

# Moving Toys : DT : Year 5

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To investigate toys with moving cam mechanisms.	Children will think of and investigate different moving toys. They will learn about cam mechanisms and explore different toys that use them.	<ul style="list-style-type: none"> <li>Can children recognise the movement of a mechanism within a toy or model?</li> <li>Do children understand that a cam mechanism will change rotary motion into linear motion?</li> <li>Can children investigate examples of cam toys and comment on how they work?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Examples of cam toys (if available)</li> <li>Question Cards</li> <li>Worksheet 1A/1B</li> <li>Worksheet 1C (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To investigate different types of cam mechanisms.	Children will explore and investigate different types of cam mechanisms and think about the shapes they will produce. They will be testing different shaped cams to see how they affect the linear movement of the follower.	<ul style="list-style-type: none"> <li>Can children describe how cams work using appropriate vocabulary?</li> <li>Can children explore how different shaped cams affect the movement of the follower?</li> <li>Can children make suggestions for how different cams could be used for different kinds of toys?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 2A/2B</li> <li>Different shaped cams OR Cam Template sheet</li> <li>Framework Template sheet photocopied onto card</li> <li>Thick card</li> <li>Dowelling</li> <li>Tubing if necessary</li> <li>Worksheet 2C (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To investigate ways of strengthening structures for a moving toy.	Children to explore materials and investigate different ways of strengthening moving toy structures.	<ul style="list-style-type: none"> <li>Can children make suggestions for how they could make a sturdy structure for a moving toy?</li> <li>Can children experiment with a variety of materials, tools and techniques?</li> <li>Can children identify ways of strengthening a structure?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Materials (e.g. dowelling, wood, card, paper, etc.)</li> <li>Tools (glue, saws, scissors, etc.)</li> <li>Challenge Cards (FSD? activity only)</li> </ul>
<b>Lesson 4</b>	To be able to design a moving toy with a cam mechanism.	Children will use their previously learnt knowledge to design a moving toy with a cam mechanism. They will need to think about who the toy is for, what shape the cam will be, the structure, decoration and materials needed to construct it.	<ul style="list-style-type: none"> <li>Can children state the purpose and audience of their design?</li> <li>Can children design a moving toy with a cam mechanism?</li> <li>Can children describe how they will create their toy and what materials and tools they will need?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 4A/4B</li> <li>Large sheets of paper (FSD? activity only)</li> </ul>
<b>Lesson 5</b>	To be able to follow a design to create a moving toy with a cam mechanism.	Children will refer to their designs from the previous lesson to create their moving toys.	<ul style="list-style-type: none"> <li>Can children follow a design to create a moving toy?</li> <li>Can children work safely with a variety of materials and tools?</li> <li>Can children identify areas of their toy that could be improved upon?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Designs from Lesson 4</li> <li>Materials (e.g. dowelling, wood, cams, card, etc.)</li> <li>Tools (e.g. saws, glue, rulers, etc.)</li> </ul>
<b>Lesson 6</b>	To be able to evaluate a finished moving toy.	Children will demonstrate their finished moving toys, then evaluate both their process and their finished product, either individually or with a partner.	<ul style="list-style-type: none"> <li>Can children evaluate a finished product fairly?</li> <li>Can children suggest ways they could improve their product if they were to make it again?</li> <li>Can children recognise ways in which they have been successful?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Finished toys</li> <li>Worksheet 6A/6B</li> <li>Worksheet 6C (FSD? activity only)</li> </ul>