

National Headquarters, Civil Air Patrol

# ACE Program

*Aerospace Connections in Education*  
Grades K - 6



# Grade 1



**Teacher's Guide**

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## Civil Air Patrol's ACE Program

### Moon Motions Grade 1 Physical Fitness Lesson #6



**Topic:** locomotor skills, the moon (PE, science)

**Length of Lesson:** 30 minutes

**Objectives:**

- Students will practice locomotor skills.
- Students will simulate moving and working on the moon.
- Students will identify muscles being used in an activity.
- Students will provide positive messages for their teammates.

**National Physical Education Standard Standards:**

- Standards 1, 2, 4, 5

**Background Information:**

Humans first landed on the moon on July 20th, 1969. Neil Armstrong and Buzz Aldrin, from the United States, were the first humans to actually walk and collect samples on the moon. Contrary to what many young people think, there is gravity on the moon. Our moon has about 1/6 the gravity of Earth.

Being physically fit keeps our muscles strong and our minds sharp. The men who went to the moon in 1969 and the early 1970's had to be in great physical shape. Their bodies had to be ready to endure long, physical activities in a new environment. Their minds had to be ready to react quickly to any potential problems. Physical fitness is important to us on Earth in order to be able to work well, think clearly, and stay healthy.

**Materials:**

- 5 - 10 rocks for each team (one rock for each member of the team, which can consist of 5 - 10 members)
- bag, container, or baggie for each team
- rope, colored tape, cones, or other objects to designate starting and finishing line
- one pair of thick gloves for each team (optional)
- backpacks with a bit of weight in them for each team (optional)

**Lesson Presentation:**

1. Allow students to warm up by conducting warm up exercises as suggested by the students.
2. Ask students if astronauts float on the moon or if they stand on the ground like we do on Earth. (stand on the ground) Ask students why astronauts don't float on the

moon. (because of gravity) Ask students if they have ever thought about what it would be like to walk or run on the moon. Explain to students that astronauts who went to the moon in 1969 and the early 1970's had to be careful walking or trying to run. There is less gravity on the moon and they had on bulky spacesuits. Tell students that today they will learn four movements that astronauts did to get from one place to another on the moon, and then they will have a relay race using these movements to collect "moon" rocks.

3. Pick and demonstrate any 3 of the following movements to the students. (You may wish to lean slightly forward in all movements as astronauts leaned just slightly forward to counteract the weight of the backpack.)
  - Kangaroo (or bunny) hop - Simply hop forward with both feet together.
  - Side to side - Stand sideways to the direction you want to travel. In other words, if you want to go north, stand facing either east or west. Turn your head only to the direction you wish to travel. Then, raise the foot that is closest to the direction you wish to travel. With your other foot that is on the ground, push off to propel yourself in the correct direction. Land on the foot that was in the air when you pushed off. Continue these "side to side" movements until you reach your destination.
  - Slow motion job - Simply jog forward with a bit of a waddle. (Think of trying to jog forward in a big, fat and somewhat rigid spacesuit.)
  - Skipping
  - Galloping
4. Have students briefly practice the three movements with you as you call each one out and lead them in the movements. Monitor to make sure students understand.
5. Divide students into equal teams of 5 - 10 students. (If a team is under-represented, instruct one member of the team to go twice in the rock relay.)
6. For each team, place 5 - 10 rocks (depending on the number of students on each team) from the starting line to the finishing line.
7. Explain to students that they will all use the kangaroo hop during this first round of the game to move forward from the starting line to the finishing line. On their way to the finish line, they should stop to pick up one rock and place it in their bag. After they cross the finish line, they should turn around and kangaroo hop back to their team to give the bag to the next player (and gloves and/or backpack if applicable), and then sit down. The first team to collect all of their rocks and be seated wins!
8. Line up teams. Provide the first person on each team with a bag. (Also provide the gloves and/or backpacks if applicable and instruct the first person on each team to put on the gloves.)

9. Signal teams to begin. Monitor and help students do the kangaroo hop correctly and remind them to **pick up one rock**. Make sure students do not sprint back to their team. They are doing the kangaroo hop! After each team has had a chance to complete the relay, announce the winning team.
10. Play again using the other movements.

**Summarization:**

Say or ask the following to summarize the lesson:

- Point to the muscles you felt being used most in the movements. (calf muscles, thigh muscles)
- Was it difficult to pick up the rock with the gloves on? Why or why not?
- Explain what moon movement was your favorite.

Tell students that astronauts have to be physically fit in order to go into space and spend time on a moon or another planet. Ask students why it is important for all of us here on earth to be physically fit.

**Assessment:**

- teacher observation
- student answers to class summary discussion questions

**Additional activity ideas to enrich and extend the primary lesson (optional):**

- Have students play again. This time, give them their choice of which movement they would like to do going toward the finish line and back to their team.
- Play again, but rather than just picking up one rock on the way to the finish line, have them pick up each rock! On the way back to their team, they should set the rocks out again for the next player.

**Associated Websites:** Be patient as some video clips may take time to load.

Shows jogging, skipping, galloping, and kangaroo hop

[http://www.hq.nasa.gov/office/pao/History/40thann/mpeg/ap17\\_strolling.mpg](http://www.hq.nasa.gov/office/pao/History/40thann/mpeg/ap17_strolling.mpg)

[http://www.hq.nasa.gov/alsj/a11/a11v\\_1101342.mpg](http://www.hq.nasa.gov/alsj/a11/a11v_1101342.mpg)

[http://www.hq.nasa.gov/office/pao/History/40thann/mpeg/ap17\\_onthemoon.mpg](http://www.hq.nasa.gov/office/pao/History/40thann/mpeg/ap17_onthemoon.mpg)

Article: "How It Feels to Walk on the Moon"

<http://www.theage.com.au/articles/2003/12/23/1071941717148.html>