



Counting Warm Up - Wheeled Devices 1 (Project image on screen)

What are we counting: Things with wheels

How are we counting: One by one or in groups/clusters

Example counting warm up questions:

(Comments in brackets are optional depending on ability range of students)

	Questions to ask	Answers and things to note
1	How many devices are green?	3 = 1 trike, 1 skateboard, 1 bicycle
2	How many devices are black?	5 = 1 bicycle, 2 trikes, 1 skateboard, 1 scooter
3	How many devices with 3 wheels?	5 tricycles
4	How many devices with 4 wheels?	6 2 bikes with training wheels and 4 skateboards
5	How many devices altogether?	14 (Count in clusters. 5 + 5, then by 2s)
6	How many devices for pre-school kids?	Arguable! Most likely the trikes, bikes with training wheels, skateboards, maybe the scooter.
7	How many of these would be usual for a teenager to ride to school?	7 = 2 adult bikes + 4 skateboards + 1 scooter
8	How many might be used in Olympic events?	6 = 2 "racing style" bikes + 4 skateboards (yes, skateboarding is now a permanent Olympic event.)
9	How many wheels on 3 wheeled objects?	15. Count them one by one. Count them by 3s: 3, 6, 9, 12, 15. Count them by saying 5 devices with three wheels $5 \times 3 = 15$
10	How many wheels on 4 wheeled objects?	24. Count them one by one. Count them by 4s: 4, 8, 12, 16, 20, 24. Count them by saying 6 devices with 4 wheels $6 \times 4 = 24$
11	How many devices might you see an adult ride to work?	3, maybe 7. 2 bikes and 1 scooter. Maybe the 4 skateboards...
12	How many inflatable tires altogether?	8 (on the bikes). All of the other devices will typically have solid rubber tires/wheels.
13	On which devices can you go the fastest? Why? (Bring different bikes into the classroom to count the rotations and demonstrate the ratios.)	The 2 racing bikes. The gearing ratios. Large front rings at the pedals and small rings at the back wheel create gearing ratios, e.g., 52 teeth: 13 teeth is 4:1. Each time you pedal once around with your feet, the rear wheel goes around 4 times. This can lead to discussion of mountain bike gearing which may be a small front sprocket with larger rear cog to make it easier to go slow and climb big hills.
14	How many devices where you travel really slowly? Why?	5. The trikes. The pedals are fixed to the front wheel. One time around with your feet is one times around with the wheel. Mainly for safety as it is for very young kids.