Adult Guidance

Using and Applying Skills

Structure and Purpose

The purpose of the 'Using & Applying' unit is to provide an engaging open-ended project for pupils to apply the skills they have developed by working on other units within the year group.

Designed to be completed by pupils in groups working over a number of lessons (such as a final half-term), the project incorporates software, skills and aims that have been covered in previous units.

Pupils should be encouraged to plan thoroughly first, before dividing up the separate tasks required to complete the whole project. Different elements of the project can be completed by different children, combining at the end but communicating and working together as a team throughout.

Ideally, there should be an opportunity for children in their groups to present their finished projects at the end, either to the rest of the class or even a wider school audience.

Role of the Teacher

Within these lessons, the emphasis is placed on the children working together as a team. The teacher's role will include guiding groups through their project and reminding children of the skills learnt in prior units, while supporting pupils wherever necessary.

Lesson Format

The first lesson of the unit will introduce the task and allow a discussion between the whole class about possible ways to incorporate the software and skills they have experienced. This planning stage will also allow children to split into groups to begin their projects.

The lessons that follow should be introduced with a recap of the project so far, asking groups to feedback their progress, and outline which tasks each individual will plan to do in the forthcoming lesson.
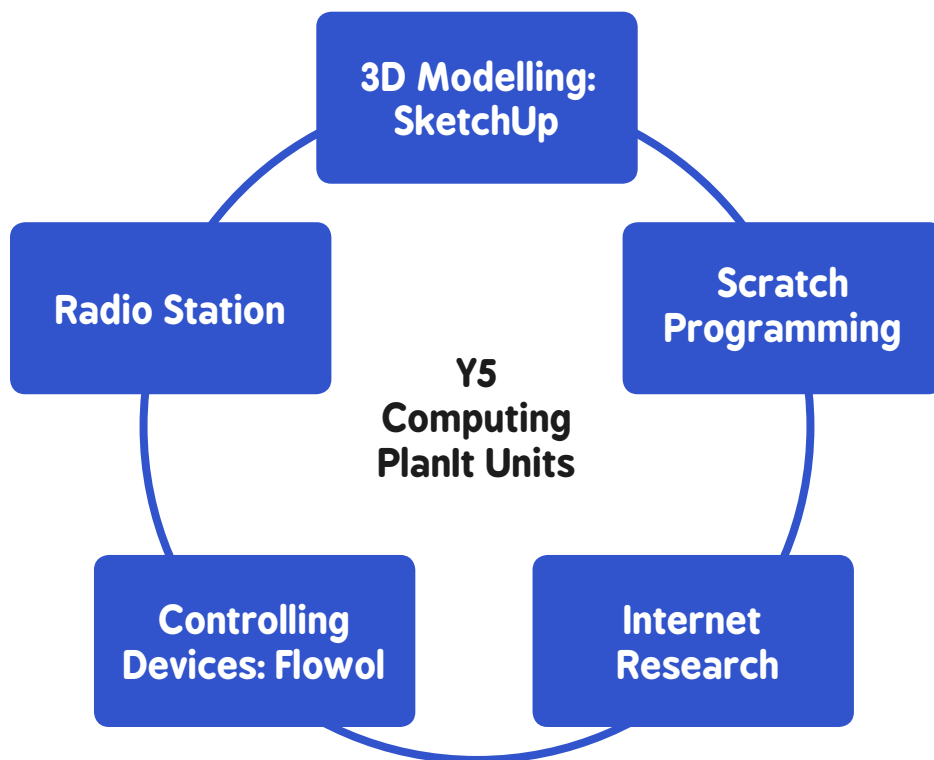
The final lesson should bring together the work from individuals within each group before giving them the opportunity to present finished or final projects.

Year 5 Project: Ultimate New Bedroom

The emphasis of this project is not just on the design of a room, but the evidence of effective prior research beforehand and the way that the design is presented using a combination of software.

- SketchUp (3D Modelling): if children are familiar with the software, this could form the basis of a room design, building on skills from the earlier PlanIt unit. Additionally, there could be smaller project elements on just designing a piece of furniture (e.g. bed or desk) as well as the whole room plan.

- Internet Research: children can research pictures in advance for inspiration (be aware of responsible searching and ensure appropriate firewall and filters are in place; a good starting search would be 'amazing kids bedrooms'). Further research could be limited to products and prices, including comparisons, using department store websites.

- Radio Station: children can plan and record a radio interview or podcast, with the bedroom 'designer' who describes all the features for the new design and what makes it so appealing.

- Flowol (controlling devices): a flowchart could be created for an automatic lighting or sound device.

- Scratch: children could use Scratch as a presentation tool to show the design elements of the bedroom; alternatively a game could be created that is unique to the bedroom design they are creating to be packaged as part of the bedroom itself.

Projects should aim to include, but not be limited to, as much of the software as possible that has been used during previous units in the year. This provides the opportunity to apply skills learnt in each to a new context.

Using and Applying Skills: Ultimate New Bedroom

Aim:
Select, use and combine a variety of software to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Children research and plan a new bedroom design.

I can research and design a new bedroom using appropriate software to create and present the plans.

The Big Question:
Can you design the ultimate new bedroom for a 10-year old?

Y5 Using and Applying Skills Computing Project: to be completed over a series of lessons.

Resources:
Lesson Pack

PCs or laptops with relevant software installed, including: MS Office, Scratch 2.0, Flowol, SketchUp and Audacity.

Access to the Internet

Sound recording equipment, e.g. plug-in microphone or device with built-in microphone.

Success Criteria:
I can use search engines safely and effectively to research ideas.

I can use and combine appropriate software to draw and design room plans and other features.

I can use and combine software to present information in different ways.

Key/New Words:
Research, plan, design, create, promote, evaluate, present.

Preparation:
Amazing Bedrooms Activity Sheet - as required

Product Comparison Activity Sheet - as required

Radio Interview Podcast Activity Sheet - as required

Project Evaluation Activity Sheet - 1 per child/group.

Prior Learning: Children will have been taught the skills in all or most other Year 5 units before Using & Applying, including Internet Research, 3D Modelling, Radio Station, Flowol and Scratch.

Learning Sequence: *to be completed over a series of lessons*

Beginning – Ultimate New Bedroom: Introduce the Big Question. What would children most like to have in their own 'ultimate bedroom'? Discuss and feed ideas back (e.g. games consoles, music system, lighting, wall decoration, furniture range). *Note: Images could be shown to inspire further ideas by searching the Internet.* Explain that children are to work in groups to complete the project over a series of lessons. Initial ideas can be planned individually or in pairs/groups, then further tasks should be shared between group members such as research, presenting information, creating a 3D plan, making a podcast and using Flowol. Discuss how each type of software could be incorporated and if it is appropriate. Remind children about other units covered throughout the year and how these could be incorporated into the project, as well as other software they may be familiar with.

Preparing – Plan and Research: Search for content ideas for your ultimate bedroom. Search for images to inspire (*e.g. 'Amazing Kids Bedroom'*). Compare products and prices, using appropriate store websites (e.g. department stores). Use printed catalogues to cut out ideas and stick onto a 'mind board'. What products would be essential and what would be desirable? What furniture is required? What additional features can you think of to make your room interesting and exciting? Can children use search engines safely and effectively to research ideas?

Exploring – Create and Describe Your Bedroom Design: Children work in groups to begin the tasks involved in the project. Set goals or targets of what is to be achieved by the end of each session. Begin each time by reviewing what has been done so far. Prioritise the design elements of the task, ensuring that either a 2D or 3D drawing of the room is completed. What additional materials can you create? Can children use and combine appropriate software to draw and design room plans and other features?

Reviewing – Evaluate and Present Your Project: Each group should use the Project Evaluation Activity Sheet to evaluate their own work as a group. These can then be presented to the rest of the class for other groups to appraise. Can children use and combine software to present information in different ways?

Supporting
Use the **Amazing Bedrooms Activity Sheet** to support children with design ideas and features.
Use the **Product Comparison Activity Sheet** to support children with researching and comparing.
Use the **Radio Interview Podcast Activity Sheet** to support children with preparation for their radio recording.

Extending
Challenge children who have been able to complete their tasks to research or create additional features or products. This could be using the Internet to make further comparisons or software such as SketchUp to model specific elements of a room.

Master*it*

Rehearse*it:* Create a presentation to introduce and describe your bedroom design to friends and other interested people. Rehearse what you will say, along with interactive slides or a presentation.

Search*it:* Search the Internet for more examples of an 'amazing kids bedroom'. Use images to illustrate and describe some of the ideal features you would like to include.
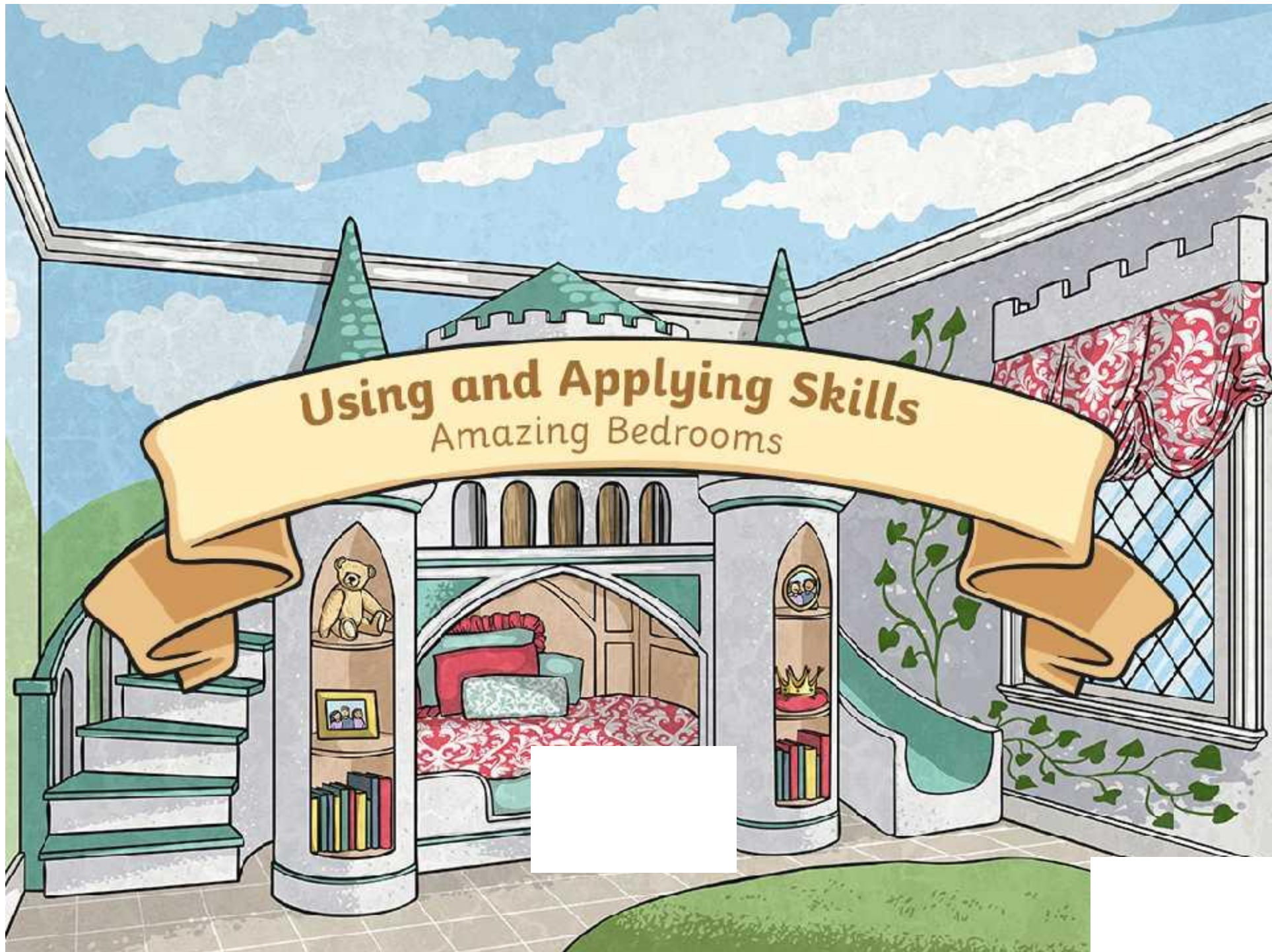
Design*it:* Use Scratch or other software to design an electronic assistant who communicates with you.

Computing

Using and Applying Skills

Using and Applying Skills
Amazing Bedrooms

Aim

- I can research and design a new bedroom using appropriate software to create and present the plans.

Success Criteria

- I can use search engines safely and effectively to research ideas.

- I can use and combine appropriate software to draw and design room plans and other features.

- I can use and combine software to present information in different ways.

Beginning – Ultimate New Bedroom

Whole Class

The Big Question: Can you design the ultimate new bedroom for a 10-year old?

Discuss and feed back your ideas:

- games consoles
- music system
- lighting
- wall decoration
- furniture

You will be working in groups to complete the project over a series of lessons.

Initial ideas can be planned individually, in pairs or in groups. Then, further tasks should be shared between group members such as research, presenting information, creating a 3D plan, making a podcast and using Flowol.

What software are we familiar with and how could each be incorporated into the project?

Preparing – Plan and Research

- Search for content ideas for your ultimate bedroom. Try searching for images to inspire (e.g. 'Amazing Kids Bedroom').

- You could compare products and prices, using appropriate store websites (e.g. department stores), or use printed catalogues to cut out ideas and stick onto a 'mind board'.

- What products would be essential and what would be desirable?

- What furniture is required?

- What additional features can you think of to make your room interesting and exciting?

Exploring – Create and Promote Your Bedroom Design

- Work in groups to begin the tasks involved in the project.

- Set goals or targets of what is to be achieved by the end of each session.

- Begin each time by reviewing what has been done so far.

- Make sure your priority is to design the actual room in either 2D or 3D.

- What additional materials can you create to make your finished project more interesting or exciting?

Reviewing – Evaluate and Present Your Project

- At the end of the project, use the Project Evaluation Activity Sheet to evaluate your work.

- Afterwards, your group can present your design and evaluation of it to the rest of the class.

Project Evaluation

Evaluate your project:

Describe the main design and features of your ultimate new bedroom.

_____

What software did you use?

_____

What is the best thing about your final project and why?

_____

What needed more work? What could you have done to improve it?

_____

What role did everyone have? What was your task?

_____

What would you do differently if you were to start your project again?

_____

What other comments would you make about the project?

_____

Aim

- I can research and design a new bedroom using appropriate software to create and present the plans.
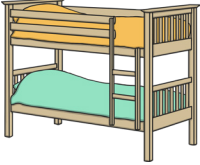
Success Criteria

- I can use search engines safely and effectively to research ideas.

- I can use and combine appropriate software to draw and design room plans and other features.

- I can use and combine software to present information in different ways.

Amazing Bedrooms

What features would be in an amazing bedroom?

Think of: furniture, wall decoration, games, music, lighting, and anything else you would like!

The Essentials	The Extras
What furniture would you definitely need to have in a new bedroom? Make a list of five items and put them into order, according to which is the priority (most needed).	Using your imagination and if money was no object, what items would you really like to have in your ultimate bedroom? Make a wish-list of five more possible items.
1. 2. 3. 4. 5.	1. 2. 3. 4. 5.

Amazing Furniture

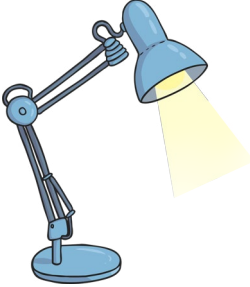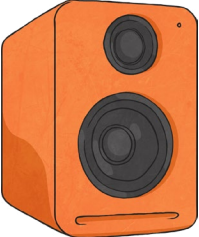How could you make the furniture in your ultimate bedroom better than a regular bedroom?

What would your bed look like? What would it include or be able to do? Make notes or draw ideas. You can continue on the back or more paper if you need. Think about how you can transfer your design and description to the computer. What software will you use?

Product Comparison

Think of the products or furniture that will be required in your bedroom.

Search and select a type or model that you like for each of these products. Use a range of stores or online shops to compare products and prices.

Product	Details and comparison
	(Note the price, copy and paste the link and type in any important details such as dimensions, material, quality). Say which place you would choose to buy from and why. Find three different sources (websites) for each.
Lamp / Light	1. 2. 3.
Music Player / Speakers	1. 2. 3.
Desk or Chair	1. 2. 3.

Project Evaluation

Evaluate your project:

Describe the main design and features of your 'ultimate new bedroom':

_____

_____

What software did you use?

_____

_____

What is the best thing about your final project and why?

_____

_____

What needed more work? What could have been done to improve it?

_____

_____

What roles did everyone have? What were your tasks?

_____

_____

What would you do differently if you were to start your project again?

_____

_____

What other comments would you make about the project?

_____

Radio Interview Podcast

If the designer of your 'ultimate new bedroom' was being interviewed for a radio programme or podcast, what questions would be good to ask and what answers would be given? How would the design be described and made to sound appealing to anyone listening?

Plan your interview ideas here (one person can play the part of the interviewer and one person the designer):

Question	Answer

Add notes about how the room design would be described and made to sound appealing here:

(You could use a word processor to type the script for your interview/podcast)

Using and Applying Skills

Challenge Cards

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Challenge Cards

Can you design an advert for your radio interview or podcast?

Can you use paint software to design your own item of furniture?

Can you interview potential customers about their opinions of

Can you carry out any market research by asking people what they would like in a bedroom design?

Research online or in a magazine the homes of any famous celebrity such as an actor, athlete

Write an estate agents description of your bedroom design.
Research other estate

Design an automated system for your room which controls the lights, music and heating with

Design a quiz or animation in Scratch all about your 'ultimate

Plants and animals are in the domain eukarya.

Write a review of a product from your bedroom design or one

Design the advertising materials for your complete bedroom package, if it was available

Write a short description for a competition or prize giveaway to win a bedroom makeover

Decide on a colour scheme or a theme for your room. Include a presentation of optional extra items to add

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Challenge Cards

Can you design an advert for your radio interview or podcast?

Can you use paint software to design your own item of furniture?

Can you carry out any market research by asking people what they would like in a bedroom design?

Can you interview potential customers about their opinions of the finished bedroom design?

Write a review of a product from your bedroom design or one that you have seen online.

Design the advertising materials for your complete bedroom package, if it was available to buy.

Decide on a colour scheme or a theme for your room. Include a presentation of optional extra items to add to your bedroom design.

Write a short description for a competition or prize giveaway to win a bedroom makeover.

Research online or in a magazine the homes of any famous celebrity such as an actor, athlete or musician.

Design an automated system for your room which controls the lights, music and heating with sensors, buttons or commands.

Write an estate agents description of your bedroom design. Research other estate agent descriptions first.

Design a quiz or animation in Scratch all about your 'ultimate bedroom design'.