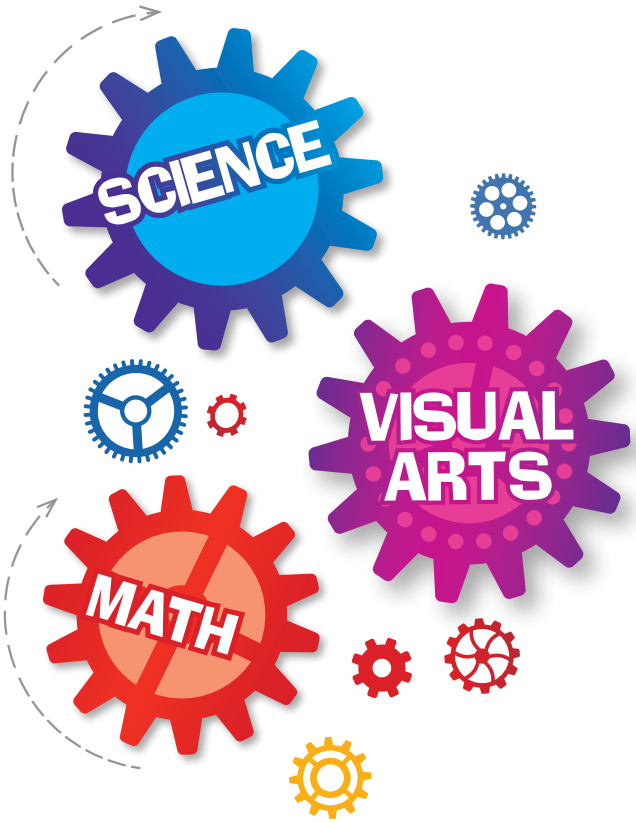
Van Wezel

THE CITY OF SARASOTA'S PERFORMING ARTS HALL

ARTWORKS FOR SCHOOLTIME

2024-25 Learning Module Series 3

to accompany the Van Wezel Schooltime Performance of



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LESSON 1

THE PUSH AND PULL OF IT

Freda Williams Kmak

STANDARDS

SC.5P.13.IN.1 Distinguish between movement of an object caused by gravity and movement caused by pushes and pulls.

SC.5.P.13.IN.2 Identify that heavier objects take more force to move than lighter ones.

TH.5.S.2.1 Collaborate with others to create tableaus and solve challenges.

STUDENT LEARNING INTENTIONS AND SUCCESS CRITERIA

Today I will use drama techniques to model forces and motion in objects.

I know I am successful when I work collaboratively with a group to create a tableau that conveys the impact of forces on objects to make them move.

GOALS

- Understand general classroom drama expectations (**Attachment 1**).
- Understand that a force is either a push or a pull. It always involves at least 2 objects. There is a cause-and-effect relationship between these objects.
- Understand that pushing equally hard in opposite directions balances the forces and cancels each other out.
- For advanced learners: Understand the sum of the forces is zero; zero newtons. How we measure force. Unbalanced force will get an object in motion. Any push or pull where the net force is NOT zero.

MATERIALS

- Open space for movement and group work
- **Attachment 1 and 2**

GUIDING QUESTIONS

- What is a force?
- How do forces affect motion?
- How do we use drama techniques to help understand forces and motion?

SKILL BUILDING AND PROCEDURE FOR LESSON

1. Students will work in pairs finding a safe space for movement. We will use the Drama tools of Body and imagination. (**attachment 1**) The skills of this experience are concentration and cooperation.
2. Students will place hands palm to palm with each other.
3. Ask students to slowly add the same amount of pressure to their palms to push each other equally but also to keep their feet safely on the ground and not to push each other over.
4. Ask students what type of force are they displaying. (hopefully, they mention balanced forces) Ask students to explain why they believe they are modeling that type of force. Explain that this is modeling equal and balanced forces Zero newtons.
5. Direct students to meet palm-to-palm one more time. This time have them take turns showing unbalanced forces, and coming back together to be balanced. Ask students what it felt like to have unequal forces. What did they have to do to come back into balance?
6. Students will place their palms together again this time coach them through levels. Invite them to attempt to stay balanced while they move closer to the floor, or up higher.
7. To continue, challenge them to explore hitting a certain level for an interesting composition. For example, the highest level 10 would be reaching as high as they can while still holding palms. The lowest level (one) would be flat on the ground. Allow the students time to practice different levels as well as balanced and unbalanced forces.
8. Discuss forces, balanced and unbalanced, with students. Use the following questions: Describe how you and your partner modeled balanced and unbalanced force. How did you use your body and imagination for these activities? What worked well? What needs work? How well was your concentration and cooperation skills for these activities?

MAIN ACTIVITY

1. Tableau is a French word meaning a still image or picture demonstrating an idea, person or thing. It can resemble a photograph a scene from a play or even a moment in history.
2. Today we are going to make tableaus that show balanced and unbalanced forces. To create an effective tableau you and your team need to create a scene that can be frozen and held safely for more than a minute. This means you need to make sure your team can hold the pose without falling down. Tableaus are silent like a statue. The best tableaus include levels.
3. Let's practice finding levels. Stand up on your tip toes and stretch your hands to the ceiling. This would be considered a HIGH level or to quantify it would be a level 10.

4. Next explain that the lowest level 1 is basically when the body is as close to the floor as possible. Allow time for students to explore this space.
5. Once the students have a good idea about levels 1 and 10 lead them to experiment with all the levels in between.
6. Now that the levels have been explained have students practice individual tableau showing a tree, a cup of tea, a door etc.
7. Then ask them to work with a partner to work together to create a tableu. Offer ideas of becoming a flower for example.
8. Finally have each pair find another pair, to make a group of 4. To prepare for your tableau keep the following in mind: everyone needs to be connected in some way (not literally but have everyone included), include at least 2 levels, silent, and frozen in a comfortable safe way.
9. The assignment is that you and your team create a tableau that either shows an example of a balanced or an unbalanced force. How can you show this example clearly? How can you show that it is balanced or unbalanced? Remember that everyone is the director so everyone is allowed to share opinions. Ask instead of telling focus on cooperation and concentration. You will use your body and imagination only. Use cards (**attachment 2**) to pass out to partners if needed.
10. Provide time for every team to share their creation. Allow the audience to compliment the actors. What kinds of force did you see? Was it balanced or unbalanced? What did you see that made you say that?

REFLECTION QUESTION (EXIT TICKET)

- What was easy/hard about creating the tableau?
- What makes a strong tableau?
- What could you do differently next time?
- What did you see that really displayed balanced or unbalanced forces?

ATTACHMENT 1

General Classroom Drama Tips for Success for Beginners (10-20 minutes perhaps the day before if possible)

- Practical ideas for Getting Ready for Drama. Try to clear some space in your classroom for safety and expression. Once the room is clear have the students sit down in a circle or horseshoe formation. This helps to create a space for drama and to set the tone for something special.
  - Then explain or teach the difference between theater and drama. How many of you have been to see a play or a musical? Brainstorm a list of ideas on a T Chart about the following: What is the difference between drama and Theater? In the theater column guide the discussion to costumes, make up, back drop, props, scripts, stage, audience. In the drama column guide the discussion to dialogue, acting, no scripts, no costumes, and no props.
  - Explain that drama in the classroom is used for learning purposes, exists only for the benefit of the participants. Everyone acts improvisational. The classroom drama is not meant for the stage but just for the class and the students in the class. There are no sets, costumes, or props. The classroom drama will not result in a polished production. Drama revolves around the creative process.
  - Create a chart or power point slide using the following information about the Drama Creative Process:
    - Basic Acting Tools ~ Imagination (point to your mind) ~ Voice (point to your throat) ~ Body (point to your body)
    - Basic Acting Skills ~ Cooperation (point to all of your class) ~ Concentration (stare at a single object)
  - Management. In drama we use cues to help manage the class.
    - Here are some examples:
      Freeze = stop movement at any time because the teacher has something to say.
      Places = actors get in position to begin their drama.
      Action = actors begin to act
      Curtain = actors complete their scene
      Relax = actors sit or stand comfortably

ATTACHMENT 2

Unbalanced See Saw	**Wind blowing the curtains**
Tug of war... Tie	**Dog on a leash running after something (pulling its master?)**
Balanced See Saw	**Tug of War.. someone losing**
Balance Scale showing items that weigh the same	**Balance scale showing items that weigh different amounts**

A person going down a slide

LESSON 2

FAST AND SLOW FORCES

by Freda Williams Kmak

STANDARDS

SC.5.P.13.4 Investigate and explain that when a force is applied to an object but it does not move, it is because another opposing force is being applied by something in the environment so that the forces are balanced.

TH.5.S.2. Development of skills such as mime to strengthen abilities to focus, remember, and sequence information.

STUDENT LEARNING INTENTIONS AND SUCCESS CRITERIA

Today I will demonstrate my understanding of acceleration and how objects can slow down or change direction through theater strategies.

I know I am successful when I work collaboratively to create a scene using miming to model ways objects accelerate and change directions.

GOALS

- Understand that acceleration can be described in how an object speeds up, slows down, or changes direction.
- Collaborate with others to create a mime to show understanding of acceleration

MATERIALS

- Open space for movement and group work
- **Attachment 3**

GUIDING QUESTIONS

- What are three ways objects can accelerate?
- How can we use mime to demonstrate acceleration?

SKILL BUILDING AND PROCEDURE FOR LESSON

1. Introduce the Theater Game: Zip Zap Zop. Students stand in a circle ready to pass the "energy". Invite students to pass the ball of energy by making eye contact with the person you are passing the energy to and then using a hand motion to pass it to them. Every time the energy is passed it follows this sequence: eye contact, Zip (hand motion to pass it), the one catches it makes eye contact with someone new and says Zap (hand motion to pass it), the next person makes eye contact, Zop (hand motion to pass it),

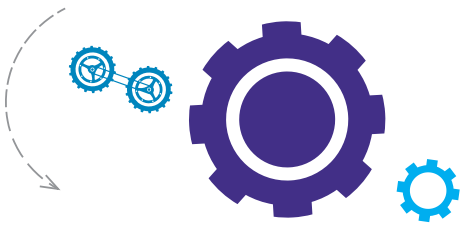
then repeat. If someone makes a mistake the entire circle walks to the center and says (wooooooaaaahhhh) and erases the mistake with their hands for a start over.

2. Once everyone has had a turn catch the ball of energy, explain that now you will send the Zip either Left or Right. If you send it Right it's to represent positive acceleration and it will stay in the same direction until someone says Zap which will send it in the opposite direction Left which represents negative acceleration. Then it will continue to move until someone says Zop and it will go the opposite direction.
3. Review the science concepts. Model negative acceleration slowing down going left and/or showing positive acceleration by going right and speeding up using the same positive and negative directions of right and left.

MAIN ACTIVITY

1. Ask the class, what do you think of when I say "mime"? Expect that students will either talk about an actor whose face is painted white wearing all black with white gloves or they may act out the mime in the box.
2. Today we are going to create a mime which means we will be demonstrating an object AND an action. Ask the group to practice a few individual mimes such as: a tree with some leaves blowing in the wind
3. Once the class has practiced mention the following: The mime needs to be very clear so we can figure out not only your object but if you are demonstrating positive/negative, speed/change direction acceleration.
4. Divide the class into groups of 5-7.
5. Either have students brainstorm an example of an object accelerating, or give each group a concrete object from **Attachment 3**. Have students discuss why this is an example of acceleration and what the cause of acceleration is (i.e. slow down, speed up, change direction)
6. The groups will work together quietly to create a short concrete mime sequence of their object in motion, trying to make the cause of acceleration clear. The teacher will walk around to each group for coaching purposes being the guide on the side to assist the group with problem solving. Remind the students that they will perform in total silence and everyone has to participate.
7. Each group will demonstrate their concrete mime for the rest of the class to observe and make guesses on what their object is and what type of acceleration is displayed.

REFLECTION QUESTION (EXIT TICKET)



- What form of acceleration?
- What is the cause of the acceleration? How do we know?
- What levels did you notice? What was done exceptionally well?
- What are other examples of acceleration we could show through concrete mime?

LESSON 3

NEWTON'S 3 LAWS OF MOTION

by Freda Williams Kmak

STANDARDS

SC.5. P.13.1 It takes energy to change the motion of objects.

SC.5.P.13. 2 Energy change is understood in terms of forces--pushes or pulls.

SC.5.P.13.3 Some forces act through physical contact, while others act at a distance.

TH.5.S.2.1 Collaborate with others to create tableaus and solve challenges.

STUDENT LEARNING INTENTIONS AND SUCCESS CRITERIA

Today I will create a short skit about one of Newton's Laws of Motion.

I know I am successful when I work collaboratively using drama skills of focus, collaboration, and creativity to demonstrate one of Newton's Laws of Motion.

GOALS

- Demonstrate an understanding of the Laws of Motion through drama skills
- Develop drama tools and skills of collaboration, focus, and creativity

MATERIALS

Open space for movement and group work

Attachment 4

GUIDING QUESTIONS

- What are Tools and Skills for Drama (**attachment 1**)
- Why do actors need to practice finding "personal space"
- What are the 3 laws of motion?

SKILL BUILDING AND PROCEDURE FOR LESSON

1. To practice personal space have the students spread out in the space provided. It is not necessary or required to have them stand in straight lines.
2. Model how to find the interior of their "personal space bubble" by tapping the top, sides, and bottom of your invisible bubble. Then ask the kids to do the same.

3. Ask the students to take their "personal space bubble" on a calm and slow walk around the room without running into anyone else. Allow a few moments for the students to feel what that is like and also model if needed.
4. Gather the group back together and this time have them expand their space bubble but this time use a larger reach. Allow time for students to walk around with a larger "personal space bubble" to practice healthy physical boundaries for acting.
5. Finally randomly split the class into groups of 4. Make sure to have at least 3 groups for students to act out the laws of motion.

MAIN ACTIVITY

1. Once the groups are created inform the class that the challenge will be to create a 60 second skit to model one Law of Motion. Pass out (**attachment 4**).
2. Remind the students to allow all ideas to be heard, to take turns, and to rehearse.
3. Allow about 10-15 minutes of rehearsals for the groups.
4. Have each group perform their skit and allow the groups who are observing take turns guessing which Law of Motion they are demonstrating.
5. Allow time for students to share what went well and what might be improved for the future.
6. If time is allowed, challenge the groups to combine their Laws of Motion to create a more interesting skit.

REFLECTION QUESTION (EXIT TICKET)

- How does drama help build understanding of Newton's Laws of Motion?
- Why is respecting actors personal space important for drama activities?
- Which Law of Motion was the most challenging or easiest to demonstrate with drama?

ATTACHMENT 3

A car speeding up **(positive)**	**A train going around a curve** **(change of direction)**
The moon orbiting the Earth **(change of direction)**	**A ball rolling down a ramp** **(negative)**
A boat anchored in choppy water **(change of direction)**	**A leaf falling from a tree** **(positive)**

ATTACHMENT 4

First Law of Motion:

An object at rest will remain at rest unless acted on by an unbalanced force. An object in motion continues in motion with the same speed and in the same direction unless acted upon by an unbalanced force.

This law is often called "Law of inertia".

This means that there is a natural tendency of objects to keep on doing what they're doing. All objects resist changes in their state of motion. In the absence of an unbalanced force, an object in motion will maintain this state of motion.

Second Law of Motion:

Acceleration is produced when a force acts on a mass. The greater the mass (of the object being accelerated) the greater the amount of force needed (to accelerate the object). Everyone unconsciously knows the Second Law. Everyone knows that heavier objects require more force to move the same distance as lighter objects.

Third Law of Motion:

For every action there is an equal and opposite re-action.

This means that for every force there is a reaction force that is equal in size, but opposite in direction. That is to say that whenever an object pushes another object it gets pushed back in the opposite direction equally hard.