

Lesson Plan Format

(an optional resource)

In the context of the *PPAT*® Assessment, this lesson plan format is a template provided for teacher candidates to use as they develop well-planned and structured lessons. This resource also can help a teacher candidate better understand and design meaningful daily lessons that will positively enhance instructional practice and student learning. It is intended for use in conjunction with Tasks 2, 3, and 4. You have the option of using your own lesson plan format.

Standards/Performance Indicators/Skills

Identify the state and national standards, performance indicators, and skills addressed by the lesson.

6.N.2.3 Add and subtract integers in a variety of situations; use efficient and generalizable procedures including but not limited to standard algorithms.

Learning Objectives/Goals

Describe the lesson's objectives and the learning outcomes that are appropriate for meeting curricular/classroom needs.

Students will balance equations fluently.

Assessment (the type[s] of assessment used throughout the lesson)

Identify the assessment that occurred before, during, and after the lesson.

1. Pre assessment - implemented prior to lesson.
2. Formative assessment - The learning activity will be a informal formative assessment.
3. Post assessment - utilized after the lesson had completed.

3	2	1
Explanation shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written.
Student always listens and follows directions and only uses manipulatives as instructed.	Student typically listens and follows directions and uses manipulatives as instructed most of the time.	Student rarely listens and often "plays" with the manipulatives instead of using them as instructed.
All problems are completed.	All but one of the problems are completed.	Several of the problems are not completed.

Pre-Test Questions:

1. What is the order of operations?
2. What happens when you have to multiply and divide
3. If you were to use the colored markers and make a pattern, what does this do to the bot?
4. What different lines can the Ozmo bot drive on?

5. When using the Ozmo bot, what was the path that the Ozmo bot driving?
6. Why does perimeter ...?
7. What ideas justify that heavy objects are difficult for sphero minis to move?
8. What path would you select for your sphero mini to roll across to travel easiest?
9. Which number would be added in the blank to complete the equation: $___ + 5 = 8$?
10. How could you determine what was needed on the left scale it only held four bears and the right scale held seven bears?

Lesson Structure and Procedures

Describe the sequence of events of the lesson elements, including the before, during, and after of the lesson (i.e., the engagement/opening, the procedures used, the activities for guided practice, and the conclusion).

Engage:

A scale will be in the middle of the room where all students can see it to gain their interest in what they will be learning.

Explore:

Students will participate in an activity using a physical scale to balance equations by using manipulatives with heterogeneous groups.

Explain: Heterogeneous groups will discuss their findings through their exploration. They will come up with a list of procedures they followed.

Elaborate:

Students will explore the website:

<https://www.mathsisfun.com/algebra/add-subtract-balance.html>

On this website students will practice balancing equations individually, using the procedures found previously.

Evaluate:

Students will complete the following tic-tac-toe board. The teacher will put an X on each spot after the student completes the activity. Students must complete 3 in a row to finish.

Instructional Strategies (Teaching Strategy – what teachers do)

Describe the teacher's approach to achieving the learning objectives and meeting the students' needs.

Explicit teaching will be used to teach students how to balance equations by using a visual representation using a balance and counting bears.

Guided practice will be used to guide students in the game that shows them how to balance equations and gives them more practice.

Learning Activities

Describe the opportunities provided for the students to develop the skills of the objective.

The students will participate in an online game that guides them in more practice with balancing equations.

<https://www.mathsisfun.com/algebra/add-subtract-balance.html>

Resources and Materials

List the materials used to plan and deliver the lesson.

- Scale/balance
- Laptops
- Counting Bears

Technology

Describe the instructional and/or assistive technology that was incorporated into the lesson to enhance instruction and student learning.

Computers are used to work on the website. The website is used as a tool so students can work on their fluency with balancing equations.

Rubistar is a great resource for making rubrics. Also, it can be downloaded into a document for students to see what is expected.

Differentiation/Accommodations/Modifications/Increases in Rigor

Describe the modifications made to meet the needs of all learners and to accommodate differences in students' learning, culture, language, etc.

Listed at bottom.

Focus Student 1: This student can watch a video about fractions. The video will help the student understand fractions and will help with her confidence level. This student can also use different manipulatives to express fractions to the teacher.

Classroom Management

Identify the strategies used that are consistent with the learning objectives of the lesson and that also met student behavior needs to help keep the students on task and actively engaged.

Extensions

Describe the activities for early finishers that extended the students' understanding of and thinking about the learning objectives/goals by having them apply their new knowledge in a different way.

Follow-Up Activity to the Lesson

Describe a quick activity for review or for building on the lesson that will deepen student understanding and interconnect concepts. (The activity may be incorporated in class the next day or throughout the unit.)

Additional Information

Identify any area or lesson component that was not covered by this lesson plan format but that you feel is vital to include in a description of the lesson.

Use items around the classroom as manipulatives to balance equations. Do at least 3 different sets of manipulatives and write up an explanation.	Draw an example of an equation with a missing integer and explain the steps to solve it.	Listen to this read aloud and explain how it relates to balancing equations. https://www.youtube.com/watch?v=vOGG5MF3i54
Watch this video explaining balancing equations:	Work with your elbow buddy with the scale. Practice balancing	Create a poster using https://www.canva.com/ that shows how to balance

https://www.youtube.com/watch?v=pH5AGza_0PA Then write out steps to balance an equation.	equations following the examples on the worksheet.	an equation (use graphics).
Use the seesaw on the playground to show a balanced equation by using items outside (sticks, rocks, pinecones etc).	Work with a partner to create a foldable that explains step by step how to balance an equation.	Work with a group and come up with rules for balancing equations and write them on a posterboard.