Materials You'll Need:

- A skateboard (child-sized preferred, or a regular one with supervision)
- Helmet and pads (Safety first!)
- A small, smooth, safe area to roll (driveway, empty garage, smooth path - adult supervision required!)
- Optional: A small ramp (very low and wide, or just a gentle slope)
- Optional: Different surfaces to observe rolling (e.g., smooth concrete, grass, carpet sample)
- Optional: Small toy car or ball

Let's Learn About Skateboarding Science!

Wow, skateboarding is super cool, right? It feels like flying on wheels! But guess what? It's also SCIENCE! Today, we'll be scientists and explore how skateboards work using ideas from Physics.

Activity 1: Push Power!

Okay, put on your helmet and pads! Place the skateboard on a flat, smooth surface. Does it move by itself? Nope!

Now, try giving it a little PUSH with your foot. What happens? It rolls! Pushing is a force. A force is like a push or a pull that makes things move. To make the skateboard go, you need to PUSH it.

Try a small push. How far does it go? Now try a slightly bigger push (be careful!). Does it go farther? Cool!

Activity 2: Gravity Pulls!

Why don't you and the skateboard float away when you ride? That's because of GRAVITY! Gravity is like an invisible rope pulling everything down towards the center of the Earth. It pulls your skateboard down, and it pulls YOU down onto the skateboard.

Hold a small toy car or ball up. Now let go. Where does it go? Down! That's gravity pulling it. Gravity keeps you on the ground and helps the wheels stay on the pavement.

Activity 3: Balancing Act!

Try standing on the skateboard (with help from a grown-up if needed). Is it easy to stay still? You have to BALANCE! Balancing means keeping your body steady so you don't fall off. Your body makes tiny adjustments to stay centered over the board. It's like when you try to stand on one foot!

Activity 4: Rough Rolling? (Friction Fun)

Let's see how the skateboard rolls on different spots. Gently push the skateboard on the smooth surface. See how it rolls?

Now, carefully push it with the *same* amount of push onto a patch of grass or a carpet sample (if you have one). Does it roll as far or as fast? Probably not! The grass or carpet creates more FRICTION. Friction is a force that slows things down when they rub against each other. Smooth surfaces have less friction, so the skateboard rolls easily. Rough surfaces have more friction, making it harder to roll.

Wrap-up:

Awesome science exploration! We learned that PUSHING makes the skateboard move, GRAVITY keeps

us down, BALANCING helps us stay on, and FRICTION can slow the board down on rough surfaces. Skateboarding isn't just fun, it's full of amazing physics!