Lesson plan example: 10th grade algebra, quadratic equations

Example 5 of 6 · 48 minutes · from draftmylesson.com/blog/lesson-plan-example

Standard reference	CCSS.MATH.CONTENT.HSA.REI.B.4.B. The broader standard includes solving quadratic equations by inspection, square roots, completing the square, the quadratic formula, and factoring as appropriate. Use this reference only where Common Core applies.
Objective	Students will solve quadratic equations of the form $ax^2 + bx + c = 0$ by factoring, with 80% accuracy on 5 of 6 problems.
Materials	• Algebra tiles (or printed equivalents) • Worked example handout (3 problems, fully solved) • Independent practice set (6 problems, mix of easy to hard) • Whiteboards and markers per pair

Step	Time	What happens
Hook	4 min	Project this: $x^2 + 7x + 12 = 0$. Ask: "What two numbers multiply to 12 and add to 7?" Wait. The class will land on 3 and 4. Tell them they just factored a quadratic.
Direct instruction	12 min	Show how $(x + 3)(x + 4) = 0$ leads to $x = -3$ or $x = -4$ using the zero product property. Work two more examples, one with a negative middle term, one with a leading coefficient. Distribute the worked example handout.
Guided practice	12 min	Pairs work three problems on whiteboards, showing every step. Walk and stamp papers that are correct. Re-teach in small group at the back table for any pair stuck on sign errors.
Independent practice	15 min	Six problems, increasing in difficulty. Last two have non-integer solutions and a hint pointing to the quadratic formula, which previews tomorrow's lesson.
Exit ticket	5 min	Solve $x^2 - 5x + 6 = 0$ by factoring. Show all steps.

Why this works

The hook starts with a pattern students can solve before the formal vocabulary arrives. The worked example handout keeps a complete solution visible while students attempt the next problems. The hardest practice problems double as a preview of tomorrow.

Sources: https://www.thecorestandards.org/Math/Content/HSA/REI/
Check the standard adopted by your state, district or school before teaching. Adapt timing and materials to your students.