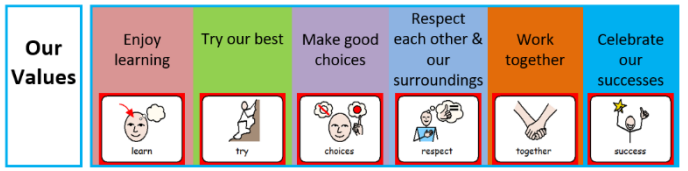


## SUBJECT MEDIUM TERM PLANNING - SUBJECT

| **Year Group:** 1 | **TERM:** Summer 1 | **Theme:** Grouping Data |
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**National Curriculum:**

- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- Recognise common uses of information technology beyond school
- Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

**Context:** -

This unit introduces pupils to data and information. They will begin by using labels to put objects into groups, and labelling these groups. Pupils will demonstrate that they can count a small number of objects, before and after the objects are grouped. They will then begin to demonstrate their ability to sort objects into different groups, based on the properties they choose. Finally, pupils will use their ability to sort objects into different groups to answer questions about data.

**Concepts:**

**Information Technology -** developing their understanding of how computers are used to label and group objects / data.

**Digital Literacy –** developing their understanding of how to stay happy and healthy online.

**Vocabulary:**

**information -** facts or knowledge that have been gathered about something or someone
**data -** numbers, words or figures that we can get information from
**properties -** the features of an item/object.
**label –** objects can be labelled using either names or properties.
**group –** placing objects together based on their properties.
**describe –** we can say what an objects or group of objects is like based on their properties.
**similar –** when we look at what is the same about groups/objects
**different -** when we look at what is different about groups/objects.
**search –** looking for information on the internet using key words/phrases

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| **Prior Knowledge:**<br>• Be able to count 1:1 objects **(Year 1 – maths curriculum)**<br>• Be able to sort objects based on a given criteria (e.g. colour or shape) **(FS2 & Year 1 – maths curriculum)** | **Future Knowledge**:<br>• To be able to group objects based on a common attribute **(Year 2, Spr 2 - Pictograms)**<br>• To present data graphically using tally charts and pictograms **(Year 2, Spr 2 - Pictograms)**<br>• To be able to answer questions about their pictograms / tally charts using mathematical language **(Year 2, Spr 2 - Pictograms)**<br>• Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information **(KS2)**<br>• To use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. **(KS2)** |
| **End points / by the end of this unit pupils will…**<br>• Be able to describe objects using labels.<br>• Be able to identify the label for a group of objects.<br>• Be able to count a group of objects.<br>• Be able to describe a property of an object.<br>• Be able to find objects with similar properties.<br>• Be able to group similar objects.<br>• Be able to group objects in more than one way.<br>• Be able to decide how to group objects to answer a question.<br>• Be able to compare groups of objects.<br>• Be able to identify rules that keep us safe online<br>• Be able to identify rules that keep us happy and healthy online | **Crucial Knowledge**:<br>Pupils need to be able to group objects based on their properties.<br>Properties are the features of an item/object. (e.g – colour, size, use)<br>Pupils need to be able to group objects to help them answer a question and compare the data through looking at the similarities and differences.<br>Pupils need to be able to use language of "greater than, less than or equal to" to compare groups. |

<table>
<tr><th colspan="3">Lesson Number - 1</th></tr>
<tr><td>Key learning: To label objects and identify objects that can be counted</td><td>Concepts:<br><br>Information Technology</td><td rowspan="2">Lesson structure: Introduction, direct teaching, activities, key questions<br><br><u>Engage:</u><br><br>Read the following description to the class.<br><br>“I’m looking for a wooden stick that has a pointed end. It is filled with lead and we use it to write on paper.”<br><br>Ask one of the pupils to find the object (a pencil). Once they have found it, explain that objects are given names to make it easier for people to know what is being talked about. The names are labels that could be given to the objects. For example, the object that the pupil found would be given the label ‘pencil’.<br><br><u>Introduce:</u><br><br>Ask pupils to find labels around the classroom. Give them time to move around the room looking for labels. These might include:<br>• Drawer labels (pencils, pens, paper, etc)<br>• Book labels (English book, maths book, topic book, etc)<br>• Room labels (Foxes class etc)<br><br>Discuss some of the labels that pupils have found.<br>Q - “Why do objects have labels?” (We give labels to objects to make them easy to talk about and find).<br><br>Model opening up a search engine (e.g. google) and click on images. Tell pupils you are going to type in the word ‘cat’.<br>Q – What do you think the computer is going to show?<br>Then press enter and show the results.<br>Point to one of the images.<br>Q – Does the computer know that this is a cat in this image? How does it know?<br>Explain that the computer doesn’t recognise that the images are cats; it is showing the images because a human gave the image a label, like those that they found around the classroom.</td></tr>
<tr><td>Success Criteria:<br>• I can describe objects using labels<br>• I can match objects to groups<br>• I can identify the label for a group of objects<br>• I can count objects<br>• I can group objects<br>• I can count a group of objects</td><td>Suggested resources:<br>Flipchart<br><br>An assortment of physical objects to group<br><br>Group labels<br><br>Large hoops or other sorting equipment</td></tr>
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| | | Show 2 circles on the flipchart with labels (e.g. animal and cars). Have pictures that fit into either of those categories<br>Have pupils help you drag the image into the correct circle.<br><br>**<u>P&C</u>**<br>This activity should be completed with physical objects. If not then pictures of the objects will be fine.<br>Scatter 10 to 20 different objects that fit into the three group labels : 'things we play with', 'things we write with', 'things we eat'.<br><br>Explain to pupils that they are not allowed to move the objects for this activity. Tell them to count the total number of objects and write it down on a whiteboard or scrap paper. Encourage pupils to check their counting. Pupils to share their answer with the class.<br><br>Then ask them just to count "things we eat" without moving any of the objects and write their answer down. Pupils to share their answer with the class.<br><br>Q – was it easier or harder to count one group?<br>Take answers from pupils and focus on their understanding of why this is more challenging to do in a big group of objects. Guide pupils to think about how it is difficult to keep track of what has already been counted, or of what objects they are counting, when there is a large group of objects mixed together.<br><br>Q – How could you make it easier?<br>Organising the objects into groups.<br><br>**<u>Independent</u>**<br>Set up 3 hoops, or specify areas on tables, with three group labels such as: 'things we play with', 'things we write with', 'things we eat'.<br><br>1. Ask pupils to work in groups to place the objects into the correct group. |

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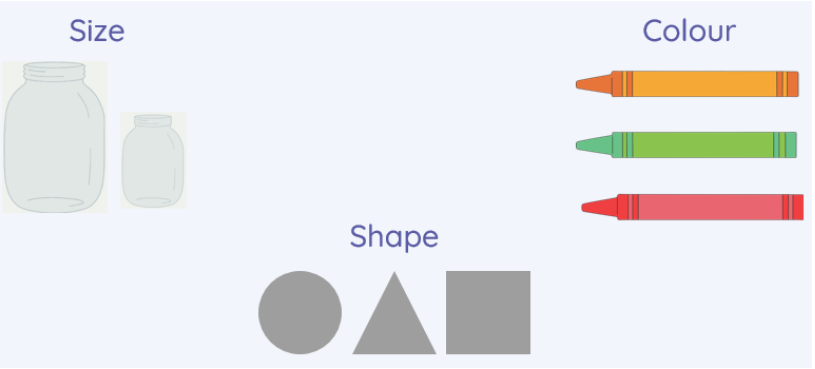
| | | Q – Are there any objects with the wrong label?<br>Ensure that pupils have checked, and discuss any misconceptions that arise.<br><br>Explain that by putting the objects with a label, they have made groups. This is a way of putting similar objects into groups, and it's why the computer showed us lots of different cats when the word 'cat' was searched.<br><br>2. Then ask pupils to count how many objects are in each group and make a note of the number.<br><br>Take pictures of this activity. You could make a note of comments that pupils have given during the first part of the lesson and during this activity and add them along with the pictures to be put into the class floorbook.<br><br>**Deepen**<br>Discussion on the carpet.<br>Q – Do you think a computer would know how many objects there are?<br>Take answers, and explain that the computer would only know the number if a human told it the number, or told it to count.<br>Discuss the example of the register completed on the computer to help pupil's understanding. Explain that when you do the register, someone has already told the computer to count how many people are marked as 'present' in the class. Explain that the computer isn't smart; it needs humans to tell it what to do and how to do it.<br><br>**Reflection**<br>Use thumbs up (3 – confident), thumbs middle (2 – unsure), thumbs down (1 – not confident) to reflect on the three statements.<br>• I can count objects<br>• I can group objects<br>• I can count a group of objects |
| **Vocabulary:** Object, label, group, search, image | | |

<table>
<tr><th colspan="3">Lesson Number - 2</th></tr>
<tr><td>Key learning:<br>To describe objects in different ways.</td><td>Concepts:<br><br>Information Technology</td><td rowspan="2">Lesson structure: Introduction, direct teaching, activities, key questions<br><br><u>Engage:</u><br><br>Show pupils images with three description labels (colour, size, shape). Explain that these are some of the ways that we can describe an object.<br><br>  <br><br><br>Q - “What words can you think of for each property?” For example, pupils may suggest ‘green’ for ‘colour’. Ask pupils to provide some suggestions, and add the words to the flipchart.<br><br><u>Introduce:</u><br><br>Q – what is a property?<br>A property is used to describe an object, and people can use properties to tell computers what objects are and how to sort them.<br><br>Show a picture of a red circle. What properties can you think of to describe this object? Ask pupils to share their ideas and then show them some examples (colour – red, shape – circle, size – big). These are all properties.</td></tr>
<tr><td>Success Criteria:<br>• I can describe an object<br>• I can describe a property of an object<br>• I can find objects with similar properties</td><td>Suggested resources:<br><br>Flipchart<br><br>Worksheets for independent task<br><br>2D shapes (optional scaffold – see P&C)</td></tr>
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| | | Show pupils that properties allow them to group objects. Show a picture of different objects grouped together that are all red. Explain that the property used to group the objects in this example is colour. All the grouped objects are red.<br><br>**<u>P&C</u>**<br><br>Display a range of words that can be used to describe objects (e.g. big, small, circle, square, red, blue).<br><br>Show pupils some different images of shapes – they have to select the correct property to finish the sentence. E.g. Show a picture of a blue triangle. "It's colour is _____" Pupils fill in the word 'blue'.<br>This could be done either:<br>• As a whole class on the carpet (discussion)<br>• Table groups – pupils have the vocabulary (shared at the start of the P&C) on pieces of paper. They have to hold up the correct answer.<br><br>***NOTE:*** *You may want to provide some pupils with just two 2D shapes that are the same in shape, but different in other values, for example, one red circle and one blue circle. Ask pupils to describe the shapes and discuss what is different and what is the same. Use talk buttons or dictation tools to record their discussion.*<br><br>**<u>Independent</u>**<br><br>Pupils find objects around the room that have similar properties. The property that they are going to find is colour.<br><br>Ask pupils to find **three things** in the room that are the same colour.<br><br>Ask pupils to pick and circle the colour that they are searching for on their activity sheets (or pupils can write the colour they have chosen if you they are able). Ask them to draw what they find and label the object underneath. |

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| | | **Note:** The focus of this activity is pupils' understanding of the term 'property', not their drawing skills. Ensure that pupils are aware that their drawings should be no more than a quick sketch of the object.<br><br>Sheets to be stuck into their discovery books.<br><br>**Deepening**<br><br>Show pupils a range of objects on the screen.<br>Q – If the property is 'black', which objects would the computer show?<br>Pupils to help teacher circle the correct answers.<br><br>Explain to pupils that humans tell computers how to arrange objects.<br>Show the objects from the previous slide again.<br>Q - "Do you need to label something as 'not black'?"<br>After a brief discussion, reveal that you do not: other images will be given a different property to use, like 'green', 'circle', or 'soft', etc, and they won't show up if they are not labelled as 'black'.<br><br>Explain to pupils that to make it easier to find the things that we are looking for, images on the computer need lots of different property labels.<br><br>Q – what labels do you think this image could be given? Pupils to generate 6 different ideas ( e.g 2 eyes, 8 legs, stripes, black, orange, spider).<br>This could be recorded into their books or done as a group discussion depending on the ability of the class.<br><br>  |

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| | | **Reflection**<br>Use thumbs up (3 – confident), thumbs middle (2 – unsure), thumbs down (1 – not confident) to reflect on the three statements.<br>• I can describe an object<br>• I can describe a property of an object<br>• I can find objects with similar properties |
| **Vocabulary:** Group, object, property, label, colour, size, shape | | |

| **Lesson Number - 3** | | |
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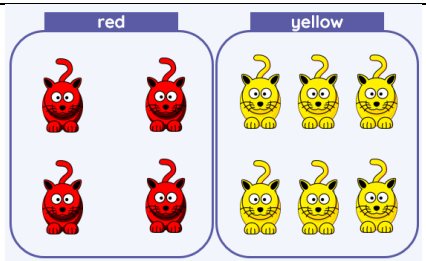
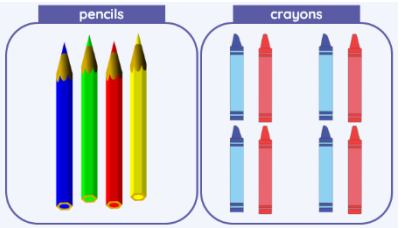
| **Key learning:**<br>To compare groups of objects | **Concepts:**<br><br>Information Technology | **Lesson structure: Introduction, direct teaching, activities, key questions**<br><br>**Engage:**<br><br>Recap vocabulary from previous lesson.<br><br>Q – What is a property?<br>A property is used to describe an object, and people can use properties to tell computers what objects are and how to sort them.<br><br>Some objects can be described using many different properties.<br>Q – Do you think you need to label every colour on this picture?<br>No because that would be very difficult as there are so many colours. It would be better just to pick out the main colours instead (blue and red) or say multi-coloured.<br><br>  <br><br>**Introduce:**<br><br>When we group objects together, we can use comparing words to describe them.<br>Q – What does comparing mean?<br>It is when you look at what is the same and what is different between 2 or more things. You can compare objects or groups of objects. |
| **Success Criteria:**<br>• I can choose how to group objects<br>• I can describe groups of objects<br>• I can compare groups of objects<br>• I can identify how many objects are in a group | **Suggested resources:**<br><br>Flipchart<br><br>Creating groups activity sheet<br><br>Chromebooks | |

Show 2 pictures and display examples of comparing language (more than, less than, same as, most, least).
Model to pupils how to use this language to compare the 2 groups of objects. (E.g. The red group has the 'same' type of objects as the yellow group)




Show 2 more pictures with the same comparing language (more than, less than, same as, most, least).
Q – can you compare the groups?
Pupils to generate their own sentences verbally to compare the 2 groups of objects and feedback to class. (E.g. the group of crayons has more than the group of pencils).




**P&C**

***Note:*** *Pupils should ideally complete this activity on the Chromebooks using a digital copy of the 'Creating groups' activity sheet. This will allow pupils to practise their mouse skills whilst dragging the objects into the correct places.*

*To do this, pupils will need to access their own copy of this file. A copy of the activity has been saved onto the Class 1 Google Drive for you titled "Y1 Summer 1 Lesson 3 – Creating Groups". This can then be used on the Chromebooks in pairs or small groups. Depending on the ability of the children, you could do this as a whole class on the interactive whiteboard instead using the same document.*

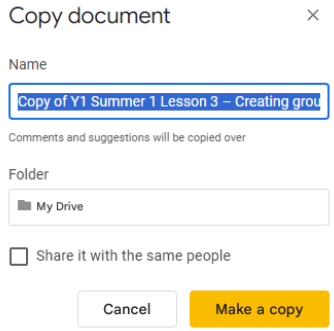
If doing in pairs / small groups on the Chromebooks you will need to show pupils how to access the document step by step. Alternatively, this could be set up for them before the lesson. This is how:

1. Remind pupils how to log onto the Chromebooks (Username: class1 Password: class100)
2. Open up Google chrome and access Google drive
3. Type into the search bar "Y1". This should be enough for the document to appear.

4. Double click on the document which will open up.

All pupils will first need to **save** their own copy before making any changes to the document. Pupils should attempt this so they can practise saving their work (as part of the curriculum):

1. When in the document click on File – Make a Copy – Entire Presentation
2. Change the name of the document by typing in the names of the pupils in the group
3. Click on "Make a Copy"




Pupils will then be able to edit their own documents. They do not need to save it again as it automatically saves for them on the google drive.

Once pupils are set up, model the activity. (You may need to explain to pupils how to click and drag on the Chromebooks).
Pupils to group the objects in ways of their own choosing (by colour, shape or size for example). Encourage them to have a go at all 3 slides, grouping the objects by different properties each time.

When finished, bring pupils back to the carpet but don't let them close their work down as they will need if for the next task.

**Independent**

On the carpet, recap vocabulary for describing and comparing (shape, size, colour, same, less than, more than, most, least).

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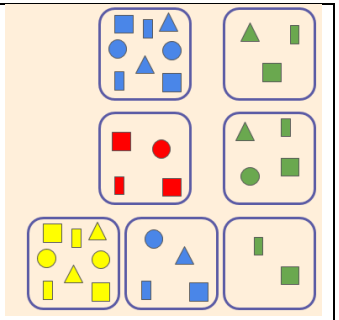
| | | On the carpet, ask pupils to use this vocabulary to complete the sentences for the picture on the right:<br>1. The blue group has _____ than the green group.<br>2. The red group has the _____as the green group.<br>3. The yellow group has the _____.<br>  <br>Ask pupils to return to their computers, and give them one minute to think about how they could describe the groups that they have created. Ask pupils to share their descriptions with a partner, and ensure that both partners have the chance to share the descriptions of their groups.<br><br>***NOTE –*** *provide pupils with a handout of key vocabulary / sentence stems for them to use.*<br><br>Teacher to move round the classroom and record comments that pupils give. These can be added to a sheet with photos / screenshots of their work to be added to the class floor book.<br><br>**Deepening**<br>**Which group has the most, and which group has the fewest?**<br><br>Show pictures of objects put into 4 / 5 different groups. Explain that you have grouped the objects by the property, colour.<br>Q - "Which group has the **most** objects?".<br>Q - "Which group has the ***fewest*** objects?"<br><br>**Reflection**<br>Use thumbs up (3 – confident), thumbs middle (2 – unsure), thumbs down (1 – not confident) to reflect on the three statements.<br>• I can choose how to group objects<br>• I can describe groups of objects<br>• I can identify how many objects are in a group |
| **Vocabulary:** Group, object, property, value, compare, label, colour, size, shape, more, less, most, fewest | | |

<table>
<tr><th colspan="3">Lesson Number - 4</th></tr>
<tr><td>Key learning:<br>To answer questions about groups of objects.</td><td>Concepts:<br><br>Information Technology</td><td rowspan="2">Lesson structure: Introduction, direct teaching, activities, key questions<br><br><u>Engage:</u><br><br>Show a series of pictures of objects in groups of 2 / 3 for different properties.<br><br>Pupils to decide whether the statements for each group of objects are True or False.<br><br>• “The objects are grouped by colour”<br>• “The objects are grouped by size”<br>• “The _____ group has more than the _____ group.”<br><br><u>Introduce:</u><br><br>Share a large group of objects on the flip.<br>Q – “ How many _____ (property based on pictures chosen) objects are there?”<br><br>Give pupils time to work out an answer.<br><br>Q – Was it easy to work out an answer to the question?<br>Q – What made it tricky?<br>Some pupils may think that this was an easy task because they got the correct answer. Encourage them to think about how hard they had to concentrate, and the length of time that it took them to find the answer, to establish that there are ways to make it easier.<br>Q – How could you make it easier? (Grouping objects together)<br><br><u>P&C</u><br>Show a range of circles, triangles, rectangles and squares. Tell the pupils that you want to find out if there are more triangles are squares.<br>Q – Can I group them into triangles and not triangles?<br>Show them an example of this on the board. After pupils have given their feedback, reveal the answer: you cannot, as this will only tell you the number of triangles, not whether there are more triangles than squares.</td></tr>
<tr><td>Success Criteria:<br>• I can decide how to group objects to answer a question<br>• I can compare groups of objects<br>• I can record and share what I have found</td><td>Suggested resources:<br><br>Flipchart<br><br>Answering questions activity sheet<br><br>Chromebooks</td></tr>
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| | | Show them an example where they have been grouped into triangles, squares and not triangles. Remind pupils that they only have to group some of the objects to answer the question.<br>Ask pupils to count the objects in the 'squares' and 'triangles' groups and answer the question (there are more triangles than squares). Remind pupils that they don't need to count the objects in the 'not triangles or squares' group because it won't help them answer the question.<br><br>**Independent**<br><br>***Note:*** *Pupils should ideally complete this activity on the Chromebooks using a digital copy of the 'Creating groups' activity sheet. This will allow pupils to practise their mouse skills whilst dragging the objects into the correct places.*<br><br>*To do this, pupils will need to access their own copy of this file. A copy of the activity has been saved onto the Class 1 Google Drive for you titled "Y1 Summer 1 Lesson 4 – Answering questions". This can then be used on the Chromebooks in pairs or small groups. Depending on the ability of the children, you could do this as a whole class on the interactive whiteboard instead using the same document.*<br><br>See previous lesson for step by step instructions on how to access the document on the Google Drive and save it to their own name.<br><br>Pupils need to read the questions on the slides and make groups by dragging and dropping the objects to help them answer them. Once they have answered a question, they can move on to the next slide.<br><br>***NOTE -*** *If reading the questions on the 'Answering questions' activity sheet is too challenging for your pupils, consider completing the activity a slide at a time, allowing pupils time to drag and drop the objects to answer each question.*<br><br>***NOTE –*** *to extend the task further, pupils could think of a different question that could be answered using the objects on the final slide of the activity sheet. Then, ask them to share it with a partner. Remind them that they must have worked out the answer, or else they won't know if their partner is right or wrong!* |

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| | | **Deepening**<br>Ask pupils to share their answers to the questions with the class. Encourage pupils to use full sentences when answering.<br><br>Encourage any pupils who completed the challenge task in the 'Answering questions' activity to share their questions with the class. If there is enough time, consider allowing pupils to have a go at answering these questions using their activity sheets, and discuss any misconceptions.<br><br>Pupils can then log off and shut down their computers.<br><br>**Reflection**<br><br>Use thumbs up (3 – confident), thumbs middle (2 – unsure), thumbs down (1 – not confident) to reflect on the three statements.<br>• I can decide how to group objects to answer a question<br>• I can compare groups of objects<br>• I can record and share what I have found |
| **Vocabulary:** Group, object, property, value, label, colour, data set, more, less, most, least, fewest, the same | | |

| **Lesson Number - 5** | | |
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| **Key learning:** To apply my knowledge of grouping and sorting | **Concepts:**<br><br>Information Technology | **Lesson structure: Introduction, direct teaching, activities, key questions**<br><br>**Independent**<br><br>Pupils to complete a Kahoot quiz on the Ipads to check their knowledge and understanding of the key concepts covered over the past half term.<br><br>Questions to include: |
| **Success Criteria:**<br>• I can choose how to group objects<br>• I can describe groups of objects | **Suggested resources:**<br><br>Kahoot Quiz<br><br>Ipads | |

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| • I can answer questions based on my knowledge of grouping and sorting | | 1) What is a 'property'?<br>2) What does 'comparing' mean?<br>3) Show picture of a triangle. Choose the properties that match the picture. (Could be a question where more than one answer needs to be selected).<br>4) Show picture of a piece of fruit. Choose the properties that match the picture. (Could be a question where more than one answer needs to be selected).<br>5) Show a picture of shapes that have been sorted into 2 groups. By which property have these shapes been sorted? (E.g. by colour, shape or size)<br>6) Show a picture of animals that have been sorted into 2 groups. By which property have these shapes been sorted? (E.g. by type, colour or size)<br>7) Show a picture of a selection of objects. How could you sort the objects into 2 groups? (e.g. blue and not blue)<br>8) Show a picture of a selection of objects. How could you sort the objects into 2 groups? (different set of objects and answers to the previous question)<br><br>**Reflection**<br><br>Complete the Project Evolve Pre-assessment Knowledge Map for Year 1 – Health, Well-being and Lifestyle. |
| **Vocabulary:** Group, object, property, value, label, compare | | |

| **Lesson Number - 6** | | |
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| **Key learning:**<br>I can explain rules to keep myself safe when using technology both in and beyond the home. | **Concepts:**<br><br>Digital Literacy | **Engage**<br>Q – what things do you do the most at home when you are using technology? (e.g. playing games, reading, listening to music etc.) |

| **Success Criteria:** | **Suggested resources:** | **Introduce** |
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| • Tell you the rules around their own use of technology in and beyond the home.<br><br>• Explain why these rules help keep them safe.<br><br>• Identify rules that apply to safety and rules that apply to health/well-being<br><br>• Emerging awareness of how rules may change with simple changes in context (where they are, what they are doing and who they might be with) | Project Evolve knowledge map<br><br>Flipchart<br><br>Project Evolve resources for "Year 1 – Health, Well-being and Lifestyle" | Discuss with children the difference between rules that keep us safe and those that make sure we are happy and healthy. Can they give any examples?<br>E.g an example of a rule to keep us safe would be not running with scissors, an example of one to keep us happy and healthy is to do 15 minutes of exercise every day.<br><br>**Practise & Consider**<br><br>We can also have rules to keep us safe online and rules to keep us happy and healthy online. Provide some examples – can they sort which rules they think are for keeping safe, and which are for staying happy and healthy?<br>• Go on Youtube when an adult is there.<br>• Only use the Ipad at weekends<br>• Take a break from the Switch after 20 minutes<br>• Don't click on anything you don't understand<br>• Only go on games or websites that have been approved by an adult<br><br>This can be done as a class or table groups.<br><br>**Independent**<br>Read out scenarios to the class.<br>Q - Which rule do you think they match to?<br>Ask them to explain their reasoning focusing on the difference between being safe online and feeling happy and healthy online, e.g taking breaks whilst playing my games would keep me happy and healthy so that my eyes don't hurt. |

Rules

- Set myself a time limit
- Stop using and give attention
- Take a short break
- Do something else

Scenarios


**Deepening**

Q – Do you have any rules at home for using technology? What are they?

Q – Which rules do you think keep you safe?

Q – Which rules do you think keep you happy and healthy?

Note down pupils ideas. Add to a word document and add to the class floor book.

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| | | **Reflection**<br>Complete knowledge map "assess impact" on the lesson outcome that has been taught to identify impact of learning. |
| **Vocabulary:** safe, healthy, happy, rules | | |