debates; select and use appropriate registers for effective communication; **Reading:** retrieve, record and present information from non-fiction; **Writing:** plan, draft, evaluate, edit; proof-read, **Measurement:** Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres, find the area of rectilinear shapes by counting squares; **Ratio and proportion:** solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts, solve problems involving the calculation of percentages and the use of percentages for comparison, solve problems involving similar shapes where the scale factor is known or can be found; **Art and Design:** improve their mastery of art and design techniques; **Computing:** use search technologies effectively; **D&T:** generate, develop and model, perform practical tasks, investigate and analyse... products, evaluate their ideas and products... consider the views of others to improve their work; **Geography:** use maps... digital/computer mapping.

Project 6

Spoken language: articulate and justify answers, arguments and opinions, use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas, consider and evaluate different viewpoints, attending to and building on the contributions of others, select and use appropriate registers for effective communication, participate in discussions, presentations, performances, role play, improvisations and debates; **Reading:** retrieve, record and present information from non-fiction; **Writing:** plan, draft, evaluate, edit; proof-read; **Science:** work scientifically asking relevant questions and using different types of scientific enquiries to answer them; **Art and Design:** improve their mastery of art and design techniques; **Computing:** use search technologies effectively, use and combine a variety of software and a range of digital devices and create a range of… content that accomplish given goals, including collecting, analysing, evaluating and presenting data. **D&T:** perform practical tasks, investigate and analyse... products, evaluate their ideas and products... consider the views of others to improve their work.

Teachers' notes

Links to the Scottish Curriculum for Excellence

Project 1

Literacy: 2-02a: "engage with others…respond in ways appropriate to my role, show that I value other's contributions…" , 2-28a: "convey information, describe events, explain processes or combine ideas in different ways", 2-29a: "persuade, argue, explore issues or express an opinion"; **Technologies:** 2-01: "When exploring technologies in the world around me, I can use what I learn to help to design or improve my ideas or products", 2-01b: "investigate how an everyday product has changed over time to gain an awareness of the link between scientific and technological developments"; **Social studies:** 2-08a: "discuss the environmental impact of human activity and suggest ways in which we can live in a more environmentally-responsible way", 2-08b: "consider the advantages and disadvantages of a proposed land use development and discuss the impact this may have on the community".

Project 2

Literacy: 2-29a: "persuade, argue, explore issues or express an opinion"; **Number:** 2-16a:" Having explored a range of 3D objects and 2D shapes, I can use mathematical language to describe their properties, and through investigation can discuss where and why particular shapes are used in the environment", 2-16b: "through practical activities, I can show my understanding of the relationship between 3D objects and their nets". 2-16c: "draw 2D shapes and make representations of 3D objects using an appropriate range of methods and efficient use of resources; **Social studies:** 2-14: "extend my mental map and sense of place, I can interpret information from different types of maps and am beginning to locate key features within Scotland, UK, Europe or the wider world.

Project 3

Literacy: 2-02a: "engage with others…respond in ways appropriate to my role, show that I value other's contributions…", 2-28a: "convey information, describe events, explain processes or combine ideas in different ways", 2-29a: "persuade, argue, explore issues or express an opinion", 2-14a: "Using what I know about the features of different types of texts, I can find, select and sort information from a variety of sources and use this for different purposes", 2-26a: "By considering the type of text I am creating, I can select ideas and relevant information, organise these in an appropriate way for my purpose and use suitable vocabulary for my audience", **Technologies:** 2-01a: "When exploring technologies in the world around me, I can use what I learn to help to design or improve my ideas or products.

Teachers' notes

Project 4

Literacy: 2-28a: "convey information, describe events, explain processes or combine ideas in different ways", 2-15: can make notes, organise them under suitable headings and use them to understand information, develop my thinking, explore problems and create new texts, using my own words as appropriate; **Numeracy:** 2-11b: "I can use the common units of measure, convert between related units of the metric system and carry out calculations when solving problems", 2-11c: "I can explain how different methods can be used to find the perimeter and area of a simple 2D shape or volume of a simple 3D object", 2-03a: "Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others"; **Science:** 2-17a: "Having explored the substances that make up Earth's surface, I can compare some of their characteristics and uses".

Project 5

Literacy: 2-28a: "convey information, describe events, explain processes or combine ideas in different ways", 2-15: can make notes, organise them under suitable headings and use them to understand information, develop my thinking, explore problems and create new texts, using my own words as appropriate, 2-02a: "engage with others…respond in ways appropriate to my role, show that I value other's contributions…" , 2-29a: "persuade, argue, explore issues or express an opinion"; **Numeracy:** 2-16c: "I can draw 2D shapes and make representations of 3D objects using an appropriate range of methods and efficient use of resources"; **Social Studies:** 2-14a: "To extend my mental map and sense of place, I can interpret information from different types of maps and am beginning to locate key features within Scotland, UK, Europe or the wider world"; **Technologies:** 2-14b: "Having evaluated my work, I can adapt and improve, where appropriate, through trial and error or by using feedback".

Project 6

Health and Wellbeing: 2-16a: "I am learning to assess and manage risk, to protect myself and others, and to reduce the potential for harm when possible"; **Literacy:** 2-02a: "engage with others…respond in ways appropriate to my role, show that I value other's contributions…" , 2-28a: "convey information, describe events, explain processes or combine ideas in different ways", 2-29a: "persuade, argue, explore issues or express an opinion", 2-14a: "Using what I know about the features of different types of texts, I can find, select and sort information from a variety of sources and use this for different purposes", 2-26a: "By considering the type of text I am creating, I can select ideas and relevant information, organise these in an appropriate way for my purpose and use suitable vocabulary for my audience", **Technologies:** 2-01a: "When exploring technologies in the world around me, I can use what I learn to help to design or improve my ideas or products.

Teachers' notes

Links to the National Literacy and Numeracy Framework for Wales (NLNF) and other areas of the Welsh national curriculum

Project 1

Oracy: Speaking: express issues and ideas clearly, using specialist vocabulary and examples, speak clearly, using formal language and varying expression, tone and volume, to keep listeners interested; explore challenging or contentious issues through sustained role play; **Listening:** listen carefully to presentations and show understanding of the speakers' conclusions or opinions, respond to others with questions and comments which focus on reasons, implications and next steps; **Collaboration and discussion:** contribute purposefully to group discussion to achieve agreed outcomes, follow up points in group discussions, showing agreement or disagreement giving reasons.

Writing: adapt writing style to suit the reader and purpose, write a comprehensive account of a topic or theme, use a range of strategies to plan writing, explore different ways to present work and use them appropriately, reflect on, edit and redraft to improve their writing; **Structure and organisation:** adapt structures in writing for different contexts, write an effective introduction that establishes context and purpose, a suitable balance between facts and viewpoints, a precise conclusion, use paragraphs making links between them, use features and layout which are constructed to present data and ideas clearly.

Reading: use a range of strategies for finding information; read closely, annotating for specific purposes; use internet searches carefully, deciding which sources to read and believe.

History: describe the characteristic features of past societies and periods and identify changes within and across periods. Show how some aspects of the past have been represented and interpreted in different ways; **Progression in Historical enquiry:** begin to select and combine information from historical sources to support an historical enquiry and evaluate its success. Select, organise and communicate historical information in a variety of ways, including ICT. Select and organise information to produce structured work, making appropriate use of dates and some specialist terms.

Art and design: Pupils should be stimulated and inspired, where appropriate, by:

- images and artefacts from a variety of historical and contemporary cultures and contexts.

Pupils should investigate:

- the properties of materials and processes
- natural objects and environments
- made objects and environments
- imagined objects and environments.

They should, where appropriate, apply to their own work findings collected from a variety of contexts, including different cultures and periods.

ICT: find information from a variety of sources for a defined purpose.

Teachers' notes

Project 2

Geography: pupils should be given opportunities to:

- identify and locate places and environments using globes, atlases, and maps, e.g. use co-ordinates and four-figure references
- follow directions, estimate and calculate distances, e.g. follow map and ground routes, calculate map-to-ground distances.
- measure, collect and record data through carrying out practical investigations and fieldwork, and using secondary sources, e.g. use instruments to measure rainfall, use GIS, design questionnaires.

D&T: Pupils should be given opportunities to develop their design and technology capability through:

- tasks in which they learn about the responsible use of materials, considering issues of sustainability.
- developing and communicating their design ideas in a variety of ways, using ICT and models where appropriate.

Project 3

Oracy: Speaking: express issues and ideas clearly, using specialist vocabulary and examples, speak clearly, using formal language and varying expression, tone and volume, to keep listeners interested; explore challenging or contentious issues through sustained role play; **Listening:** listen carefully to presentations and show understanding of the speakers' conclusions or opinions, respond to others with questions and comments which focus on reasons, implications and next steps; **Collaboration and discussion:** contribute purposefully to group discussion to achieve agreed outcomes, follow up points in group discussions, showing agreement or disagreement giving reasons.

Writing: Organising ideas and information: adapt writing style to suit the reader and purpose, write a comprehensive account of a topic or theme, use a range of strategies to plan writing, explore different ways to present work and use them appropriately, reflect on, edit and redraft to improve their writing; **Structure and organisation:** adapt structures in writing for different contexts, write an effective introduction that establishes context and purpose, a suitable balance between facts and viewpoints, a precise conclusion, use paragraphs making links between them, use features and layout which are constructed to present data and ideas clearly; **Reading:** use a range of strategies for finding information; read closely, annotating for specific purposes; use internet searches carefully, deciding which sources to read and believe.

D&T: pupils should be given opportunities to develop and communicate their design ideas in a variety of ways, using ICT and models where appropriate.

ICT: find information from a variety of sources for a defined purpose.

Teachers' notes

Project 4

Oracy: Speaking: express issues and ideas clearly, using specialist vocabulary and examples, speak clearly, using formal language and varying expression, tone and volume, to keep listeners interested; explore challenging or contentious issues through sustained role play; **Listening:** listen carefully to presentations and show understanding of the speakers' conclusions or opinions, respond to others with questions and comments which focus on reasons, implications and next steps; **Collaboration and discussion:** contribute purposefully to group discussion to achieve agreed outcomes, follow up points in group discussions, showing agreement or disagreement giving reasons.

Writing: Style: adapt writing style to suit the reader and purpose, write a comprehensive account of a topic or theme, use a range of strategies to plan writing, explore different ways to present work and use them appropriately, reflect on, edit and redraft to improve their writing; **Structure:** adapt structures in writing for different contexts, write an effective introduction that establishes context and purpose, a suitable balance between facts and viewpoints, a precise conclusion, use paragraphs making links between them, use features and layout which are constructed to present data and ideas clearly.

Reading: use a range of strategies for finding information; read closely, annotating for specific purposes; use internet searches carefully, deciding which sources to read and believe

Geography: identify and locate places and environments using globes, atlases, and maps, e.g. use co-ordinates and four-figure references; follow directions, estimate and calculate distances, e.g. follow map and ground routes, calculate map-to-ground distances; measure, collect and record data through carrying out practical investigations and fieldwork, and using secondary sources, e.g. use instruments to measure rainfall, use GIS, design questionnaires.

Art and design: Pupils should investigate:

- the properties of materials and processes
- natural objects and environments
- made objects and environments
- imagined objects and environments.

D&T: develop and communicate their design ideas in a variety of ways, using ICT and models where appropriate.

ICT: find information from a variety of sources for a defined purpose.

Teachers' notes

Project 5

Oracy: Speaking: express issues and ideas clearly, using specialist vocabulary and examples, speak clearly, using formal language and varying expression, tone and volume, to keep listeners interested; explore challenging or contentious issues through sustained role play; **Listening:** listen carefully to presentations and show understanding of the speakers' conclusions or opinions, respond to others with questions and comments which focus on reasons, implications and next steps; **Collaboration and discussion:** contribute purposefully to group discussion to achieve agreed outcomes, follow up points in group discussions, showing agreement or disagreement giving reasons.

Writing: Style: adapt writing style to suit the reader and purpose, write a comprehensive account of a topic or theme, use a range of strategies to plan writing, explore different ways to present work and use them appropriately, reflect on, edit and redraft to improve their writing; **Structure:** adapt structures in writing for different contexts, write an effective introduction that establishes context and purpose, a suitable balance between facts and viewpoints, a precise conclusion, use paragraphs making links between them, use features and layout which are constructed to present data and ideas clearly.

Reading: use a range of strategies for finding information; read closely, annotating for specific purposes; use internet searches carefully, deciding which sources to read and believe.

Geography: identify and locate places and environments using globes, atlases, and maps, e.g. use co-ordinates and four-figure references; follow directions, estimate and calculate distances, e.g. follow map and ground routes, calculate map-to-ground distances; measure, collect and record data through carrying out practical investigations and fieldwork, and using secondary sources, e.g. use instruments to measure rainfall, use GIS, design questionnaires.

D&T: learn about the responsible use of materials, considering issues of sustainability; develop and communicate their design ideas in a variety of ways, using ICT and models where appropriate. Pupils should be given opportunities to:

- measure, mark out, cut, shape, join, weigh and mix a range of materials and ingredients, using appropriate tools/utensils, equipment and techniques.
- discuss their products, and evaluate their work, e.g. explain why and how they made their product and what they think about its function, features, performance, taste.

Teachers' notes

Project 6

Oracy: Speaking: express issues and ideas clearly, using specialist vocabulary and examples, speak clearly, using formal language and varying expression, tone and volume, to keep listeners interested; explore challenging or contentious issues through sustained role play; **Listening:** listen carefully to presentations and show understanding of the speakers' conclusions or opinions, respond to others with questions and comments which focus on reasons, implications and next steps; **Collaboration and discussion:** contribute purposefully to group discussion to achieve agreed outcomes, follow up points in.

Reading: use a range of strategies for finding information; read closely, annotating for specific purposes; use internet searches carefully, deciding which sources to read and believe.

D&T: develop and communicate their design ideas in a variety of ways, using ICT and models where appropriate; develop a simple specification/recipe for their products indicating their intentions and approach; discuss their products, and evaluate their work, e.g. explain why and how they made their product and what they think about its function, features, performance, taste.

ICT: find information from a variety of sources for a defined purpose.

More able children: The "real life" context of the Education Pack also makes it an ideal vehicle for addressing the extension objectives for your more able children.

Younger children: All of the activities can be used or adapted for Years 3 and 4 – and in some cases earlier still. Most of the NLNR objectives track back directly into these earlier years.

Answers page

Resource sheet 1

Organise the houses into time order.

1. Old Briton Home
3. Roman Building
4. Tudor House
7. English Country Cottage
8. Georgian Building
6. Victorian Street
5. Modern Tower Block
2. New Build Home

Resource sheet 2

Why do people improve old houses and how do they do it?

1. DIY store
2. Loft conversion
3. Dormer window
4. Planning for extensions/ conservatories
5. Insulation
6. Double glazing
7. Fencing
8. Garages
9. Installing solar panels
10. Landscaping
11. Partition walls

Resource sheet 6

Worker images.

1. Surveyor
2. Bricklayer
3. Site Manager
4. Carpenter
5. Machinery Operator
6. Decorator
7. Roofer
8. Architect
9. Electrician
10. Plumber
11. Sales Executive

Resource sheet 10

Keeping safe – hazards!

1. Excavators and other machines
2. Hazardous chemicals
3. Scaffolding
4. Cranes
5. Working at heights
6. Working on ladders
7. Working in trenches
8. Lorries and other vehicles on site
9. Material storage
10. Power tools
11. Site safety sign
12. Electricity
13. Overhead power lines
14. Fumes and dust