BIG FLOOR PLANS · COLLEGE & TRADES TRACK · 50 MINUTES

Lay Out the Parking Lot: teacher script

Civil engineering technology and landscape architecture students lay out a parking lot on a site plan, count the accessible spaces the lot needs, and tape an accessible stall pair at full size.

Prep: Tape or chalk one 8-ft stall, a 5-ft access aisle and a second 8-ft stall, all 18 ft deep, in a gym or lot. Print one layout sheet per team.

Min	Step and what to do	Ask	Listen for
0-5	**Hook** "How many cars fit in 180 by 120 feet?"	What do you need besides stalls?	Aisles to drive in.
5-15	**Modules** Stall 18 + aisle 24 + stall 18 = 60 ft.	How many stalls?	2 modules, 4 rows of 20 = 80.
15-25	**Accessible count** Read the table for the total; 1 in 6 accessible spaces is van-accessible.	How many?	4 accessible, 1 van.
25-40	**Walk the stalls** Roll the chair or cart into the taped stall pair and use the access aisle.	Why the striped aisle?	Room to open the door fully and transfer or deploy a ramp.
40-50	**Recount and exit** Place the accessible stalls in the row nearest the entrance and recount, then the exit ticket.	New total?	79 spaces, still 4 accessible required.

Common misconceptions

- **Learners may think:** Accessible spaces are just regular stalls with a sign. **Address it:** They are wider and need an access aisle beside them.
- **Learners may think:** Van spaces are optional. **Address it:** At least 1 in every 6 accessible spaces must be van-accessible.

Supports

- Give the accessible-parking table as a card.
- Multilingual learners: label stall, aisle, access aisle and van space on the floor.
- Mobility: a wheelchair user can lead the full-size test if they choose; the reviewer can work from a seat.

References

- **2010 ADA Standards for Accessible Design**: Table 208.2, 208.2.4, 208.3.1, 502.2 and 502.3 as quoted (check your jurisdiction's adopted code)
- **Scenario rules**: 9 x 18 ft stalls at 90 degrees with a 24-ft two-way aisle are common design values, used here as the scenario
- **Perkins V (CTE)**: postsecondary and secondary CTE program context

Scenario sheet

Lot 180 ft wide x 120 ft deep, entrance on the north side. Scenario: 90-degree stalls 9 x 18 ft, two-way aisle 24 ft. Rules as quoted (2010 ADA Standards; check your adopted code): Table 208.2 accessible spaces by total (1-25: 1; 26-50: 2; 51-75: 3; 76-100: 4; 101-150: 5); at least 1 in 6 accessible spaces van-accessible (208.2.4); car stall 96 in, van stall 132 in (or 96 in with a 96-in aisle); access aisle 60 in, may be shared (502.2, 502.3); accessible spaces on the shortest accessible route to the entrance (208.3.1).

LEARNER SHEET · LAY OUT THE PARKING LOT

Name _____ Date _____

Step	Work	Answer
Module depth		
Modules in the lot		
Stalls per row; total		
Accessible required; van		
Width of the accessible stalls		
Standard stalls they replace		
New total; does it still meet the table?		

Exit ticket

1. A lot has 60 spaces. Accessible spaces required?

2. How many of those must be van-accessible?

3. Two car stalls share one access aisle. Total width?

Answer key

Step	Answer
Module	18 + 24 + 18 = 60 ft
Modules	120 / 60 = 2
Stalls	180 / 9 = 20 per row x 4 rows = 80
Accessible	80 total: 4; van 1
Width	(8 + 8 + 5) + (8 + 11 + 5) = 45 ft
Replaced	45 / 9 = 5 standard stalls
Total	80 - 5 + 4 = 79; 79 still needs 4 accessible: the count is met

Place them in the north row nearest the entrance.

Exit ticket

1. A lot has 60 spaces. Accessible spaces required?
   Answer: 3.
2. How many of those must be van-accessible?
   Answer: 1.
3. Two car stalls share one access aisle. Total width?
   Answer: 21 ft (8 + 5 + 8).

Scoring: 1 point each, plus 1 for a correct recount. 3 or more = secure.

Free to copy for teaching. Big Floor Plans, Lay Out the Parking Lot, 2026. Codes and standards change: use the edition your jurisdiction or program adopted. Full-size prints: bigfloorplans.com/get-a-quote