



# Portfields Primary School Medium Term Plan



Year Group – 1

Subject - **Design and Technology**

Strand – **Mechanisms**

Topic – **Moving Storybook**

Term - **Summer 1**

| National Curriculum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Key Questions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Substantive Knowledge                                                                                                                                                                                                                                                                                                   | Key Vocabulary                                                                                 | Real-Life Links                                                                                                                                              |
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| Design purposeful, functional, appealing products for themselves and other users based on design criteria.<br><br>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.<br><br>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].<br><br>Evaluate their ideas and products against design criteria.<br><br>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. | What objects do you know that have moving parts?<br>How do the parts move in the same direction?<br>Would it be good to have the pictures in a book move?<br>How can we make pictures in a book move?<br>What moving books do you know?<br>Do you prefer up-and-down or side-to-side sliders? Why?<br>What will EYFS children want to see in a story book?<br>What will the background of this page be? Why?<br>What will the moving part of this page be? How does this contribute to the story?<br>What feedback did you receive about your final product from the target market?<br>What would you do differently next time? |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Know that mechanisms are the parts of an object that move together.<br><br>Understand the three distinct parts of a given story. Know that designs should be appropriate for the target market.<br><br>Understand that the background and moving parts of the storybook need to complement each other and tell a story. | Background<br>Design<br>Down<br>Feedback<br>Lolly stick<br>Mechanism<br>Movement<br>Side<br>Up | Mechanisms in a playground: seesaw, roundabout, swings.<br><br>A ball bouncing up and down.<br><br>A bicycle or tricycle.<br><br>The story of Humpty Dumpty. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Technical Questions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | What is a mechanism?<br><i>The parts of an object that move together.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | What is a target market?<br><i>The people a product is being made for.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | How can we make pictures in a book move?<br><i>Using an up and down or side to side slider.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | How can we tell a story without words?<br><i>By moving pictures on the ends of sliders.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Disciplinary Knowledge                                                                                                                                                                                                                                                                                                  | Design criteria<br>Prototype<br>Slider<br>Slot<br>Target market                                | Inventors and Makers                                                                                                                                         |
| Why are we making slider handles from lolly sticks?<br><i>Lolly sticks are stiff so will not bend or get stuck inside the paper as they move.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                            | How do you know what the moving part on each page should be?<br><i>The moving part should be related to that part of the story and fit the background.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                                                                                              |
| Why do we need slots?<br><i>Slots are slits/cuts in paper that a slider is threaded through. They keep a slider in place whilst still allowing up-and-down or side-to-side movement.</i>                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Name some everyday objects that have mechanisms for movement.<br><br>Make prototype up-and-down and side-to-side sliders to test movement using a picture on a lolly stick and slots in paper.<br><br>Create a class design criteria based on the target market (EYFS children).<br><br>Design a moving storybook using a planning template to plan the background, moving part and mechanism of each part.<br><br>Make up-and-down and side-to-side sliders using lolly sticks.<br><br>Cuts slits in folded paper to create slots for sliders. Create backgrounds and moving part designs that fit with the theme of the storybook.<br><br>Present the final product to the target audience and receive feedback. |                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                                                                                              |

| Lesson 1       |                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                  |                                                                                    |
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| Flashback Four |                                                                                                                                                                                              | Learning Objectives                                                                                                                                                                                                                                                                              | Star Knowledge                                                                     |
|                | <b>Last Topic</b><br>What are these methods of joining fabric called?<br><i>Pinning, gluing, stapling</i>  | <b>Learning Objective</b><br>LO to explore the movement of sliders.<br><br><b>Success Criteria</b><br>I know that mechanisms are the parts of an object that move together.<br>I can name some everyday objects that have mechanisms.<br>I can make and test prototype sliders to test movement. | <i>Kapow lesson 1</i><br>Mechanisms are the parts of an object that move together. |
|                | <b>Last Year</b><br>How can you test whether a material is waterproof?<br><i>Pour water over it</i>                                                                                          |                                                                                                                                                                                                                                                                                                  |                                                                                    |
|                | <b>Art</b><br>Name the three secondary colours.<br><i>Orange, green, violet/purple</i>                      |                                                                                                                                                                                                                                                                                                  |                                                                                    |

| Lesson 2                                                                                                                                                                                                              |                                                                                                                                                                                        |                                                                                                                                                                                                                                                       |                                                                                                       |
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| Flashback Four                                                                                                                                                                                                        |                                                                                                                                                                                        | Learning Objectives                                                                                                                                                                                                                                   | Star Knowledge                                                                                        |
| <b>Last Lesson</b><br>Which of these is not an example of a mechanism?<br><i>A bench because it does not have any moving parts.</i>  | <b>Last Topic</b><br>Why do I need to leave a gap when joining 2 pieces of fabric to make a puppet?<br><i>Because there needs to be a big enough space for your hand to go inside.</i> | <b>Learning Objective</b><br>LO to design a moving storybook.<br><br><b>Success Criteria</b><br>I can create a class design criteria to suit the target market.<br>I can plan the background, moving part and mechanism of each page of my storybook. | <i>Kapow lesson 2</i><br>A planning template can be used to organise ideas and designs before making. |
| <b>Last Year</b><br>How can you test whether an object will float or sink?<br><i>Place them in water</i>                                                                                                              | <b>Art</b><br>What is Pop Art?<br><i>Pop art is a type of art that uses bold and bright colours.</i>                                                                                   |                                                                                                                                                                                                                                                       |                                                                                                       |

| Lesson 3                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                       |                                                                                                                                          |
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| Flashback Four                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                           | Learning Objectives                                                                                                                                                                                                                                   | Star Knowledge                                                                                                                           |
| <b>Last Lesson</b><br>Should the background of this page of a moving storybook be a beach?<br><i>No, it should be related to the moving part.</i>          | <b>Last Topic</b><br>What is the problem with using glue to join fabric in this example?<br><i>The glue has become unstuck and there are gaps between the fabric.</i>  | <b>Learning Objective</b><br>LO to make a moving storybook.<br><br><b>Success Criteria</b><br>I can make moving parts that tell a story.<br>I can present my final product to the target market.<br>I can reflect on feedback about my final product. | <i>Kapow lessons 3 &amp; 4</i><br>It is important to get feedback from the target audience so you know what to do differently next time. |
| <b>Last Year</b><br>Which is the best boat to take lots of people on holiday? Why?<br><i>The ferry because it is bigger so more people can fit in it.</i>  | <b>Art</b><br>Which paintbrush would you use to paint a large square?<br><i>The bigger paintbrush</i>                                                                  |                                                                                                                                                                                                                                                       |                                                                                                                                          |