

Animate a Pendulum, Part 1: The Arc and the First Swing

40 minutes

Following My Interests Online

Outcome 3.8

WHAT THIS LESSON DOES

Students draw a pendulum, build a locked guide layer for its arc, and animate the swing out to one side with deliberate frame spacing.

CURRICULUM OUTCOMES

Outcome	What the specification asks for
3.8	create a digital montage on a specific topic of interest from images sourced online while applying learning regarding copyright, fair use, plagiarism, and intellectual property ownership

WHAT STUDENTS SHOULD BE ABLE TO DO

- Explain why frame spacing controls apparent speed
- Build a locked guide layer to hold a motion path
- Copy an element frame to frame so it keeps its size
- Animate a swing along an arc with spacing that matches real movement

BEFORE THE BELL

- Wick Editor needs no account, so the set-up is the same as the previous lesson: open wickeditor.com in a browser and start a new project.
- This lesson follows on from the first animation lesson and assumes onion skinning is familiar. If the class has not done that one, do it first, because this will not stand alone.
- The physics is worth one sentence and no more: a pendulum is slowest at the top of each swing and fastest through the bottom. Everything else in the lesson follows from that.
- Copying the bob from frame to frame instead of redrawing it is the part students find fiddly, and it is also the part that keeps the bob the same size all the way along the arc, so it is worth spending the time on it in Hands-on: Swing it to one side .
- Devices with a browser. Wick Editor needs no account, but it keeps nothing once the tab closes.

WHAT YOU NEED

Item	Qty	Per	If you do not have it
Chromebook/Laptop/PC		student	
Wick Editor needs no account			Free, browser-based, no sign-up and no adverts. Work saves to the browser, not a server, so students must export before closing the tab.

Animate a Pendulum, Part 1: The Arc and the First Swing

HOW THE LESSON RUNS		
4 min	introduction	Start
4 min	content	Spacing is timing
13 min	activity	Hands-on: Draw the pendulum and its arc
13 min	activity	Hands-on: Swing it to one side
4 min	content	Make sense
2 min	summary	What you covered