Lesson Plan

Title of the Lesson	Animating Art: Create Your Own Moving Stick Figure!
Duration	1,5 h
Teaching methods and strategies	• Presentation • Group activity in pairs or small groups • Guided Exploration • Hands-on learning
Learning Outcomes	• Understand the concept of animation and how moving images are created. • Learn how to assemble a simple electrical circuit using a DC motor, battery, and switch. • Experiment with different drawings to create smooth looping animations. • Develop basic knowledge of how voltage affects the speed of a motor and figure animation. • Work collaboratively to design and assemble an animated circuit.
Steps to be Followed	**1. Introduction (5-10 mins)** • Ask the students if they've ever seen flipbooks or animated drawings. Explain how they work by flipping the pages quickly and how that gives the illusion of movement. • Demonstrate a simple flipbook animation to introduce the idea. Then, explain how today, they will create their own animated figure using a motor. • Introduce the basic components: the DC motor, battery, switch, and insulation tape. Briefly explain how the motor works to spin the frames and create the animation effect.

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	Adaptation for Inclusivity: • Provide visual aids or a video tutorial for students who may have difficulty understanding verbal instructions. • For students with motor difficulties, simplify tasks like drawing or cutting by offering assistance or pre-cut shapes. **2. Main Content** **Step 1: Draw the Frames (15 minutes)** • Give each student a piece of paper and markers. • Ask them to draw a stick figure in four stages of running (e.g., start, mid-run, full stride, and finish). Ensure that the figure remains centred in each frame. Tip: Encourage students to keep their figures simple and clear to maintain the smoothness of the animation. **Adaptation for Inclusivity:** • Students with visual impairments can be provided with larger paper and raised-line markers for tactile drawing. • Students with learning difficulties can be given examples or templates of figures to trace or colour in, helping them stay on track. **Step 2: Attach the Motor (15 minutes)** • Instruct students to cut out the frames and fold them in half. • Tape them in an 'X' shape around the motor in order, with hot glue at the base to secure it. Tip: Make sure the frames can spin freely without blocking the motor's rotation. **Adaptation for Inclusivity:**

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	• Provide pre-folded frames for students who may have difficulty with fine motor skills. • Students with visual impairments may benefit from assistance in aligning the frames around the motor or using tactile guidance for positioning. **Step 3: Cut Out the Box (15 minutes)** • Using the template, ask students to trace and cut out the box on a piece of cardboard. Optionally, they can glue coloured paper to the outside to decorate their box. Tip: Help students who may have trouble cutting by providing larger, easier-to-cut cardboard or by pre-cutting the box for them. **Adaptation for Inclusivity:** • Offer assistance or use pre-cut templates for students who struggle with scissors. • Ensure that students with physical disabilities have access to appropriate scissors or cutting tools with easier grips. **Step 4: Complete & Attach the Circuit (20 minutes)** • Instruct students to cut holes for the motor and switch in the box, then insert the components. Tape the battery to the middle of the box, and connect the black (negative) wire to one end of the motor. Connect the other (positive) end of the battery to the red (positive) end of the switch. Finally, connect the negative wire of the switch to the other end of the motor. Secure all connections with insulation tape.

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	Tip: Remind students that they will need to test the circuit before finalizing the assembly to ensure it works properly. **Adaptation for Inclusivity:** • For students with learning difficulties, provide visual instructions or step-by-step guides for assembling the circuit. • Ensure that students with physical disabilities can access materials and receive assistance with handling small components. • Use coloured tape or large print to make it easier for students with visual impairments to follow the steps. **Step 5: Assemble and Decorate (10 minutes)** • Have students fold and tape the box to secure it. They can also add extra decorations using paper or other materials to personalize their animated box. • Once assembled, students can test their animation by pressing the button to activate the motor and watch their figure come to life! **Adaptation for Inclusivity:** • Allow students with different abilities to express their creativity through alternative means (e.g., digital drawing for students with fine motor difficulties). • Peer support can help students who may need assistance with the final steps, including pressing the button or decorating their box. **3. Wrap-Up/Review (10 minute)**

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	• Invite students to share their creations and describe how they made their drawings come to life. Ask them how they could improve the speed or smoothness of their animations by adjusting the voltage or changing the motor. • Encourage students to reflect on what they learned about animation and circuits. Ask them if they could apply this knowledge to create other types of moving art in the future. **Adaptation for Inclusivity:** • Encourage alternative methods of reflection, such as drawing or using assistive communication devices for students with communication challenges. • Provide additional time for students who need more support during the reflection or sharing portion.
Required material and resources	**Circuit Materials:** • 1x DC motor • 1x 1.5v AA battery + battery holder • 1x push-button switch • Insulation tape **Decoration Materials:** • Paper + Markers (for drawing) • Cardboard • Box cutout (template download below) • Scissors • Tape • Hot glue gun (+ glue) **Template:** Box Template: You can use Google Drawings, Canva or online drawing software to create the template, perhaps downloading it as a PDF or image for easy printing.

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Assessment or evaluation techniques	**Hands-On Engagement:** Evaluate students based on their participation in each step of the activity, including drawing, cutting, assembling the circuit, and testing the animation. **Problem-Solving Skills:** Assess how well students troubleshoot and adapt their designs to achieve a working animation. **Collaboration and Teamwork:** Evaluate how students work together in pairs or small groups, ensuring everyone has a role in building the project. **Final Product:** Assess the functionality and creativity of the animated designs, considering how effectively the animation works when the button is pressed.
Ethical Considerations	• **Inclusivity:** Ensure all students, regardless of their abilities, have equal opportunities to participate. Make accommodations, if necessary, for students with disabilities. • **Respect for Diverse Abilities:** Promote respect for each student's unique abilities and encourage empathy in group activities. Students should be encouraged to support and include each other, especially when working together on tasks that require teamwork. It is important to create a culture where all contributions, regardless of the quality or speed of execution, are valued. • **Safety and Supervision:** Since the activity involves using small components like batteries, motors, and hot glue guns, it is crucial to ensure the students are supervised at all times to avoid accidents. Provide clear instructions on how to

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	handle tools safely, especially for students who may not have experience with these materials. Ensure that the hot glue gun is used only with supervision to prevent burns or injuries. • **Encouraging Positive Behaviour:** Foster an environment where students are encouraged to work together respectfully and inclusively. Address any bullying or exclusionary behaviour immediately, especially in group settings. The lesson should promote teamwork and positive collaboration, ensuring every student feels safe and valued. • **Fair Participation and Support:** Ensure that every student has the chance to participate in the activity, including those who may require additional support or time. For students with learning challenges, ensure that they have the resources or accommodations they need to succeed. This might include providing instructions in alternative formats (e.g., visual aids, simplified language, or technology-assisted tools). • **Environmental Impact:** Encourage students to be mindful of their materials and the environment. For example, promote recycling and reuse of materials like cardboard and paper, and encourage students to use materials responsibly to minimize waste.

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