SCIENCE
CLASSROOM ENERGIZERS

Classroom-based Physical Activities | The way teachers integrate physical activity with academic concepts

NORTH CAROLINA Healthy Schools
Community & Clinical CONNECTIONS for Prevention & Health Branch
PUBLIC SCHOOLS OF NORTH CAROLINA State Board of Education Department of Public Instruction
<table>
<thead>
<tr>
<th>NAME OF ACTIVITY:</th>
<th>Chapter Review Charades</th>
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</thead>
<tbody>
<tr>
<td>GRADE LEVEL:</td>
<td>6th - 8th</td>
</tr>
<tr>
<td>SUBJECT AREA:</td>
<td>Science</td>
</tr>
<tr>
<td>NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:</td>
<td>Review of any content area</td>
</tr>
<tr>
<td>FORMATION:</td>
<td>Groups of 3</td>
</tr>
<tr>
<td>EQUIPMENT:</td>
<td>Flashcards, timer</td>
</tr>
</tbody>
</table>
| RULES/DIRECTIONS: | 1. Students will play charades and compete in small groups.  
|                 | 2. The teacher will prepare a set of cards with various concepts and vocabulary words from the objective covered in class.  
|                 | 3. One member of the group will pick a card, and then must act out the concept for his/her group.  
|                 | 4. The group has 2 minutes to guess the concept; group members must march or jog in place until they guess the correct answer or time expires. |
| VARIATIONS:      | 1. The teacher calls the concept and each group has to talk about how to physically illustrate the concept.  
|                 | 2. Each group will perform the action for the class.  
|                 | 3. Use different concepts  
|                 |   • Simple Machines  
|                 |   • Force and Motion  
|                 |   • Levers  
|                 |   • Newton’s Laws  
|                 |   • Solar System  
|                 |   • Rocks and Matter  
|                 |   • Energy |
### NAME OF ACTIVITY:

**Don’t Break Newton’s Laws**

### GRADE LEVEL:

7th

### SUBJECT AREA:

Science

### NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:

- 7.P.1.1 Explain how the motion of an object can be described by its position, direction of motion, and speed with respect to some other object.
- 7.P.1.2 Explain the effects of balanced and unbalanced forces acting on an object (including friction, gravity and magnets).

### FORMATION:

Standing at desks

### EQUIPMENT:

Paper ball

### RULES/DIRECTIONS:

1. Students make a paper ball and perform the following activities for one minute each. They will record the number of successful catches for each activity.
   a. Toss and catch (to self).
   b. Toss and catch (to self) while hopping on left foot.
   c. Toss and catch (to self) while walking in place.
   d. Toss and catch (to self) while hopping on right foot.
   e. Toss and catch (to self) while jumping in place.
   f. Toss and catch (to self) while jogging in place.
   g. Compare recordings and discuss Newton’s laws.
      - the force and friction retards motion
      - for every action, there is an equal and opposite reaction
      - the greater the force, the greater the change in motion
      - the object’s motion is the result of the combined effects of all forces acting on the object
      - a moving object that is not subjected to a force will continue to move at a constant speed in a straight line
      - an object at rest will remain at rest

### VARIATIONS:

1. Perform each activity with a partner.
2. Adapt this activity for the solar system to introduce weight on other plants.
3. Students can create movements.
**NAME OF ACTIVITY:** Go with the Flow (of Energy)

**GRADE LEVEL:** 6<sup>th</sup> & 8<sup>th</sup>

**SUBJECT AREA:** Science

**NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:**

- **6.L.2.1** Summarize how energy derived from the sun is used by plants to produce sugars (photosynthesis) and is transferred within food chains and food webs (terrestrial and aquatic) from producers to consumers to decomposers.
- **8.L.3.3** Explain how the flow of energy within food webs is interconnected with the cycling of matter (including water, nitrogen, carbon dioxide and oxygen).

**FORMATION:** Class is divided into four groups; each group is assigned to one area of the room

**EQUIPMENT:** Several of any object (e.g., piece of paper, ball, etc.) to represent energy

**RULES/DIRECTIONS:**

1. Divide class into 4 equal groups. Label each group as a part of the ecosystem: (1) sun, (2) producers, (3) consumers, or (4) decomposers. Separate each group into 4 different areas of the room.
   - Sun: walk in a circle (to simulate rotation)
   - Producers: Jump or hop in one place
   - Consumers: Standing sit-ups (touch right elbow to left knee)
   - Decomposers: Squats

2. Teacher sets out a yellow piece of paper or a ball for each student in the sun group.
3. The students who are assigned to be the sun will walk to pick up the object that represents energy (e.g., piece of yellow paper). The “sun” will bring the energy to any producer (i.e., student must know that energy flows from the sun to producers) and return to the area they started from and carry out designated movement.
4. The “producer” will take the energy to any consumer (i.e., student must know that energy flows from producers to consumers and return to designated spot and continue movement).
5. The “consumer” will bring the energy to any decomposer and return to designated spot.
6. The “decomposer” will return the energy to the starting spot to start the process again (since energy cannot be created or destroyed).
7. Process is continued until each “sun” transfers energy to each “producer” who transfers energy to each “consumer” who transfers energy to each “decomposer.”

**VARIATIONS:**

1. Use specific examples of producers, consumers, and decomposers rather than just the general term. Create a chant to reinforce the direction of the cycle.

Advanced Variations:

1. Become a different portion of the chain
2. Before starting each student writes a part of the ecosystem on one side of a note card and an example on the opposite side.
3. Students can move in different ways. For example, the sun can move by spinning around, the producer can move by hopping on the right foot, the consumers can move by jumping with both feet, and decomposers can move by hopping on left foot. Teacher can write cycle and designated movement on the chalkboard.
NAME OF ACTIVITY: Heart Rate

GRADE LEVEL: 7th

SUBJECT AREA: Science

NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER: 7.L.1.4
Summarize the general functions of the major systems of the human body (digestion, respiration, reproduction, circulation, and excretion) and ways that these systems interact with each other to sustain life.

FORMATION: Standing at desks

EQUIPMENT: Stop watch or wall clock with a second hand, data sheet, and graph paper

RULES/DIRECTIONS: Teacher should help students locate the carotid (neck) or radial (wrist) artery with index and middle finger to acquire the pulse count. Teachers should give the following directions:

- Find your pulse (at either carotid or radial arteries).
- Start counting your pulse rate.
- Stop and record.

1. Students will sit quietly for one minute, take their pulse, and record. This is the resting heart rate.
2. Student will then exercise for one minute (jumping jacks, running in place, or other activities from the Movement Bank).
3. Take the pulse rate and record. Repeat a different activity from the Movement Bank for one minute.
4. Stop and take pulse for 1 minute and record number.
5. Plot individual data on graphs.
6. Teacher may repeat procedure for 10 minutes.
**NAME OF ACTIVITY:**  Human Air Molecule – Demonstration of Humidity

**GRADE LEVEL:**  7th

**SUBJECT AREA:**  Science

**NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:**  7.E.1.3 Explain the relationship between the movement of air masses, high and low pressure systems, and frontal boundaries to storms (including thunderstorms, hurricanes, and tornadoes) and other weather conditions that may result.

**FORMATION:**  Divide class into two groups

**EQUIPMENT:**  None

**RULES/DIRECTIONS:**  Humidity is the measure of water vapor in the air. This is a demonstration of how the temperature of the air affects the amount of water vapor air can hold at a specific time.

Warm air: molecules of air are spread out and as individual molecules are moving quickly.

Cold air: molecules of air are close together and individual molecules move slowly. When air gets too cold, the water vapor is pushed out of the air and is released as precipitation. Have the students act out the configuration of the air at various temperatures.

**Group 1: Air Molecules**  
**Group 2: Water Vapor Molecules (perform the sign for rain see figure)**  
1. Teacher calls for the students to create a warm air mass. The students move to create the following configuration. The students in the air group spread out. Students in the water group stand between students from the air group. No one is touching. Students from the air group begin marching/running in place.
2. Teacher calls for the students to create a cold air mass. The students move to create the following configuration. Students in the air group are close together (shoulder to shoulder or holding hands) and the students in the water vapor group stand around the students from the air group, but not inside the configuration. Students in the water vapor group must jump outside of the circle. The students in the air group are not moving much at all.
3. Teacher continues to call various configurations so the students can practice the concept. Between each configuration have the students march in place as warm air molecules. Air mass configurations that effect the U.S. are mP (maritime Polar = wet and cold), mT (maritime Tropical = wet and warm), cP (continental Polar = dry and cold), and cT (continental Tropical = dry and warm). Between each configuration have the students march in place as warm air molecules.

**VARIATIONS:**  
1. Have students switch groups.
2. Use as review of concepts after the lesson on humidity and air molecules has been taught.
<table>
<thead>
<tr>
<th>NAME OF ACTIVITY:</th>
<th>May the Force Be With You</th>
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<tbody>
<tr>
<td>GRADE LEVEL:</td>
<td>7th</td>
</tr>
<tr>
<td>SUBJECT AREA:</td>
<td>Physics</td>
</tr>
<tr>
<td>NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:</td>
<td>7.P.1.1 Explain how the motion of an object can be described by its position, direction of motion, and speed with respect to some other object. 7.P.1.2 Explain the effects of balanced and unbalanced forces acting on an object (including friction, gravity and magnets).</td>
</tr>
<tr>
<td>FORMATION:</td>
<td>Partners (choose someone of similar size)</td>
</tr>
<tr>
<td>EQUIPMENT:</td>
<td>None</td>
</tr>
</tbody>
</table>
| RULES/DIRECTIONS: | 1. The object is to get your partner off balance. 2. Use the following strategies to achieve this objective:  
  - Partners stand face-to-face with hands together overhead (a stationary high 10). Push against your partner’s hands and see who falls off balance. Progressions should be as follows: feet apart, feet together, standing on one foot.  
  - Same as above with arms extended directly in front (parallel to the floor). Keeping arms straight, push against your partner’s hands and try to get him or her off balance.  
  - Partners push against one another’s hands and try to step on their partner’s feet.  
  - Partners squat with arms crossing chest. Try to knock each other off balance. |
<table>
<thead>
<tr>
<th>NAME OF ACTIVITY:</th>
<th>Mind Over Matter</th>
</tr>
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<tbody>
<tr>
<td>GRADE LEVEL:</td>
<td>7th</td>
</tr>
<tr>
<td>SUBJECT AREA:</td>
<td>Science</td>
</tr>
<tr>
<td>NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:</td>
<td>7.P.1.3 Illustrate the motion of an object using a graph to show a change in position over a period of time. 7.P.1.4 Interpret distance versus time graphs for constant speed and variable motion.</td>
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<tr>
<td>FORMATION:</td>
<td>Beside desk</td>
</tr>
<tr>
<td>EQUIPMENT:</td>
<td>Chair</td>
</tr>
</tbody>
</table>
| RULES/DIRECTIONS: | 1. Students complete the following exercises 2 times.  
   - 30 seconds jumping jacks  
   - 15 squats (Have students pretend to sit in an imaginary chair and stand back up.)  
   - 30 seconds jogging in place  
   - 15 knee lifts  
   - 30 seconds hop left foot  
   - 15 chair push-ups (Students place hands on back of chair or against wall and perform a push-up from a standing position.)  
   - 30 seconds hop right foot  
   - 10 chair dips (Stand with back to chair. Place hands on the edge of the chair. Bend and straighten arms.)  
   - 30 seconds march in place  
   - Stretch with both arms reaching to the sky for 10 seconds  
   2. Discuss with class how the following made a difference when performing each exercise.  
   - Time  
   - Distance  
   - Mass  
   - Force  
   - Velocity  
   - Center of Mass  
   - Acceleration |
| VARIATIONS:      | 1. Repeat sequence 1 time.  
   2. If space is limited replace movements such as jumping jacks and chair dips with more appropriate items from the Movement Bank. |
<table>
<thead>
<tr>
<th>NAME OF ACTIVITY:</th>
<th><strong>Modified Baseball Review</strong></th>
</tr>
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<tbody>
<tr>
<td>GRADE LEVEL:</td>
<td>6&lt;sup&gt;th&lt;/sup&gt; – 8&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>SUBJECT AREA:</td>
<td>Science</td>
</tr>
<tr>
<td>NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:</td>
<td>Review of any content area</td>
</tr>
<tr>
<td>FORMATION:</td>
<td>Divide the class into two teams</td>
</tr>
<tr>
<td>EQUIPMENT:</td>
<td>Whiffle ball (or paper ball) and bat, review question cards</td>
</tr>
</tbody>
</table>
| RULES/DIRECTIONS: | 1. One team is at bat and the other is in the field.  
2. The student at bat must answer a review question.  
3. If the student’s answer is correct, they hit the ball. If it is incorrect the student may refer to teammates for help.  
4. After hitting the ball, the batting team must pass the bat to each team member without using their hands. Once a student has passed the bat he/she must do a victory dance.  
5. Once the team in the field gets the ball they must do “over and under” with the ball. (Over and Under: The ball is passed over the head of one student and through the legs of the following student.) . Repeat until the object is passed to each student in the group.  
6. If the team in the field can do this before the batter’s team moves the bat, then the batter is out. If not, the batter’s team wins a point.  
7. Switch position after one out. |
<table>
<thead>
<tr>
<th>NAME OF ACTIVITY:</th>
<th>Osmosis Jones</th>
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<tbody>
<tr>
<td>GRADE LEVEL:</td>
<td>7th</td>
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<tr>
<td>SUBJECT AREA:</td>
<td>Science</td>
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<tr>
<td>NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:</td>
<td>7.E.1.3 Explain the relationship between the movement of air masses, high and low pressure systems, and frontal boundaries to storms (including thunderstorms, hurricanes, and tornadoes) and other weather conditions that may result. 7.E.1.4 Predict weather conditions and patterns based on information obtained from: • Weather data collected from direct observations and measurement (wind speed and direction, air temperature, humidity and air pressure). • Weather maps, satellites and radar • Cloud shapes and types and associated elevation</td>
</tr>
<tr>
<td>FORMATION:</td>
<td>Divide class into groups of 2</td>
</tr>
<tr>
<td>EQUIPMENT:</td>
<td>None</td>
</tr>
</tbody>
</table>
| RULES/DIRECTIONS: | 1. Osmosis is the movement of liquid through a membrane.  
Student 1: Cell Membrane/Membrane  
Student 2: Water/Liquid  
2. Teacher calls for the students to create an environment in which osmosis would occur. (e.g., salt water and fresh water).  
3. The students move to create the configuration. Students in group 1 create a membrane (join hands and form a circle). Students in group 2 are split on the outside or the inside of the circle standing shoulder to shoulder. Students in group 1 are marching or running in place.  
4. Teacher calls for the students to create different environments in which the water would flow in or out of the membrane.  
5. The students move to create the configuration for 10-15 seconds.  
6. Teacher continues to call various configurations so the students can practice the concept. Between each configuration have the students march in the direction flow would occur. |
| VARIATIONS:      | 1. Have the students in group 1 and group 2 switch roles. |
NAME OF ACTIVITY: **Shake, Bake, Twist, and Mist**

GRADE LEVEL: 6th

SUBJECT AREA: Science

NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER: 6.E.2.1
Summarize the structure of the earth, including the layers, the mantle and core based on the relative position, composition and density.

FORMATION: Beside desks

EQUIPMENT: None

RULES/DIRECTIONS: 1. The teacher writes the following 4 phenomena and corresponding physical activities on the board:
   - Earthquake ("shake") – shake or wiggle.
   - Volcano ("bake") – squat down and jump toward the ceiling.
   - Tornado ("twist") – twist.
   - Hurricane ("mist") – imitate jogging through a strong wind.
2. The teacher reads a statement from below that describes one of the 4 phenomena.
3. The students must allow the teacher to finish reading each statement. They then determine which phenomenon the teacher is describing and perform the corresponding activity for 30 seconds.

Phenomena Descriptors:
- One of these is felt approximately every 30 seconds (earthquake).
- Its ultimate source of energy is heat and moisture from warm water (hurricane).
- Ocean water must be warmer than 81 degrees F for this to occur (hurricane).
- This is called a “funnel” until it comes in contact with the ground (tornado).
- This generates vibrations called seismic waves (earthquake).
- This phenomenon occurs when rock from the earth’s mantle melts and moves up to the surface (volcano).
- These weaken when traveling over land or cool ocean waters (hurricane).
- The Saffir-Simpson scale categorizes these on a scale from 1 to 5 (hurricane).
- These send fiery bits and ash into the air. The bits that cool and return to the Earth are called “tephra” (volcano).
- Winds must be at least 74 mph (hurricane).
- The molten rock from the Earth’s mantle, or “magma” that escapes during one of these is called “lava” once it reaches the Earth’s surface (volcano).
- A “hotbed” for these in the U.S. extends from Texas up through Oklahoma, Kansas, Nebraska, and the Dakotas (tornado).
- Over 1 million of these occur annually, with some too small to be felt by humans (earthquake).
- Hazards associated with this phenomenon are storm surge, high winds, flooding, and tornados (hurricane).
- These occur along faults, or fractures in the Earth’s crust (earthquake).
- These cause a storm tide, which can increase the mean water level by 15 feet or more (hurricane).
- In the mid-western U.S., these often form when warm, moist air from the gulf of Mexico collides with cold air from the north (tornado).
**NAME OF ACTIVITY:** Simple Machine Course

**GRADE LEVEL:** 6th - 8th

**SUBJECT AREA:** Science

**NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:** Review of any content area

**FORMATION:** Create stations and divide the class into competition groups of no more than 4 members

**EQUIPMENT:** Various: calculators, jump ropes, cones, balls, hula hoops, stop watch

**RULES/DIRECTIONS:**
1. Set up various stations. At each station have a question and/or a skill activity for students to perform.
2. The students must perform a physical activity as a group.
3. Upon completion of that action, the students are to complete the academic task.
4. Have groups rotate through the stations.

**Examples:**
- **Station One:** **Physical Activity:** Teams are to perform “Over and Under” twice with a ball, science book, or balled up piece of paper (Over and Under: the selected object is passed over the head of one student and through the legs of the following student). Repeat until the object is passed to each student in the group. **Academic Task:** Calculate the mechanical advantage of several simple machines.
- **Station Two:** **Physical Activity:** Teams are to do imaginary jump rope 15 times each. **Academic Task:** Calculate the efficiency of various simple machines.
- **Station Three:** **Physical Activity:** Teams are to run through a twisting course of cones, beakers, or chairs. **Academic Task:** Identify the correct class of lever for each picture.
- **Station Four:** **Physical Activity:** Each member swings an imaginary hula-hoop around his/her waist 15 turns. **Academic Task:** From a description, students must identify the correct simple machine to use for each task in the descriptions.

**VARIATIONS:**
1. Instead of hula-hoop have student pass science book around his/her body.
2. Have the students create physical tasks that can be done by teams.
3. Demonstrate the type of lever using body parts.
4. Do only one station per day if time is an issue.
5. Create more stations if the class size is large.
6. The team that completes the course the fastest with the most correct answers wins.
**NAME OF ACTIVITY:** To Infinity and Beyond  
**GRADE LEVEL:** 6th  
**SUBJECT AREA:** Science  
**NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:** 6.E.1.2 Explain why Earth sustains life while other planets do not based on their properties (including types of surface, atmosphere and gravitational force) and location to the Sun.  
**FORMATION:** Beside desks  
**EQUIPMENT:** None  

**RULES/DIRECTIONS:**
1. The teacher writes the following 4 solar system vocabulary words and corresponding physical activities on the board:
   - Constellation – shake or wiggle.
   - Telescope – squat down and jump toward the ceiling.
   - Sun – twist.
   - Galaxy – jog in place or walk on the moon
   - Universe – touch head, shoulders, knees, and toes.
2. The teacher reads a statement from below that describes one of the 4 vocabulary words.
3. The students must allow the teacher to finish reading each statement. They then determine which vocabulary word the teacher is describing and perform the corresponding activity for 30 seconds.

Descriptors:
- Its diameter is one hundred times greater than the diameter of the earth (sun).
- The Milky Way (galaxy).
- Group of stars that form a pattern in the sky (constellation).
- Placed on mountain tops and rural areas (telescopes).
- One of countless stars in space (sun).
- Contains billions of galaxies (universe).
- Uses a curved mirror that gathers light (telescope).
- Groups of millions or billions of stars (galaxy).
- All of the planets orbit this (sun).
- This contains everything (universe).
- Many of these were named after ancient gods (constellation).
- A device that gathers electromagnetic radiation (telescope).
### NAME OF ACTIVITY: Vocabulary Tag

### GRADE LEVEL: 6th - 8th

### SUBJECT AREA: Science

### NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER: Review of any content area

### FORMATION: Standing at desks

### EQUIPMENT: Overhead, whiteboard, or chalkboard, vocabulary list

### RULES/DIRECTIONS:

1. Vocabulary list with corresponding activities should be posted.  
   Examples:  
   - Gene – jumping up and down  
   - Chromosome – jumping jacks  
   - DNA – lunging to the right  
   - Punnett Square – lunging to the left  
   - Dominant – toe touches  
   - Recessive – twisting at the waist  
2. Students will stand at their desk and march in place until the teacher tags a student or asks for a volunteer.  
3. Once the student is tagged, he/she will define or explain the vocabulary word or concept from the overhead list.  
4. All students will then perform the activity matched with the word for 10 seconds.  
5. Time is called and the students begin to march in place as the teacher selects the next student.  
6. That student repeats the process.

### VARIATIONS:

1. Have the students create actions that relate directly to the vocabulary word/concept. Post those actions on the overhead or board to use.
<table>
<thead>
<tr>
<th>NAME OF ACTIVITY:</th>
<th><strong>Wave Science</strong></th>
</tr>
</thead>
<tbody>
<tr>
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<td>Science</td>
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<table>
<thead>
<tr>
<th>NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:</th>
<th>6.P.1.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explain the relationship among the rate of vibration, the medium through which vibrations travel, sound and hearing.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>FORMATION:</th>
<th>Students in circle around room</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQUIPMENT:</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RULES/DIRECTIONS:</th>
<th>1. Students form circle and begins the wave around circle.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. After 3 rounds, students do the full body wave from arms up to squat and back up.</td>
</tr>
<tr>
<td></td>
<td>3. After 3 more rounds, students continue with the wave doing various activities such as knee lifts or slides (see Movement Bank).</td>
</tr>
</tbody>
</table>

<p>| VARIATIONS: | 1. This activity can explain the concept of how sound waves travel. |</p>
<table>
<thead>
<tr>
<th>NAME OF ACTIVITY:</th>
<th>We Are Orbiting</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRADE LEVEL:</td>
<td>6th</td>
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<td>SUBJECT AREA:</td>
<td>Science</td>
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<tr>
<td>NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:</td>
<td>6.E.1.1 Explain how the relative motion and relative position of the sun, Earth and moon affect the seasons, tides, phases of the moon, and eclipses. 6.E.1.2 Explain why Earth sustains life while other planets do not based on their properties (including types of surface, atmosphere and gravitational force) and location to the Sun.</td>
</tr>
<tr>
<td>FORMATION:</td>
<td>Students at desk</td>
</tr>
<tr>
<td>EQUIPMENT:</td>
<td>None</td>
</tr>
</tbody>
</table>
| RULES/DIRECTIONS:         | 1. Students are taught the distance of each planet from the sun. Each desk will represent the sun.  
   - Mercury ~ 35 million miles  
   - Venus ~ 65 million miles  
   - Earth ~ 93 million miles  
   - Mars ~ 137 million miles  
   - Jupiter ~ 467 million miles  
   - Saturn ~ 850 million miles  
   - Uranus ~ 1.7 billion miles  
   - Neptune ~ 2.7 billion miles  
   - Pluto ~ 3.5 billion miles  
   2. One circle around the desk will represent 10,000,000 miles.  
   3. Teacher then calls out a planet and student jogs around desk the number of times needed to represent the distance of that planet from the sun. |
| VARIATIONS:               | 1. Teacher could call out asteroid, meteor, comet and the student would have to do a certain activity while orbiting. Example: While orbiting, if teacher calls out “Comet is coming,” then students must do 10 jumping jacks then continue orbiting.  
   2. Have the students go outside and walk around the school building or playground or some other area instead of desks.  
   3. Using sidewalk chalk outdoors the teacher will write the name of each planet in order from the sun. Students will begin at the sun and run to each planet and back to the sun in order from the closest planet to the farthest.  
   4. Desks may need to be rearranged.  
   5. Teacher can adjust how many miles are represented by each lap around the desk.  
   6. Convert miles to kilometers. |
<table>
<thead>
<tr>
<th>NAME OF ACTIVITY:</th>
<th>Alphabet Soup</th>
</tr>
</thead>
<tbody>
<tr>
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<td>6th – 8th</td>
</tr>
<tr>
<td>SUBJECT AREA:</td>
<td>Miscellaneous</td>
</tr>
<tr>
<td>NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:</td>
<td></td>
</tr>
<tr>
<td>FORMATION:</td>
<td>Teams of 4</td>
</tr>
<tr>
<td>EQUIPMENT:</td>
<td>Alphabet blocks or scrabble tiles (2 sets) divided into 4 stations around the room, additional sets may be needed for vowels</td>
</tr>
</tbody>
</table>
| RULES/DIRECTIONS: | 1. The object is for students to correctly spell the vocabulary word.  
  2. Teacher calls out a vocabulary word related to subject area.  
  3. One student from each team will go get one letter from a station and return to the group. All students remain moving (see Movement Bank) for the entire activity.  
  4. Students take turns getting letters until a team has spelled the word correctly.  
  5. The first team to spell the word correctly will earn a point.  
  6. Continue until all words have been spelled. |
| VARIATIONS:       | 1. Perform the activity as above and have teams make a sentence with the vocabulary words.  
  2. Make your own laminated alphabet cards. |
<table>
<thead>
<tr>
<th>NAME OF ACTIVITY:</th>
<th><strong>Crazy Questions</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>GRADE LEVEL:</td>
<td>6th - 8th</td>
</tr>
<tr>
<td>SUBJECT AREA:</td>
<td>Miscellaneous</td>
</tr>
<tr>
<td>NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:</td>
<td></td>
</tr>
<tr>
<td>FORMATION:</td>
<td>Four teams</td>
</tr>
<tr>
<td>EQUIPMENT:</td>
<td>None</td>
</tr>
</tbody>
</table>
| RULES/DIRECTIONS: | 1. Students group together into 4 teams (easiest way may be to have them group together by rows).  
2. The teacher selects a list of vocabulary words or a set of questions from the end of a chapter.  
3. The students must complete a series of movements to receive each question.  
4. When each student in a group has completed the assigned movement they must sit down and raise their hands to receive each question.  
5. The teacher will then approach the group to give them the next question.  
   a. To receive the first question, each student in the group must jump to the sky and slap the floor with their hand. Repeat 5 times.  
   b. To receive the second question, the students must hop on one foot while turning in a circle 10 times.  
   c. To receive the third question, students must run in place for 30 seconds.  
   d. To receive the fourth question, students must do imaginary jump rope as fast as possible for 10 seconds.  
   e. To receive the fifth question, students must complete all previous movements. |
<p>| VARIATIONS:       | 1. This activity can be used for sequencing, listening skills, auditory procession, and multiple intelligences. |</p>
<table>
<thead>
<tr>
<th><strong>NAME OF ACTIVITY:</strong></th>
<th><strong>Everybody is a Star</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GRADE LEVEL:</strong></td>
<td>6th – 8th</td>
</tr>
<tr>
<td><strong>SUBJECT AREA:</strong></td>
<td>Miscellaneous</td>
</tr>
<tr>
<td><strong>NC STANDARD COURSE</strong></td>
<td><strong>OF STUDY OBJECTIVE</strong></td>
</tr>
<tr>
<td><strong>NUMBER:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>FORMATION:</strong></td>
<td>Walking around the classroom</td>
</tr>
<tr>
<td><strong>EQUIPMENT:</strong></td>
<td>Pen and paper for the Journalist group</td>
</tr>
</tbody>
</table>
| **RULES/DIRECTIONS:**  | 1. Each student writes 3-5 questions a journalist would ask a Celebrity/Super Star and identifies one Super Star.  
2. The class is divided into two groups: Journalists and Super Stars.  
3. The journalists have 5 minutes to interview as many Super Stars as they possibly can, asking only the three questions they wrote down.  
4. The Super Stars can never directly say their name or exactly what it is that they do. The Super Star group must constantly be walking because celebrities are very busy.  
5. The journalists try to guess who the Super Stars are based on the answers to their question.  
6. After 5 minutes has lapsed the Super Stars reveal who they are and the journalists check to see if their guesses were correct.  
7. Switch roles. |
| **VARIATIONS:**        | 1. Journalists write an article about Super Stars. Super Stars write a reflective entry about their interviews. Incorporate writing techniques like persuasive writing and inferences. Share writing with the entire class. |
NAME OF ACTIVITY: Have a ball

GRADE LEVEL: 6th - 8th

SUBJECT AREA: Miscellaneous

NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:

FORMATION: Students sitting at desks

EQUIPMENT: Each student should have a scrap piece of paper and make a ball

RULES/DIRECTIONS: 1. Each student should wad up a piece of paper to make a ball. Use the piece of paper for the following exercises:
   - Place the ball on the feet (feet together) while seated, repeatedly toss up and catch the ball with the top of the feet (like hackey sack).
   - Set the ball on elbow. Flip the ball into the air and catch it with the hand on the same side.
   - Lift the feet off the floor (feet together) and rotate the ball over and under the legs using your hands.
   - Toss the ball overhead and catch behind back.
   - Lift the feet (feet slightly apart) and weave the ball between the left and right leg (such as a figure eight).
   - Toss the ball from behind the back and catch in the front.
   - Circle waist while standing.

2. This activity will strengthen the abdominal muscles and quadriceps.

VARIATIONS: 1. Allow each student to shoot the ball into the trashcan at the end.
NAME OF ACTIVITY: Hot Tamale

GRADE LEVEL: 6th - 8th

SUBJECT AREA: Miscellaneous

NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:

FORMATION: Beside desks

EQUIPMENT: None

RULES/DIRECTIONS: 1. Write each direction and corresponding activity on the board or overhead to make it easier for the students to follow.
   - Move backwards - back stroke (swimming motion)
   - Move forward - march in place
   - Move to either side - side stretch in the direction of the hot tamale
   - Up higher - climbing ladder motion
   - Down lower - squats
   - Within one foot of the tamale - students pretend they are stepping on hot coals (in place).

2. One student exits the classroom.

3. The rest of the class watches the teacher hide the “hot tamale” (can be any object) somewhere in the classroom.

4. The student who exited the classroom re-enters.

5. The rest of the class tries to guide him/her to the hidden tamale by performing various physical activities, with each activity corresponding to a different direction. Students are not allowed to talk.

6. Once the student locates the hidden “hot tamale”, another student is selected to exit the classroom and the “hot tamale” is hidden in another location so that the game can be repeated.
**NAME OF ACTIVITY:** I’m A Student and You’re a Student Too!

**GRADE LEVEL:** 6th - 8th

**SUBJECT AREA:** Miscellaneous

**NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:**

**FORMATION:** Standing at desks or in a circle

**EQUIPMENT:** None (teacher may decide to use a small ball or bean bag)

**RULES/DIRECTIONS:**

1. Students stand in a circle or at desks and march in place.
2. Teacher selects a student to begin the game by either pointing to or tossing a small ball to the student.
3. The student begins with the line “I’m a student and you’re a student too if....”
4. The student fills in the end of this statement with something characteristic of them that other students may have in common. Example: “I’m a student and you’re a student too if you have on tennis shoes” or “I’m a student and you’re a student too if you like to play basketball.”
5. All students who share this trait perform an activity such as jumping into the air 3 times or walk to the front of the classroom and switch places with another student that shares the specified characteristic, while all other students continue to march in place.
6. The teacher then selects another student to continue the game.

**VARIATIONS:**

1. Instead of using the word student in the working phrase, insert the name of the school’s mascot. e.g., “I’m a Pirate and you’re a Pirate too if...”
<table>
<thead>
<tr>
<th>NAME OF ACTIVITY:</th>
<th><strong>Sports on the Move</strong></th>
</tr>
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<tbody>
<tr>
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<td>6th- 8th</td>
</tr>
<tr>
<td>SUBJECT AREA:</td>
<td>Miscellaneous</td>
</tr>
<tr>
<td>NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:</td>
<td></td>
</tr>
<tr>
<td>FORMATION:</td>
<td>Standing at desk</td>
</tr>
<tr>
<td>EQUIPMENT:</td>
<td>None</td>
</tr>
</tbody>
</table>
| RULES/DIRECTIONS: | 1. Teacher will say a sport and movement and students will repeat that movement for about 30 seconds until a new movement is stated.  
Examples:  
- Basketball: dribble with fingertips; dribble through legs; dribble around back; jump shot and follow through; bounce pass; chest pass; overhead pass; defensive slide to front and back to start position  
- Soccer: shot on goal (practice with both feet); inside of foot pass; outside of foot pass; long banana kick; juggle imaginary soccer ball; trap ball with thigh; trap ball with feet  
- Baseball or softball: swing a bat; windup and pitch; field a ground ball; catch a fly ball; play imaginary catch  
- Tennis: forehand; backhand; serve; volley  
- Volleyball: serve, set, dig, spike  
- Football: quarterback long pass; short pass; catch imaginary ball; kick field goal; punt; catch a punt; block  
- Golf swing  
- Drive a NASCAR  
- Lacrosse  
- Tae Kwon Do |
| VARIATIONS:      | 1. Ask students to name the sport and movement.  
2. Tell students that mental practice and making correct fundamental movements without the equipment can improve performance. |
NAME OF ACTIVITY: **What’s My Job?**

GRADE LEVEL: 6th - 8th

SUBJECT AREA: Miscellaneous

**NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:**

FORMATION: Partners standing at desk

EQUIPMENT: Pencil and paper

RULES/DIRECTIONS:

1. Students group into pairs at their desks.
2. Partners face each other (one facing the board and the other facing the back of the room).
3. The teacher writes a series of professions on the board which could include:
   - Teacher
   - Basketball Player
   - Hockey Player
   - Airplane Pilot
   - Doctor
   - Fireman
   - Chef
   - Truck Driver
4. The student facing the board must act out the entire list in 2 minutes while the student facing the back of the classroom attempts to write down which profession his/her partner is acting out.
5. After the 2 minutes has ended, the students facing the back of the classroom turn around and see if their lists match that on the chalkboard.
6. Students in each group switch places (the writer becomes the actor and visa versa).

Note: entire game could be played silently

**VARIATIONS:**

1. Create a different list of professions for each group.
**NAME OF ACTIVITY:**  
**World’s Strongest Student**

**GRADE LEVEL:**  
6th - 8th

**SUBJECT AREA:**  
Miscellaneous

**NC STANDARD COURSE OF STUDY OBJECTIVE NUMBER:**

**FORMATION:**  
Standing at desks

**EQUIPMENT:**  
None

**RULES/DIRECTIONS:**

1. Have students imitate activities that competitors in the “World’s Strongest Man” competition undertake. Perform each activity for 30 seconds.
   - Chain Drag (walking backwards and pulling)
   - Car Lift
   - Train Push (walking forward and pushing)
   - Anchor Carry (walking forward and pulling)
   - Pole Flip (pretend to toss a small tree trunk as far as you can)
   - Iron Cross (hold arms out to sides holding great weights)
   - Stone Wall (picking up heavy stones from the ground and stacking them on top of a wall)
   - Dead Lift (competitors squat and lift a barrel of rocks with increasing weight.)

2. Repeat the entire sequence.

**VARIATIONS:**

1. Teacher may need to explain the activities to the students before the activity starts.