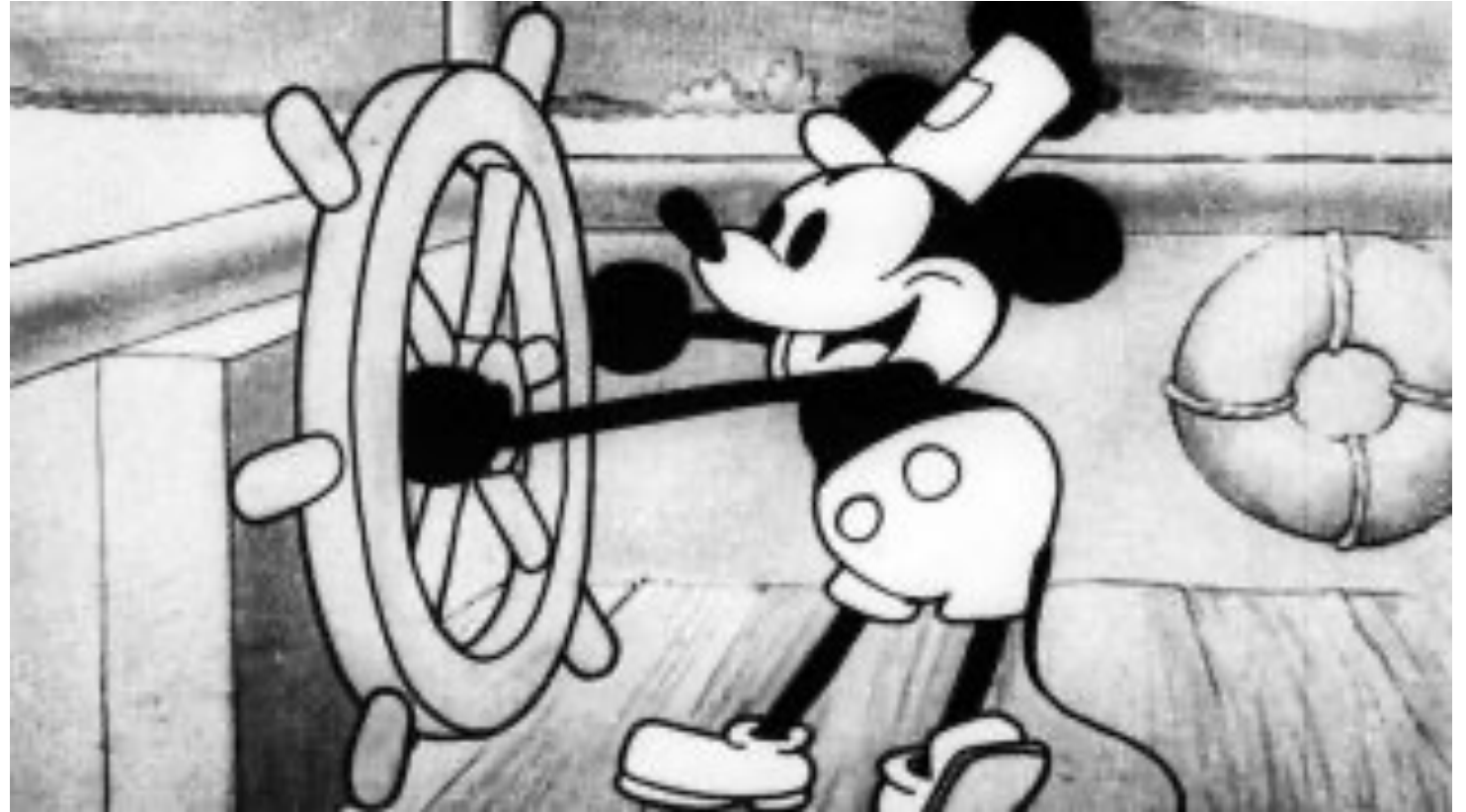
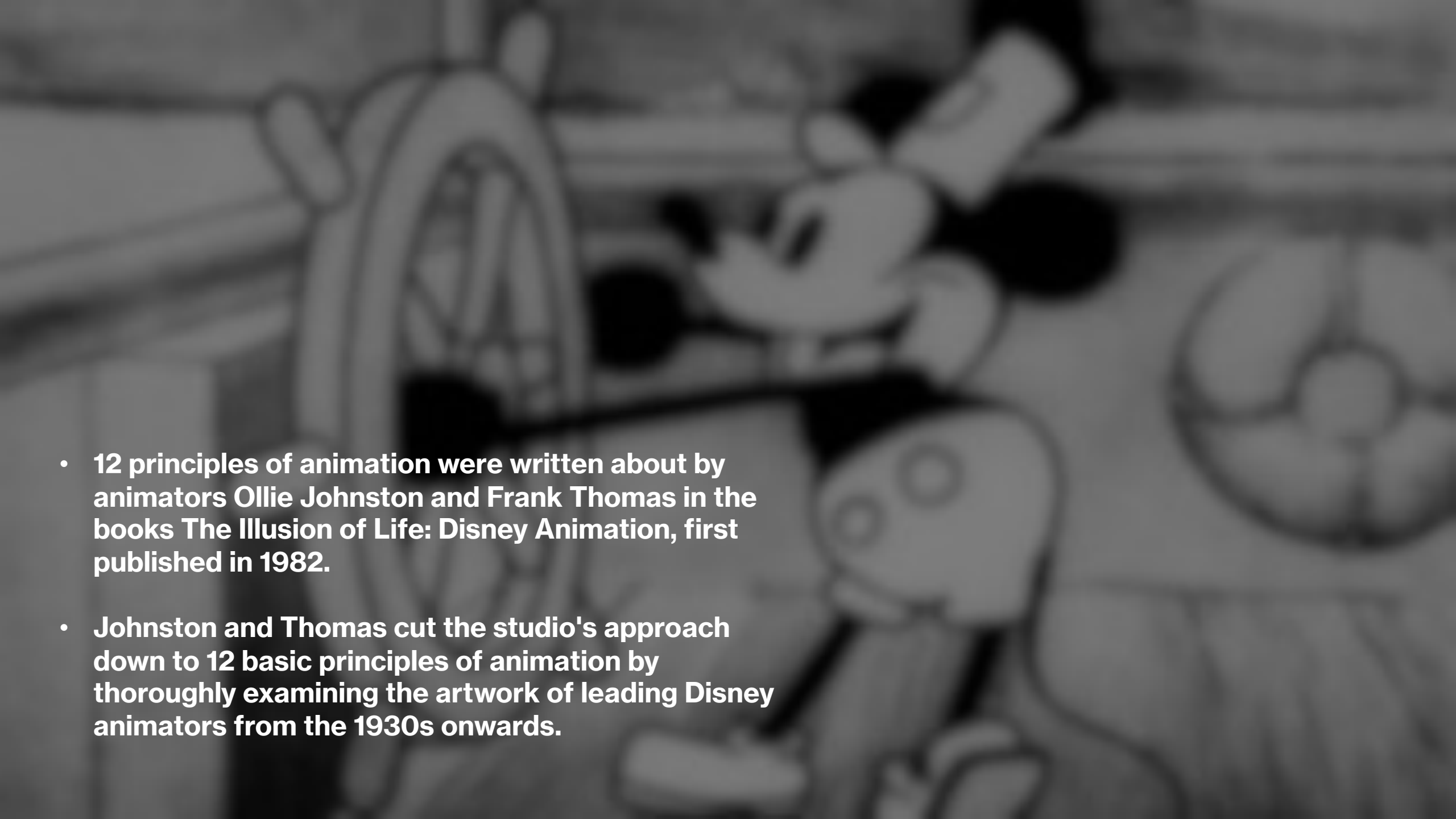


Understand Disney's 12 principles of animation

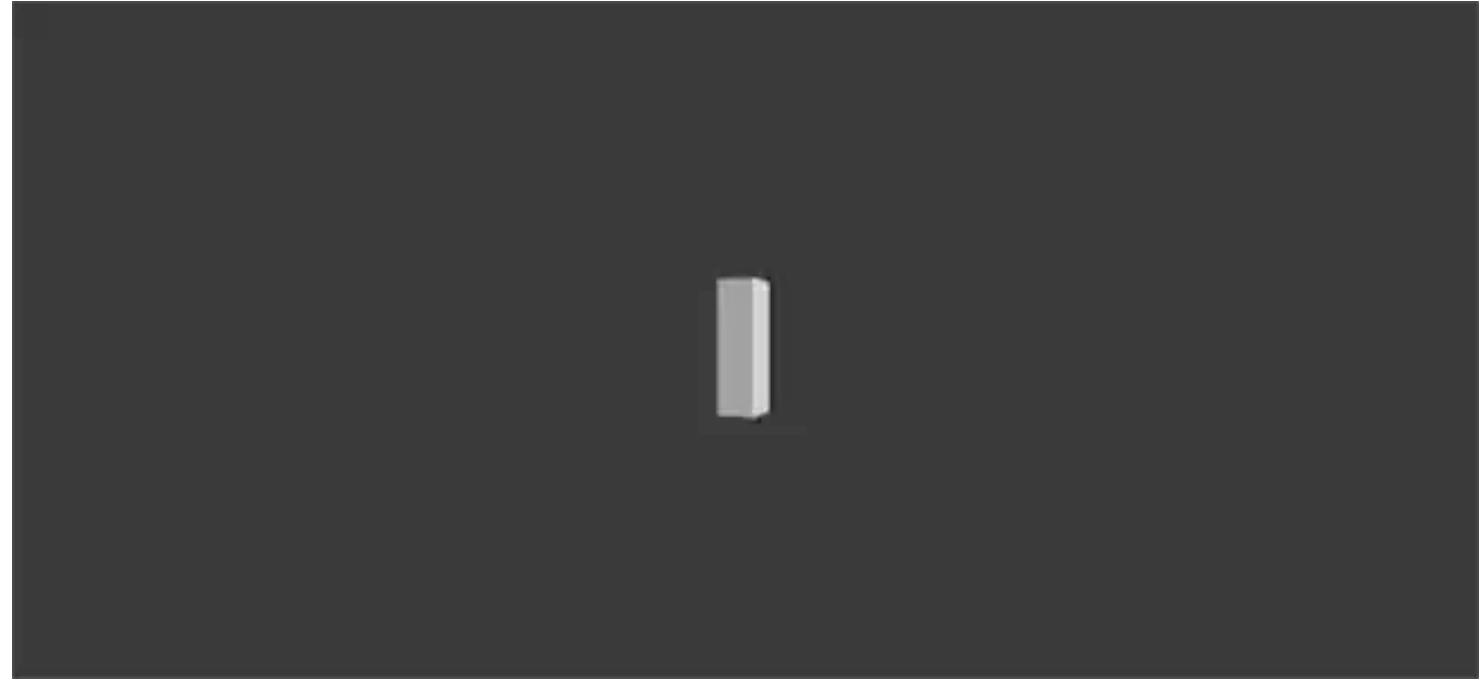
Disney's principles of animation
underpin all motion work



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- **12 principles of animation were written about by animators Ollie Johnston and Frank Thomas in the books *The Illusion of Life: Disney Animation*, first published in 1982.**
 - **Johnston and Thomas cut the studio's approach down to 12 basic principles of animation by thoroughly examining the artwork of leading Disney animators from the 1930s onwards.**

01. Squash and stretch

The squash and stretch principle is considered the most important of the 12 principles of animation. When applied, it gives your animated characters and objects the illusion of gravity, weight, mass and flexibility. Think about how a bouncing rubber ball may react when tossed into the air: the ball stretches when it travels up and down and squishes when it hits the ground.



02. Anticipation

Anticipation helps to prepare the viewer for what's about to happen. When applied, it has the effect of making the object's action more realistic.



03. Staging

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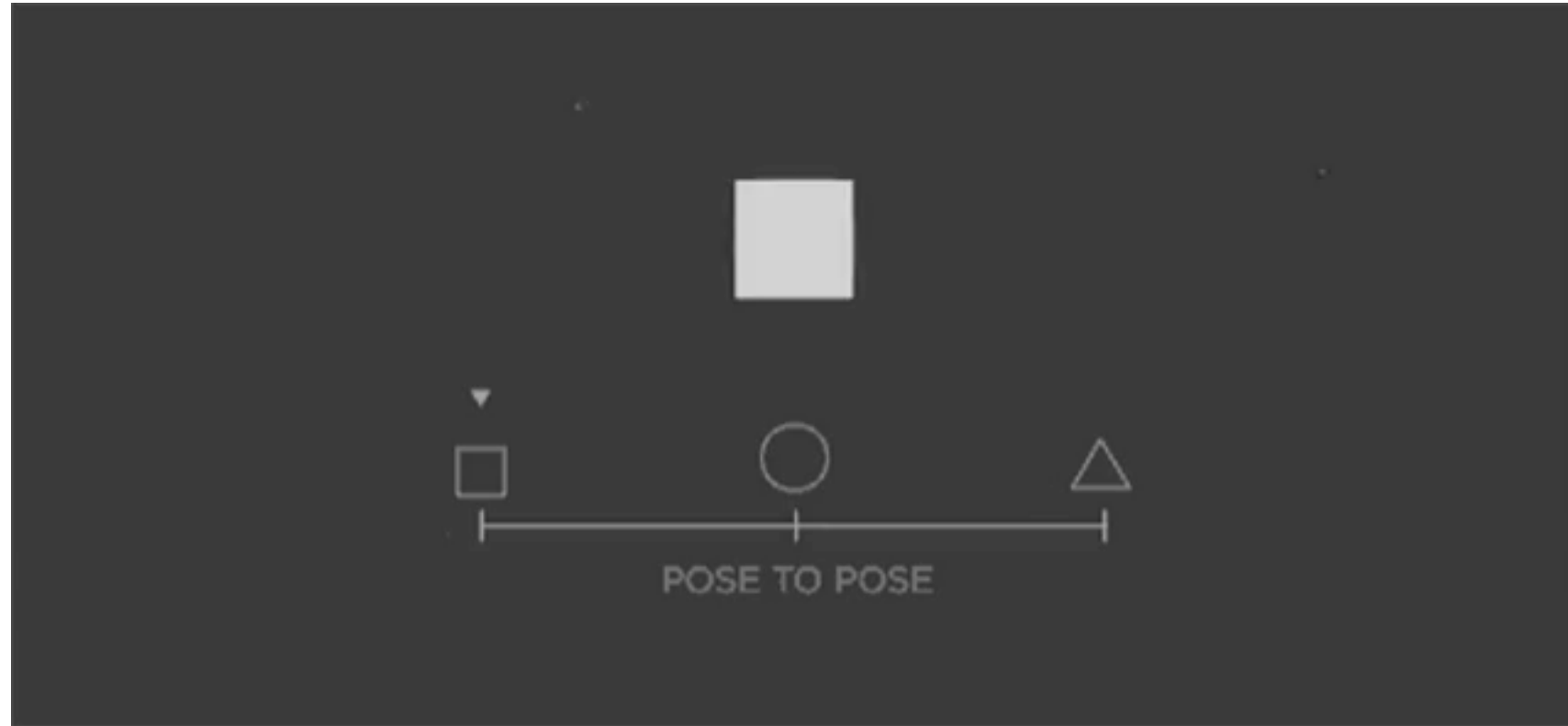
03. Staging

Staging in animation is a lot like composition in artwork. What we mean by that is, you should use motion to guide the viewer's eye and draw attention to what's important within the scene. Keep the focus on what's important within the scene, and keep the motion of everything else of non-importance to a minimum.



04. Straight ahead action and pose to pose

There are two ways to handle drawing animation: straight ahead and pose to pose. Each has its own benefits, and the two approaches are often combined. Straight ahead action involves drawing frame-by-frame from start to finish. If you're looking for fluid, realistic movements, straight ahead action is your best bet.



05. Follow through and overlapping action

When objects come to a standstill after being in motion, different parts of the object will stop at different rates. Similarly, not everything on an object will move at the same rate. This forms the essence of the fifth of Disney's principles of animation.



06. Slow in and slow out

The best way to understand slow in and slow out is to think about how a car starts up and stops. It will start moving slowly, before gaining momentum and speeding up.



07. Arc

When working in animation, it's best to stick with the laws of physics. Most objects follow an arc or a path when they're moving, and your animations should reflect that arc. For example, when you toss a ball into the air, it follows a natural arc as the effects of the Earth's gravity act upon it.



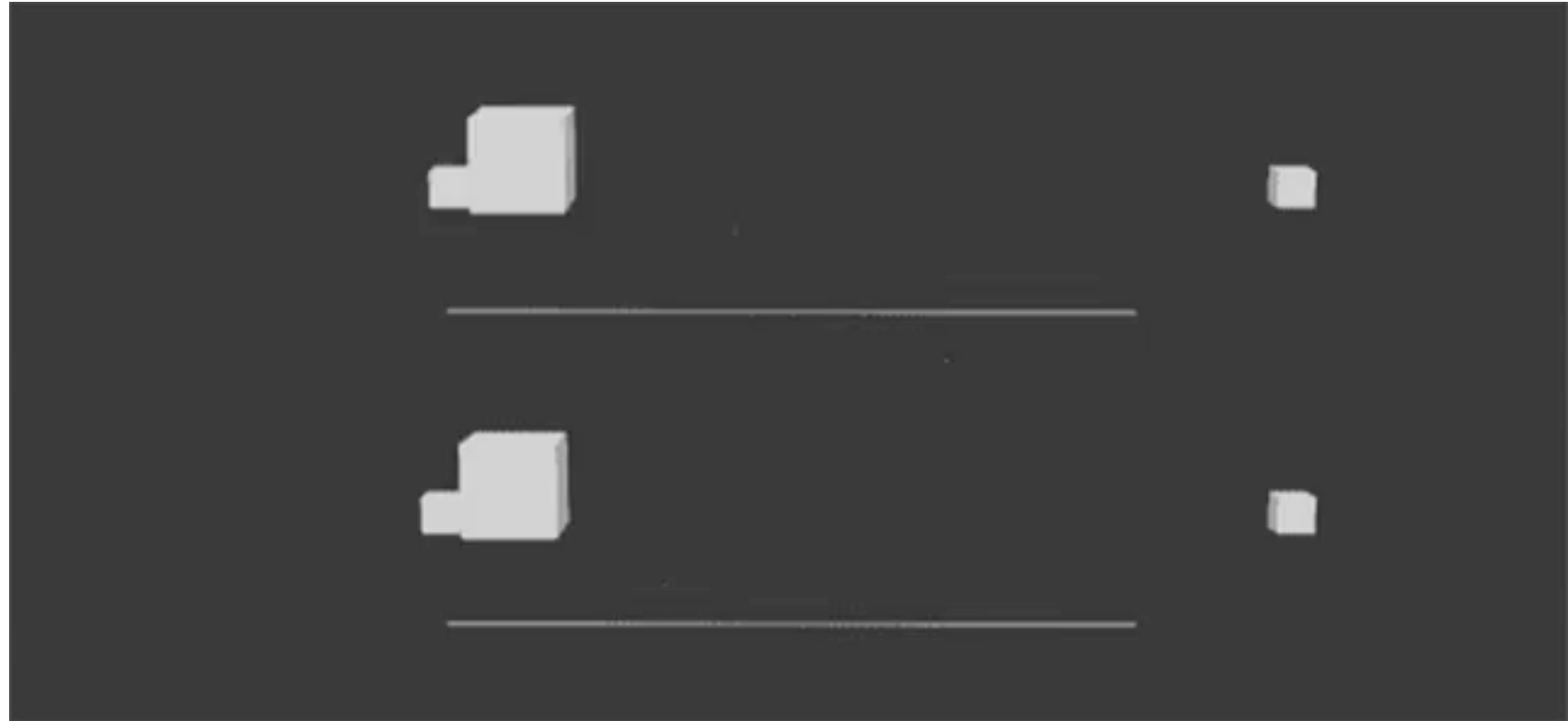
08. Secondary action

Secondary actions are used to support or emphasise the main action going on within a scene. Adding secondary actions help add more dimension to your characters and objects.



09. Timing

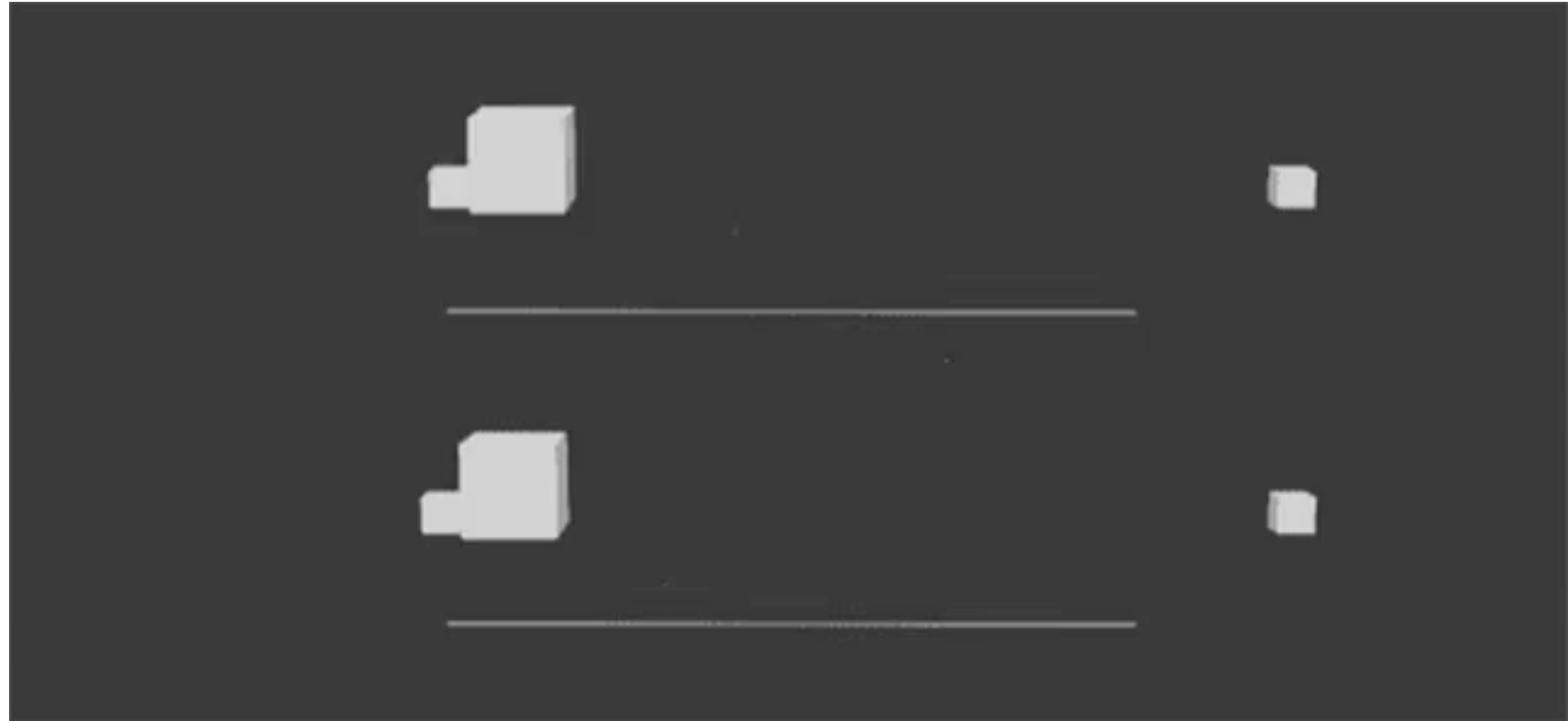
For this principle of animation we need to look to the laws of physics again, and apply what we see in the natural world to our animations. In this case, the focus is on timing.



08. Secondary action

Secondary actions are used to support or emphasise the main action going on within a scene. Adding secondary actions help add more dimension to your characters and objects.

For instance, the subtle movement of your character's hair as they walk, or perhaps a facial expression or a secondary object reacting to the first. Whatever the case may be, this secondary action should not distract from the primary one.



10. Exaggeration

Too much realism can ruin an animation, making it appear static and boring. Instead, add some exaggeration to your characters and objects to make them more dynamic. Find ways to push the limits just beyond what's possible, and your animations will pop.



11. Solid drawing

You need to understand the basics of drawing. This includes knowing [how to draw](#) in three-dimensional space and understanding form and anatomy, weight and volume, and lights and shadows.



12. Appeal

Your characters, objects, and the world in which they live need to appeal to the viewer. This includes having an easy-to-read design, solid drawing, and a personality. There is no formula for getting this right, but it starts with strong character development and being able to tell your story through the art of animation.



