

+ = positive, desired  
- = negative, unwanted  
Expectations  
attention getter

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Science Lesson  
12:37 pm

We are going to do another investigation. The students cheered. Mrs. [redacted] instantly yelled, "LLP." The students immediately responded. Two students in the center table reached for materials. Mrs. [redacted] said, "Oh, did she say to touch those?" She also addressed two other groups by saying, "Make sure you are paying attention," and "Your speaker is up here."

expectations

praise + behavior

You gave directions. Then you asked, "What's the first thing that we are going to do?" "Oh, I love that quiet hand over there," and you called on the student who was quiet.

expectation

→ correct behavior

You introduced each of the items. You said, "Your task..." Mrs. [redacted] said, "Oh, listen!" You continue. The volume started to increase as students became excited. Mrs. [redacted] said, "Oh." Students became quiet.

Directions:

"Before we start, I want you to open your science notebook." Students start moving to open their notebooks and talking. One student complains about having to open and close it. Mrs. [redacted] said, "[redacted], whether she tells us that we have to open it, close it, open it, close it, do we have to be rude?"

expectation

correct behavior

expectations

You tell the students to copy the entry in their notebooks. "I know you are done when your pencil is down."

One student raises a hand. As you address that student, Mrs. [redacted] quietly says to another student, "Good job, [redacted]. I love how you are..." The student responds thank you.

praise + behavior

Both you and Mrs. [redacted] are walking around the room. She high fives two students.

expectation

You say, "I know you are finished when you are sitting quietly." Some students continue to talk. You say, "Friends at table 3." Then you repeat yourself, "Friends at table 3."

correct behavior

"Okay, it looks like everyone is ready. When you start, you will have 20 minutes. You will use only the materials that you have in there and you will find [redacted] a way to light that light bulb. We are not going to tell you. We will walk around in case there are any issues, but other than that, you are on your own."

correct behavior

Mrs. [redacted] says, "Where do we look if we forget?" The students chorally respond, "Up there!"

"Thank you. Okay, you are going to draw, label, and explain." "If you finish before the 20 minutes are up, I challenge you to find another way."



Mrs. [redacted], "And I'm just saying that we have candy bars for those who persevere the most." Students gasped.

You say, "Your 20 minutes starts... NOW!" Student leap up and dig into the materials.

Mrs. [redacted] says, "I love those goggles." Other students start grabbing goggles and putting them on.

You walk around. Mrs. [redacted] says to a student, "Oh, I am so glad that you problem solved." You say to a group, "There you go. I like that. You can actually physically split it." You move to another table. "Okay, [redacted], make sure you can share all of the things you have learned from your electromagnetic activity." "Are we just going to sit the paperclip on top? What are we going to do with it?" "How can we get that chemical energy to transform into another form of energy?" Student responds. "Okay, let's see. I'll be back in a minute to see." You move to another group. "Oh, that's interesting. I like how you are exploring with that electromagnetic energy." You move to another group. You address a student's question, "What do you know?" He answers. You say, "Okay, how are we going to get the energy to come out of this light bulb?" You say to another student, "Did you break my paper clip?... Why don't you explain to your partner..." You turn to address the group behind you. "Is that how we use our science equipment?" You return to your group. You continue to walk around. You grab a new paperclip from the front and return to the middle group to give them the new clip. "Be gentle."

You move to the back corner. "That's what your challenge is. You have to figure it out." (Perhaps - What strategies have you tried so far?)

Student explains what has happened. You say, "You are referring to the electromagnetic activity. Okay, that makes sense." He goes on to tell you more. You respond, "Okay, I'll come back." You return to the first group.

"Now what made you think to put the light bulb on the end of it?" "Okay, you go ahead and give it a try and I'll come back." Another student jumps up to show you his strategy. You look at it. Then you move to another group. "Now why did you choose to wrap the end all the way up there?" Students respond. "How did we wrap the wire around the nails?" Student responds. "Okay, let's see. I'm going to come back in a few minutes."

You move to another group. "Never give up." "Girls, persevere! Never give up!"

You move to another group. "I'm going to say yes. I like how you have used your resources, so I'm going to say yes." Students move to get notebooks. "But, if you spend too much time, you won't have time to investigate, so pick and choose wisely." Then you move to the front of the room to talk with Mrs. [redacted]. Students at all tables are working on the challenge. You circulate and return back to the table. "Let me remind you friends that you have limited time. Although you were trying to use your resource, this set up is not quite the same. I'm going to ask you now to close your resource and see if you can get creative here."

expectations

praise + behavior

praise + behavior

1  
2  
expectations



The student says something. "You can do it. The first class did it and you can do it." "What have you tried so far?" Students respond. "Alright, now try." "Wait a minute, wait a minute. What did you say? It got hot? That sounds like an observation. I would jot that down in your notebook. Didn't we see that in our electromagnetic activity?" Students at two tables are laughing loudly. Mrs. █████ says, "My friends! I need you to get back to work." The students return to their work. You move to another group. *Correct-behavior*

"Tell me what's different." The students respond. "What about the end of the wires?" A student explains her answer. "How are they connected to the battery?" Student responds. A student from the table behind calls you. You turn back to them and give them a new battery. "That is hot. Nice observation." You move to another group. "I don't know. Is there a wrong side?" "You have to take all of the information we learned and apply it to this activity." Students respond. "Okay, that's a great observation. Maybe you should jot that down in your science notebook before you forget." "I can tell you that I can do it without a battery holder, so that's not the answer." You say, "What have you tried so far?" Student responds, "Everything." "Well, you haven't tried everything because if you had, the light would have been lit by this point." You move to another group.

"There's something different that you are doing here than we did with our electromagnetic activity." "I notice that you are..." "It is easier, but does that mean we can only do this with a battery?" you say to the group of students. A girl at the middle table yells, "The paper clip is getting hot!" She starts laughing. You say, "You've got 3 1/2 minutes left."

Mrs. █████, "It's getting hot. Let's use our scientific terminology. Instead of it's getting hot, what would you say?"

You comment, "That's a great observation." Mrs. █████ agrees. The two of you talk up front. "Are you working with █████?" Mrs. Coscia says to students in the back corner who had risen from their seats. "Okay, just checking."

*expectations*

The two of you move around again to work with small groups. You say, "What other options do we have?" Students respond. "I really like what you have on there. That's a really interesting design." Mrs. █████ asks students to record their different ideas in their notebooks. You say to your student, "So where can we put the light bulb?" The alarm goes off. The students yell, "Awww!" Mrs. █████ says, "Give me five." The students are silent and turn towards her. She comments on two students who give the behavior she wants. She says, "I'll wait for all my friends. All my friends. All my friends. █████. All my friends. █████. All my friends." You ask students in the back to share their ideas. The student in the back says, "Well, it was █████ idea." The student holds up their idea. Mrs. █████ says, "So if you gave me five my friends, and someone is speaking, where should your eyes be? Should we be playing with our battery?" You wait until the students stop playing with the items. The student explains his answer. As he does, some students continue the behavior. Mrs. █████ says, "Hold on. I'm sorry. Some of our friends are being rude." She walks closely up to █████ and glares at her. █████ stops. "I want to make sure everyone hears you." Mrs. █████ then walks to the other side of the room so that the student can explain. "What did he do to the wire and the nail?"

*attention  
getter  
Correct-behavior*

*Correct-behavior*

*Correct-behavior*

*Correct-behavior*



"How many sets of hands do you have in your group?" Students didn't come up with the right answer.

Mrs. [redacted], "I think there is a misconception that the battery holder powered the battery." A student responds.

You say, "But some of you noticed that we were able to get the heat energy without the battery holder. So we know we don't need the holder to get the energy out of the battery."

Mrs. [redacted] says, "Another thing I want to bring your attention to is the wrapping of the wire entirely around the battery."

You say, "How much more time should we give them?"

Mrs. [redacted] says, "Let's start with five." Students complain. Mrs. [redacted] responds, "Oh, I'm sorry. Should I make it three?" "No!" The students respond.

Correct - behavior

You start the timer and start circulating around the room. You say, "How can we get that energy out of the bulb?" Student responds. "But you can only use these materials," you say. Student responds. You say, "But you only have one more item that you have to incorporate to get the energy out of the battery. I'll come back." You move to the front left table.

You move to the back table where a student has her hand raised. You respond, "Yes, ma'am." The student explains. You say, "I don't know." Student responds. You say, "Tell me why you think it needs to be connected to both sides of the battery." Mrs. [redacted] addresses two students by name who have raised their voices. One of those students doesn't have his glasses on. You continue working with your pair. "So we know that we can get energy out of this battery by connecting the wire to both sides. Now, how can we incorporate the light bulb into this scenario?" Mrs. [redacted] says, "Should we give them five more minutes?" "Should we give them a hint?"

You say, "I notice that they can get energy out of the battery, but they don't know where to place the light bulb."

Key moment in management:

"You have to make a choice. I can come take the battery or you can put the glasses on."

Student responds. "That's not an option." The student still hasn't put on the glasses. You walk away. Mrs. [redacted] comes over and whispers in the student's ear. She gets down at her level and explains to her why we have to have the glasses on. The student picks up the glasses and puts them on. "Thank you, sweetie." You never walked over to the student

corrects negative behavior

"You are warm like the battery." Students jump up to see. Two boys race back to their table and try again. Mrs. [redacted], "[redacted] is that respectful?" [redacted] says, "Yeah, [redacted]. That hurts my feelings." Mrs. [redacted] says, "[redacted], you focus on you."

correct - behavior

Expectations

Correct behavior



Two more students celebrate that they have figured it out. Students in the back get excited and yell, "Hurry up!" to each other.

"Now you can draw, label, and explain." [redacted] says, "I don't want to draw anymore."

[redacted] is standing on a chair in the back. You say, "~~Correct behavior~~" and you motion for him to get down. He gets down. He and his partner are so excited. They yell, "Mrs. Reyerse!" and they show you their strategy.

Two more students are figuring it out. Mrs. [redacted] says, "My friends, I do not appreciate the rude comments." One boy says to another student, "Do you want me to help?" They say yes and he races up to help them. You walk around with your phone showing strategies up on the big screen. Two of the boys who figured it out are moving around the room helping their peers to figure it out. You say, "Give me five." The students were quiet. Correct behavior

Mrs. [redacted] turns off the lights to get the students' attention because they aren't paying attention. \* misconception - She turned off the lights so they could see the bulb & projection, but that made the view worse, so I asked her to turn them back on. \*

Correct behavior "Okay, friends. Pay close attention. Notice where she is placing the ends of her paper clip." Students start to talk. "Friends, pay attention." Mrs. [redacted] starts to name names. "Friends, stop talking." Students are still whispering. One calls Mrs. [redacted]. She says, "I'm too busy watching what's happening up here." The first pair is still struggling to light their bulb. "Do you want me to come back to you?" The group finally gets it. "But we did it a different way!" says a group of students. Students are talking. "Okay, wait! We are going to look at one more." "Look! Look! Look!" Mrs. [redacted] exclaims! attention getter

attention getter "We're noticing... Five!... We're noticing that some of you lit it on the negative side of the battery and some of you lit it on the positive side. What did we have to do?"

Mrs. [redacted] said, "I think some of our friends are too busy playing. Maybe we can restate the question. My friends, I need you in your seat in five, four, three, two, one." You start talking. Mrs. [redacted] says to two students, "I need you listening." Correct behavior

You say, "What is similar between our two models here?" Students respond. You say, "Be more specific." Two students in the back are talking. Mrs. [redacted] says to them and leans over their table, "Sh. sh. sh..." as she points to the speaker. Correct - behavior

The boys in the back are still playing. Mrs. [redacted] walks over with her hands out and she takes the battery and materials.

"What did we do to Dave?" Student says, "We charged him." Mrs. [redacted] says, "I like how she's using scientific terms." expectations for language

"Why was he attracted to me?" Student responds. Mrs. [redacted] says, "Well, are the charges deep inside of it?" Student re-explains. Mrs. [redacted], "She charges her shampoo?"



Setting expectations

"What kind of charges did he have? What did I have?" Mrs. [redacted] says, "Instead of saying I don't know. Instead can we say, 'I'm not sure. Can I call on someone else?'" She then walks over to talk with him one on one. He has his hands on his cheeks.

Correct behavior

[redacted] has the batteries under her hands. She quietly whispers, "[redacted]," to show him. She glances up at Mrs. [redacted] to see if she sees her playing with the batteries. She repeats this pattern three times. Four times. On the fifth time, Mrs. [redacted] says, "[redacted], I'm going to repeat this." And then she pauses. [redacted] looks at her and she puts the battery down. Student responds. Student phones a friend. That student phones a friend.

Students are starting to rock in their seats. Three students get up – two to go to the bathroom. One to go to the sink. (1:41) Two students are swinging their legs. One student yawns. Another student is playing with his battery.

Correct behavior

"So it transformed or converted from heat energy. Then when we added our light bulb, it transformed into light energy! Yes, dear." [redacted] starts talking. "Hold on just a second, some of your friends are talking." The students get quiet. [redacted] explains. "Can I restate that?" You restate her answer. "Is that what you're saying?" [redacted] says, "No, not at the bottom." You said, "Well, let's try it." Some students start moving because they want to see. They are leaning every which way trying to stay in their seats and yet see at the same time.

You demonstrate and you say, "But it's not working. Why not?" [redacted] explains. "What are you noticing that you need to do in order to make it light? And Feel free to phone a friend." A friend answers.

"You have to have everything touching in order to create a circuit." Students are shuffling their feet and one after another are taking turns going to the bathroom. Mrs. [redacted] asks the students to put their materials in their bag and sit in LLP. (1:47)

expectation of readiness