Lesson Plan Template

Grade: 1st

Subject: Science

Materials: Magnets, bins with materials, magnet book, worksheets

Technology Needed: N/A

Instructional Strategies:

- € Direct instruction
- € Guided practice
- € Socratic Seminar
- € Learning Centers
- € Lecture
- € Technology integration
- € Other (list)
- € Peer teaching/collaboration/ perative learning
- € Visuals/Graphic organizers
- € PBL
- € Discussion/Debate
- € Modeling

Guided Practices and Concrete Application:

- € Large group activity
- € Independent activity
- € Pairing/collaboration
- € Simulations/Scenarios
- € Other (list)
- € Hands-on
- € Technology integration
- € Imitation/Repeat/Mimic

Explain:

Standard(s)

1.1.3. Describe different ways that things can change (e.g., size, mass, color, movement)

1.2.1. Record and describe observations with pictures, numbers, or words

Objective(s)

By the end of the lesson, students will identify that magnets can force objects into movement by using magnets with magnetic objects.

By the end of the lesson, students will demonstrate their understanding of the scientific method by observing how magnets work and recording their observations and predictions on a worksheet.

Bloom's Taxonomy Cognitive Level:

Knowledge
Understand

Differentiation

Below Proficiency: Below proficient students will be able to draw pictures to represent their discoveries.

Above Proficiency: The above proficient students will be able to summarize their conclusions more in depth. They will be able to write their predictions with words and ask good questions.

Approaching/Emerging Proficiency: These students will be able to complete the normal lesson.

Modalities/Learning Preferences: Tactile, Kinesthetic, and visual learning preferences

Classroom Management- (grouping(s), movement/transitions, etc.)

The students will begin at their desks. They will work with the students at their tables. They will gather on the carpet for the lesson review.

Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)

Students will raise their hands to talk. Students will follow directions and participate in all activities.

Minutes	Procedures
2	**Set-up/Prep:** Get out magnet supplies, pull up powerpoint on smartboard, get out books
4	**Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)** "Okay, I want everyone to stand up! Now reach up as high as you can! Now reach down as low as you can. Now curl up as small as you can. Now open up as big as you can! Now use your hands to squeeze down your shoulders and arms. Now squeeze down your legs. Now take a deep breath in, and out. One more. In and out. Today, we are scientists, each one of us. What do we know about scientists? What do good scientists do? Good scientists ask really good questions. Have you ever had a question that you wanted to know the answer to? Maybe you have wondered why leaves turn different colors in the fall. Or why they fall from the trees. Or maybe you have wondered how plants grow. What are some things you have wondered?
7	**Explain: (concepts, procedures, vocabulary, etc.)** Alright, are you ready for some science, scientists? Me too! Before we begin our experiments, we need to learn more about how scientists think. So we are going to learn about the Scientific Method. Can everyone say that with me? The scientific method uses steps to help scientists answer a question or solve a problem. I am going to pass out 6 cards with the 6 steps of the scientific method. Each table will get a set of six cards. We are going to help each other put them in order.

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	Okay. let's look at our cards. What do we think is the first step? Any ideas? The first step in the scientific method is, 'make an observation'. Observing something means that we look at it very closely. We pay special attention to it in order to find out information. Let's pretend that I was growing plants in my house. I might observe that the plants are growing bigger everyday. The next step is, "ask a question." What is a question you might have about growing plants? Great! The third step is 'make a hypothesis'. This means that we make a prediction, we guess what we think might happen. If our question is how do you think plants grow, then what might be our prediction? My hypothesis might be, 'plants grow when they have sunlight'. The fourth step is 'conduct an experiment'. If I wanted to see if my prediction were right, I would put my plant in the sun to see if it grows. The fifth step is,'draw conclusions'. Drawing conclusions means that we think about our question and our experiment and we think about what we have learned. What did we learn from putting the plant in sunlight? And the last step it, report your results. Write down what happened, take notes, record what happened so that you can remember it and share it with others! Okay, let's go over our steps again! Make sure you have them in order at your tables. The first step is? The second?.....etc....
15	**Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)** Now we are going to use the steps of the scientific method to experiment with magnets. Has anyone used magnets before? I am going to pass out different types of magnets at your tables. You can play around with the different magnets and see what they do. (I will pass out the magnets) Alright, Hands on top (Everybody Stop). I need everyone to put their magnets back in the bins on their tables. Don't worry, we will be using them again. Okay so what's the first step of the scientific method again? That's right, 'make an observation'. Has anyone made any observations about your magnets? Yes, the magnets sometimes stick to each other and other times they push each other away. What's the second step? Ask a question. Does anyone have any questions about their magnets? Today we are going to focus on the questions, "What objects are magnetic?" When an object is magnetic, it sticks to a magnet, just like some of the other magnets. So we have our question. What is our question again? (Write it on the board). I am going to pass out a worksheet. On it you will see that there are pictures of items on the left side (Model a worksheet at the front of the class). Under the prediction column, draw a smiley face if you think that the item is magnetic and will stick to a magnet. Draw a frowny face if you predict that it is not magnetic. (give the students a minute to work) Talk with the people at your table about your predictions. Why did you make those predictions? What do you think about the paper clips? Why? (Go through some more of the sheet if desired or the rest of it) Alright. Are we ready for the next step? What is the next step of the scientific method? 'conduct an experiment'. Let's see if our hypothesis is true?" I will hand out plastic bins for every two students to share. The students will have time to test all of the objects and then record their results. If they are finished testing all of the materials, they may explore the classroom with the magnet. Then they will find three things that are magnetic and draw or write them in the spaces on your worksheet. "Hand on top...turn and talk with your partner about your experiment. Was your hypothesis correct? Were your predictions right? What did you learn? What did you all learn? Were your predictions right? Did you come up with any conclusions? On the bottom of your worksheet, write some conclusions that you came up with."
10	**Review (wrap up and transition to next activity):** "So now that we've explored magnets, let's read a little more about them. Come gather on the carpet." I will read a short book about magnets to the students. "So were some of our conclusions true? Right! What else did we learn about magnets? Do you think we could use the scientific process for other questions that we have? Like what? Today, I gave you a question to think about. But you can come up with your questions and experiments too! Great job scientists! We will be continuing to explore the scientific method and magnets this year! Now let's turn our attention to Mrs. Ryberg.

Formative Assessment: (linked to objectives) **Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.**	**Summative Assessment (linked back to objectives)** **End of lesson:** The summative assessment will be the worksheets. **If applicable- overall unit, chapter, concept, etc.:**

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I will monitor the students throughout the lesson by asking questions. I will also walk around and see how they are doing with their worksheets and their experiments. **Consideration for Back-up Plan:**	

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

As always, this lesson went a little differently than I had planned. The students were a little more boisterous than I had anticipated. Furthermore, I was cut a little short on time. There are definitely some things that I would change for the next time I teach this lesson. I might not use the cards for the scientific method. Instead, I would just lead a carpet discussion about it with visuals on the board for the students to see and arrange. They could help me put the visuals in order as I explain them. Because the students had the cards at their tables, they were more focused on rearranging them and working together than they were on what I was saying. I think that doing this activity with the cards as a group would help the students to focus more on the discussion and not be so distracted by the cards. In the future, I would also give myself more time for this lesson or even break it into two lessons. The students did not have enough time to finish their conclusions or go around the room and look for magnetic objects. Looking back, if I had done more of a single group discussion about the scientific method before having the students move, we may have had more time for the experiment and the conclusion and review of the lesson. Next time I teach this lesson, I want to be sure to let them explore how magnets are used in their everyday lives. I think that having them explore the classroom with their magnets would really help with this.

I think that the students could have definitely used more time for making conclusions and recording them. I also think that the lesson could have use more closure at the end and more discussion and explanation about magnets. In the future, I will be sure to have a better discussion with the students about why their predictions were right or wrong and about how magnets work. In addition, I think that I could differentiate with my worksheets. I think that the front page worked well for all of the students, but I think that I could have put room on the second page for either drawing or writing their conclusions. I could have individually challenged the higher level students to write more and then encouraged any of the struggling students to start out with pictures and go from there.

However, overall, the lesson went well. The students were highly engaged and loved exploring the magnets. Several of the students were completely shocked that the pipe cleaners were magnetic. They expressed their surprise in their words and actions and it was really neat to see them make new discoveries. The transitions went well from the carpet to table teamwork to individual work. I think that having several different transitions helped the students to stay engaged even at such a young age. As I walked around from table to table, I got to hear about their reactions and their predictions. Even though the vocabulary of the lesson was difficult, the students started to understand them and even use them in during their exploration of magnets. I think that this was potentially due to the repetition of hearing the words along with seeing how the words came to life with the magnets. I will definitely use this lesson again! I learned a lot and I hope to make it even better next time!