BIG FLOOR PLANS · COLLEGE & TRADES TRACK · 50 MINUTES

Set the Banquet Room: teacher script

Hospitality and event-management students set a ballroom at full size with round tables, a stage and a dance floor, count the seats the room really holds, and check it against the room's occupant load.

Prep: Tape the 54 ft x 84 ft room. Tape the stage 24 ft wide x 12 ft deep, centered on the north wall, and an 18 ft x 18 ft dance floor in front of it. Mark the 10-ft grid lines starting 6 ft from the south and west walls. Print one floor-plan sheet per team.

Min	Step and what to do	Ask	Listen for
0-5	**Hook** "The client wants 320 guests." Show the empty room.	What will take space besides tables?	The stage, the dance floor and room to move between tables.
5-15	**Grid** Mark table centers every 10 ft, starting 6 ft from the walls.	How many centers fit?	5 across x 8 down = 40.
15-28	**Remove conflicts** Lay a 5-ft circle at each center near the stage and dance floor; remove any that touch.	How many tables go?	9.
28-38	**Count** Count tables and seats at 8 per table.	How many guests?	31 tables, 248 guests.
38-46	**Capacity** Compute occupant load: net area (room less stage) / 15.	Does the plan fit the code limit? Can the room take 320?	Occupant load 284; the plan seats 248. 320 does not fit.
46-50	**Exit ticket** Individual exit ticket.		

Common misconceptions

- **Learners may think:** Guests = room area / space per guest. **Address it:** The stage, dance floor and table grid remove seats long before the area runs out.
- **Learners may think:** If the tables fit, the event is legal. **Address it:** The occupant load is a separate cap and must be checked.

Supports

- Give a grid sheet with the 10-ft lines pre-drawn.
- Multilingual learners: label stage, dance floor, table and aisle on the floor.
- Mobility: one teammate places centers from the print while others set circles.

References

- **International Building Code (IBC)**: Table 1004.5, assembly unconcentrated (tables and chairs): 15 sq ft net per occupant (check the edition your jurisdiction adopted)
- **Perkins V (CTE)**: postsecondary and secondary CTE program context

Scenario sheet

Ballroom 54 ft x 84 ft. Stage 24 ft wide x 12 ft deep, centered on the north wall (x 15-39, y 72-84). Dance floor 18 x 18 ft in front of it (x 18-36, y 54-72). Origin at the southwest corner, feet.

Planning rules (scenario, not code): 60-in rounds of 8; table centers on a 10-ft grid starting 6 ft from the south and west walls, no center closer than 6 ft to any wall; each table uses a 5-ft-radius zone with its chairs, which may not touch the stage or the dance floor. Occupant load (IBC, tables and chairs): net area / 15, net area = room less the stage. The client asks for 320 guests.

LEARNER SHEET · SET THE BANQUET ROOM

Name _____ Date _____

Check	Work	Answer
Centers across (x)		
Centers down (y)		
Grid total		
Tables removed		
Tables and guests		
Occupant load		
Answer to the client		

Exit ticket

1. A room is 46 ft wide. Table centers start 6 ft from each wall, 10 ft apart. How many across?

2. 42 tables of 8. Guests?

3. Net area 3,000 sq ft at 15 sq ft per person. Occupant load?

Answer key

Check	Answer
Across	6, 16, 26, 36, 46 ft: 5
Down	6, 16, 26, 36, 46, 56, 66, 76 ft: 8
Grid	40
Removed	9: (16, 56); (16, 66); (16, 76); (26, 56); (26, 66); (26, 76); (36, 56); (36, 66); (36, 76)
Seats	31 tables x 8 = 248 guests
Occupant load	(54 x 84 - 288) / 15 = 283.2, so 284
Client	The plan seats 248, under the occupant load of 284. 320 does not fit; offer 248, or drop the dance floor and re-check.

Exit ticket

1. A room is 46 ft wide. Table centers start 6 ft from each wall, 10 ft apart. How many across?
   Answer: 4 (6, 16, 26, 36; 46 would sit on the wall).
2. 42 tables of 8. Guests?
   Answer: 336.
3. Net area 3,000 sq ft at 15 sq ft per person. Occupant load?
   Answer: 200.

Scoring: 1 point each, plus 1 for a complete floor plan. 3 or more = secure.

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