



LESSON PLAN by Lauren McCoy

Lesson: Addition and Subtraction of Integers (single digits) Length 30-40 minutes

Age or Grade Intended: ^{9-12th} 7th grade resource kids (I know I'm an English major, but in my field placement for Special Education, most of my time is spent in lower-level math classes, so I thought this would be good to use).

Academic Standard(s): Math 7.2.1 Add and subtract positive and negative integers.

Performance Objectives:

When asked to show an answer to a given integer addition problem, students will manipulate the correct number of M&M's to demonstrate their answer 8 times out of ten.

When asked to show an answer to a given integer subtraction problem, students will manipulate the correct number of M&M's to demonstrate their answer 8 times out of ten.

Assessment: For the starter activity, I will give the students a 30 or more M&M's a piece and then I will write and say aloud a question on the board. The students will then solve the problem using the M&M's to show the equation and their answer. This is practice for the later activity. BINGO will serve as a final version of this lesson later. BINGO will be started by the teacher handing out the BINGO boards and giving out the chip pieces (this will just be the M&M's that the students already have from the earlier activity). Then the teacher will have note cards of different + and - problems and read them aloud to the class and the students will then place an M&M on the correct number, and the game will continue on in this manner. Students will raise their hand when they get a BINGO and I will check their answers.

Advanced Preparation by Teacher: I will need to get a couple bags of M&M's and create different BINGO boards for each student in the class, and pre-made index cards with the BINGO questions on them. Also, if I wanted to monitor the students' learning outside of the BINGO game, I would need to create a checklist for when I go around and check their answers for the first activity of ten problems. Also, teacher may want to make a list of integer problems beforehand for the BINGO activity. I would also type out copies of number lines (-10 to 10) for students to have on their desk in front of them.

Procedure:

Introduction/Motivation: What would you do if you had 4 dollars and you bought something that was 5 dollars? What would happen? Is there such a thing as a negative number?

Step-by-Step Plan:

1. I would ask the class if anyone knew what an integer was. If no one knows, then I would start the lesson by stating what an integer is and how it relates to real life (credits, debit accounts, etc). (Verbal/Linguistic)

2. I would write on the board the “rules” of integers (positive plus positive=positive, negative plus negative = a negative, etc. and then explain how to add and subtract integers (Spatial/Visual)
3. I would then write a number line on the board as well, ranging from -10 all the way to 10.
4. Next I would show an example of an integer problem and write it on the board and show them how to use the number line. I would then have M&M colors represent negative and positive numbers (Blue=positive, Red= negative.) I would place the candy on the overhead projector so the whole class can see how to work out the problem. (If the problem was $-5+-4$, I would show a group of 5 red and 4 red M&M’s and place them in one group to show the answer to the problem (Spatial/Visual)
5. I would model some more problems with the M&M’s so the students get the idea (Spatial/Visual)
6. I would then give the students their own M&M’s and write ten practice questions on the board and have them manipulate the M&M’s using the method I showed them. (Kinesthetic/Visual)
7. I would have students raise their hand after every answer so I can check their work. I may keep a check list and keep track of those students who I see are struggling and those who are mastering the lesson.
8. After that, I will distribute BINGO cards, explain the rules of BINGO and then begin the game (Visual/Kinesthetic).
9. I will walk around classroom in between questions to make sure students are getting the answers right and help correct them if they are confused.
10. After a couple games of this (or however long it takes to complete one BINGO,) I will collect the cards and begin the wrap up and do a quick review.

Closure: Relate the concept of M&M’s to money and bank accounts that students will have later in life. Stress the importance of a negative that is greater than a positive and how that can be a bad thing. The basic, elementary idea of debit and credit can be brought into this as well.

Adaptations/Enrichment: Since this lesson is geared towards students in a resource room, I will not need to include adaptations, unless, however, I have students with other specific disabilities. I might have easier problems for them to do on special index cards and also a smaller BINGO board so they have fewer problems to figure out. For the first activity, I would allow students to work in groups (vs. individually) to manipulate the M&M’s to create an answers by pairing stronger students with students I see are struggling with this lesson. Also, I would hand out printed copies of number lines, for additional visuals. For some students, depending on their IEP’s, I would allow the use of calculators.

Self-Reflection: I will measure the impact of my students’ learning by the two activities listed above. The check list will also help me keep track of what students are meeting the standards and those who are not. The checklist helps me also decide if the students need to move on to the next lesson and helps me figure out what needs to be re-taught. If 80% of the class met the objectives, then I would know to move on to the next lesson. However, the things I may change about this lesson would be finding better manipulative in place of the M&M’s (maybe translucent different colored chips for the overhead). Also, I would need to come up with an enrichment plan if this

were for a general education classroom.

MATH BINGO

7	0	-4	5	-1
9	10	-10	-18	-5
-16	-7	FREE SPACE	20	-13
11	2	-12	-21	13
-19	-2	-10	14	12

(Obviously I would make different BINGO cards for each student so they would not all have the same answers, but for simplicity, I only made one for this lesson plan, since I am not actually teaching this

lesson).

7th Grade Check/Assessment Sheet for M&M Bingo Activity

Student's name	Prob 1	Prob 2	Prob 3	Prob 4	Prob 5	Prob 6	Prob 7	Prob 8	Prob 9	Prob 10
Student A										
Student B										
Student C										
Student D... etc										

Some starter problems for BINGO

1. $0 + -7$
 2. $-5 + -4$
 3. $-4 - -4$
 4. $7 - -9$
 5. $3 + -2$
 6. $-7 + -1$
 7. $-9 + -7$
 8. $13 - 21$
 9. $8 - 16$
 10. $-17 + 6$
-

Manchester College Lesson Plan Rubric – EDUC 348, 353, and 440

Name _____

McLoy

Score 34/44 /44

Required	1	2	3	4	score
(C1) MC lesson plan format with explicitly stated Academic Standards	Lesson does not follow MC format or state academic standards	Lesson does not follow MC format but does state academic standards	Lesson plan follows most of the M format and explicitly states academic standards	Lesson plan follows MC format correctly and explicitly states academic standards	4
(C1) Lesson Plan Objectives	Objectives are not included	Objectives are included, but are not correctly written or do not relate to the stated academic standards	Objectives are included, related to stated academic standard(s), but are not written correctly	Objectives are written well and fully correlate to stated academic standard(s)	4
(A1)Assessment	Assessment is unrelated to objectives and standards	Assessment is somewhat related to objectives and standards. Assessment is not appropriate for all students' learning styles and strengths	Assessment is related to objectives and standards. Assessment is less accessible for students with certain learning styles and strengths	Assessment is directly related to objectives and standards. Assessment provides opportunities for students with varying learning styles and strengths to excel	4
(C1)Intro/ Hook	No introduction is provided	Introduction is vague or procedural	Introduction provides some structure for lesson, but lacks connections	Introduction clearly pulls students into the lesson, drawing connections to previous lesson	3
(C1) Supporting Materials	No supporting materials are included	Supporting materials and student handouts are messy, incomplete, and/or unappealing to students. Materials do not enhance lesson	Supporting materials and student handouts are clear and complete. Materials enhance lesson	Supporting materials and student handouts are clear, complete, and appealing to students. Materials enhance lesson significantly	4
(C1) Procedures/ Instructional Activities	Procedures are unclear; do not relate to objectives; no attempt is made to individualize activities for learning styles or strengths	Procedures are mostly clear; areas of vagueness	Procedures are clear and relate to the objectives	Procedures can be easily replicated by others	4
(C6)Bloom's	Bloom's levels are <u>not</u> indicated	A few (2) levels of Bloom's questions are used	Some (3) different levels of Bloom's questions are used	A variety (4 different levels) of Bloom's questions are used	1
(E1)Gardner's	Gardner's MI are not indicated	A few (2) examples of Gardner's are identified	Some (3) examples of Gardner's are identified	A variety (4) examples of Gardner's are identified	4
(E1) Adaptations/ Modifications	Lesson does not include reasonable adaptations and/or modifications	Lesson includes one or two reasonable adaptations and/or modifications	Lesson includes more than two (3) reasonable adaptations and/or modifications	Lesson thoroughly (4+) details reasonable adaptations and/or modifications that are exemplary	3
(R6) (E2) Engaging/ Creativity	Lesson lacks opportunity for student engagement	Lesson makes an attempt at engaging students in the learning process	Lesson mostly engages students in the learning process	Entire lesson engages students in the learning process	4
(R5) Grammar and spelling	Spelling and grammar are unacceptable. (4 or more errors)	The lesson plan contains many (3) spelling and grammar errors	The lesson plan contains few (2) spelling and grammar errors	Spelling and grammar in lesson plan are flawless (1 or no errors)	3

Teacher Comments:

Students would/will enjoy this. Very interactive.