



Are We There Yet?

McCarthy

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First Grade

Essential Question

How can I follow directions using co-ordinate points and landmarks?

Standard(s)

3.1.1.A9: Distinguish between scientific fact and opinion. Ask questions about objects, organisms, and events. Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known. Plan and conduct a simple investigation and understand that different questions require different kinds of investigations. Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information. Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge. Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be reproduced, and review and ask questions about the work of other scientists.

S.K-2.A.1.1.2: Identify examples of technology.

S.K-2.A.1.1.3: Describe how technology can help people (e.g., home appliances, phones, computers, transportation).

Objectives

Using co-ordinates and landmarks, the student will be able to follow directions to find a hidden object and identify its location using co-ordinates and landmarks.

Materials and Equipment

Co-ordinate grid practice sheet, hidden objects (ticket out the door from Day One), written directions, pencil, recording sheet, student name sticks, sticky notes, projector.

Procedures

Introduction “Mac and cheese, everyone freeze! In 5...4...3...2...1 I would like you to sit up tall, zip your lips, and show me that you are ready to learn.

Excellent! Okay, boys and girls, today we are going to continue our journey with good directions in our very own scavenger hunt!”

Anticipatory Set/Activating Learning Strategies

- Why good directions are so important: “Okay, so I would like everyone to put on their thinking caps because I’m going to pull a stick and have one of you remind me one reason good directions are so important. Let’s put them on—are you thinking? *Teacher models a thoughtful face and pulls a stick.* Maria, what is one reason good directions are important? *Good directions are important because they help us get where we need to go without getting lost.*”
 - How we get good directions (GPS): “That’s right, Maria: good directions are important because they help us get where we need to go without getting lost. That sure is helpful when we’re going someplace we haven’t been before and don’t know where it is. In fact, for the past couple of days, we’ve been talking about something called a GPS. Who can tell me what we use a GPS for? *Teacher pulls a stick* Martin, why do we use a GPS when we’re going someplace we haven’t been before? *Because they give good directions!* Spot on: they give us good directions. And the day before yesterday we drew pictures about what a GPS can be used for, because it’s not just for driving directions, is it? Who else uses GPSes, Timmy? *The police use GPS to find bad guys.* Yes, they do. Who else uses GPSes, Sarah? *NASA—the space people—they use GPSes.* Mmmhmm, one more—Gregory? *There’s a new backpack being made for people who are blind that talks to them so that they know where they are and where they are going, even though they can’t see signs and stuff.*
 - How GPSs give good directions (co-ordinates): “Very good—now who can tell me how a GPS works? What is the simple system we learned about? *Co-ordinate grids!* Yes, co-ordinate grids.”
 - How to read and write co-ordinates: “GPSs, as we learned yesterday, give directions through co-ordinate points. A co-ordinate plane—the boxed area on a map, are labeled with numbers from left to right, and letters from bottom to top.”
- I do:** Show reading and writing co-ordinates of one location (town map): “To write directions, we always start with parentheses. *Teacher writes one on the projected worksheet.* When I want to tell you where the grocery store—the place that sells apples—is on this map, I start by bringing my finger across the map from left to right. When I am in the column *teacher motions up and down on the one column* that the grocery is in—the one column—I write the number one inside the parenthesis. Next, I slide my finger across to the side column that has the letters and read where the grocery is. I see it is on the B, so I write a comma, to separate my numbers from my letters, and then a B. I finish with a closing parenthesis. The finished point is (1,B). If you asked me where the grocery store was, and I gave you the point (1, B), you would be able to find it. And if I were to ask

you what was placed at (6, E), you'd drag your finger across the numbers until you got to six. Then you'd slide one finger up the six column and one finger on the E row. You'd slide those two fingers until they bumped into each other. Then you'd look at the picture and see that (6, E) is the co-ordinate points for the goose pond.

We do: So, who can tell me where the bridge is? What is co-ordinate point for the bridge? Yes, Molly? *The co-ordinate point for the bridge is (2, E).* Yes, it is! And how did you find your answer? *First I found the bridge. Then I slid my finger down to the number part. My finger landed on 2, so I wrote parenthesis two. Next I went back to the bridge and slid it to the left, to the letters. My finger bumped the E, so I wrote E parenthesis.* Very good. Now...who can tell me what is at (3, D)? Yes, Kyle? *The house is at (3, D). I knew that because I slid my one finger up the three column and my other finger across the D row, and they bumped at the house.* Very good, thank you, Kyle. Now, one last question: If I wanted to go from the grocery store to the bridge to the house, how would you tell me to get there? Think back to yesterday when you wrote directions for your hidden object. Yes, Liv? *I would tell you to go from (1,B) to (1,E) and then (1,E) to (2, E), and then (2,E) to (E,3), and then down to (E,2)* Whoo! You've got it, Olivia. I love how you traveled in a series of up and down and side-to-side directions. Now, if I wanted to get from the grocery store to the goose pond, who could tell me how to do that using landmarks? Again, think back to yesterday when you wrote your directions. A landmark is what? *A place or object to help you know you're going on the right path.* Great. So, how do I get from the grocery store to the goose pond with landmarks? *Well, I'd say travel five blocks to the right. You should see a school up ahead on the left. Go up three blocks.* You've got it! I love how you told me how many units to go and *also* a place to look for as I followed the units."

You do: Follow directions to find hidden object: "So, now, it's your turn to follow directions. I have, according to your directions, hidden your ticket out the door from the other day. Your partner will follow your directions and see if he or she can find your object. You will follow your partner's directions and see if you can find his or her object. When you find your partner's object, write your name on this worksheet. Then write your partner's name and also the final co-ordinate—write where you found the hidden object. Then take your partner's object, return it to them, put your paper in the "finished basket", and check the finishing folder for more activities. Any questions? Okay, take out your directions. Pass them to your neighbor and start searching.

Closure/Summarizing Strategy: “Okay boys and girls, in 5...4...3...2...1...and we’re back. You have two more minutes to finish what you’re doing before we get ready to go to special. If you’ve finished your worksheet, please put it in the “finished basket”. If you’re still finding your object, work on getting that finished up. *Two minutes elapse.* Class class? Yes, yes! Okay, all papers should be in the “finished basket” by now. I saw lots of hard work today. I really liked the way Gabriel took his directions step by step. I liked how Maria checked off each direction as she did it. I liked how Lukas checked his directions for co-ordinate points *and* landmarks. We did a good job following directions. Let’s keep up the good work!

Assessment/Evaluation

Assignments (if any)

The teacher will check to see if the student correctly identified the location of their partner’s hidden object.

Special Considerations

Early Finishers: Write an alternate set of directions (for your hidden object) from a different starting point and ending point.

Remediation: Students who struggle to follow directions will review the process of reading and writing co-ordinates with the teacher (an extension of the “I do” and “We do” sections.)

Enrichment: Research additional real-life applications of co-ordinate grids.

Special Accommodations: Students who have trouble focusing will take each direction step by step, having a checklist to break up the task and show their progress.

Bibliography

Standards - View Standards by Subject Area and Grade Level or Course. (n.d.). Retrieved November 2, 2015, from <http://www.pdesas.org/Standard/Views#106|775|0|0>

Finding a Spot on a Map – Coordinate Map Worksheet. (n.d.). Retrieved November 2, 2015, from <http://files.havefunteaching.com/free-worksheets/grade/third/math/coordinate-map-worksheet-1.pdf>

Name: _____ # _____

Partner's Name: _____

Where was the hidden object? (___, ___)