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| **Lesson 1** | | | Key question: | | | | |
| **Building on from Year R:** | | | Created a simple slider picture and character to move in their book scene | | | | |
| **Key DT focus*–***  *Skills developed with guidance* | | | Select and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing)  Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics | | | | |
| **Teaching Objectives** | | | L.O. To explore making mechanisms  I understand that sliders are mechanisms  I know that sliders can make things move  I can create moving models that use sliders  I can use the words: up, down, left, right, vertical and horizontal to describe movement | | | | |
| **Key Vocabulary**: Sliders, Mechanism, up/down & left/right | | | | | | | |
| **Resources**  Rabbit & hat materials prepped  Vehicle & scene materials prepped | | **Locality context barriers to learning**  Finger strength- might find using scissors precisely tricky. Can use adaptive, spring loaded scissors if struggling with dexterity.  High quality modelling to show what can be achieved.  Growth mind set: explain that this is an opportunity to explore and experiment. Keep practising until you feel more confident with this skill. | | | **Protective Characteristics**  Offer a range of coloured paper so children can make their own choice | | **Weblinks**  Kapow |
| * **Before the session:** *Presentation: Exploring sliders* (see Lesson page) * A teddy bear (or other toy) * Lollipop sticks or strips of stiff card, 2 cm width (two sticks per child) * Strips of card 2cm x 10 cm, for bridges (one per child) * Scissors, glue, rubbers rulers, hole-punch * The car and street and rabbit and hat from the *Activity: Demonstrating sliders,* assembled before the lesson * *Activity: Demonstrating sliders* (see Resources) – you will need one copy of pages one and two per child and one copy of page three for every four children – this will give enough for each child to make up a car and street and a rabbit and hat   **Retrieval task:**  What is DT? What can you make in DT? Can you remember any Reception projects? How could you make this character move in the middle of this piece of paper?  **Oracy Starter:**  Put a teddy bear on a table. Ask the children how they could make the bear move up or down or from side-to-side?  Ask the children to stand up and demonstrate.  Ask the children if we can make a picture move in the same way. How?  Show the children your pre-assembled car and street, and rabbit and hat that you have made using the Activity: Demonstrating [sliders](https://www.kapowprimary.com/glossary/sliders/)  Something that can move from side to side or up and down.  Ask pupils how they think the car moves along the street scene?  What might be behind the image that makes the car move? (A side-to-side slider [mechanism](https://www.kapowprimary.com/glossary/mechanism/) The parts of an object that move together as part of a machine….).  Ask the pupils how they think the rabbit moves up and down in the hat? What might be behind the image that makes the rabbit move? (An up-and-down slider mechanism).  Explain that mechanisms are the parts of an object that move together.  **Questions & Main Teaching**  Explore (20 minutes)  Explain that the children will be making each of the mechanisms that you demonstrated (the car and street scene (a side-to-side slider) and the rabbit and hat (an up-and-down slider) so that they can start to explore how they work.  Using the Activity: Exploring [sliders](https://www.kapowprimary.com/glossary/sliders/) Something that can move from side to side or up and down, give each child a copy of a hat and rabbit (page 1), a street scene (page 2) and a car (page 3).  **Moving car**  1.Make the slider: The children need to cut out the car image (unless you have done this already) and stick the car to a lollipop stick or strip of stiff card. The lollipop stick or stiff card will act as a handle. The car on the handle will be the slider.  2. Make the slot: The children take the street scene, fold the page in half lengthways along the line marked, and make a single hole in each corner of the folded edge.  This will make four holes because the card is folded. Depending on the time available and the children’s ability, you may want to have punched the holes in the street scene before the lesson.  The children now cut across the page between each set of two holes so that there are two parallel cuts running the length of the street. These cut lines will form the two slots for the slider.  3.Insert the slider in the slot: The children then insert their car slider into the top slot and back out through the bottom slot.  This [mechanism](https://www.kapowprimary.com/glossary/mechanism/). The parts of an object that move together as part of a machine…. allows the children to slide the car backwards and forwards along the street.  4.Children explore: Ask the children to move their sliders backwards and forwards and explain that the slider is moving through the slot.  **Rabbit in a hat**  1.Make the slider: The children need to cut out the rabbit image (unless you have done this already) and stick the rabbit to a lollipop stick or strip of stiff card.  The lollipop stick or stiff card will act as a handle. The rabbit on the handle will be the slider.  2.Make the slot: The children need to cut out the hat and punch two holes in it. This can be done using a pencil with a rubber behind the card so that the pencil pierces the hat and goes safely into the rubber behind.  The children then cut between the two holes to make the slot.  3.Insert the slider in the slot: The rabbit needs to move up and down. The children need to insert their slider rabbit through the slot in the front of the hat so that the handle is behind the hat. They can then make the rabbit move up and down through the slot, looking as if the rabbit is moving in and out of the hat.  4.Children explore: Ask the children to move their sliders up and down and explain that the slider is moving up and down through the slot.  Extension: Ask the children how they might stop the rabbit wobbling from side-to-side instead of going straight up and down.  This is done by using guides, which are pieces of card stuck to the back of the hat on either side of where the handle will run. They form a sort of groove in which the handle slides, so restricting the movement.  Questions to Ask the children:  What do you think will move?  How will you make it move?  Which part of the mechanism will move?  In what way will it move? | | | | | | | |
| SEN Provision | **PKF** | | WTS | EXS | | GDS | |
| Will need further direction to insert the car into the cut grooves. They may need to refer back to the demonstration model. | Pupils should begin to look at how they can better control their movements using guides. Could the children:   * Explain what a slider and a slot is before the lesson? * Explain what a slider and a slot is after the lesson? * Describe the direction that something moves using the language: up, down, left, right, vertical, horizontal? * Cut slots and insert sliders to demonstrate the moving mechanism?   **Pupils with secure understanding indicated by:** Identifying whether a mechanism is a side-to-side slider or an up-and-down slider and determining what movement the mechanism will make. Able to cut slots and insert sliders to demonstrate mechanism.  **Pupils working at greater depth indicated by:** Identifying if a mechanism is a side-to-side slider or an up-and-down slider, determining what movement a mechanism will make. Able to cut slots and insert sliders to demonstrate mechanism. Able to predict what mechanism would be needed to achieve given movements. | | | | | | |
| **End of lesson reflection**  Display Presentation: Exploring [sliders](https://www.kapowprimary.com/glossary/sliders/)  Something that can move from side to side or up and down.  Presentation: Exploring sliders  Show this on your interactive whiteboard  Go through the Presentation: Exploring [sliders](https://www.kapowprimary.com/glossary/sliders/)  Something that can move from side to side or up and down, which shows several pictures and descriptions of movements.  Ask the children to consider the direction of movement in each of the examples and then state what mechanisms would be needed to make this movement required: either a side-to-side slider or an up-and-down slider.  Once the children have agreed on the movement, reveal the answer. | | | | | | | |
| **Outcomes**   * **Majority:** To explore making mechanisms * **Most: Identifying if a mechanism is a side-to-side slider or an up-and-down slider, determining what movement a mechanism will make** * **Some: Able to predict what mechanism would be needed to achieve given movements.** | | | | | | | |
| **Lesson evaluation notes and next steps** | | | | | | | |