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**Directions to the Teacher:**

1. Review the included background information and any other relevant background information found in your own research about satellites. Show students photos of satellites, satellite images, rocket launches, rockets, and GRACE. Use the GRACE model or any other concrete items (blocks) and the globe to explain how the two satellites will orbit the Earth.
2. Demonstrate to students how a launch occurs. You may use a model (if available) or use your body (jumping). Practice the words to the song (see attached) with the students. After this is complete, have students choose a partner. Show the students how they can move and be the GRACE satellites orbiting Earth. Students will then sing the song as they pretend to launch and orbit.

**Extensions:**

- Make up a rhyme about the GRACE satellite.
- Draw a picture of the twin GRACE satellites going around Earth.

**References / Resources:**

Goodman, Susan. Amazing Space Facts. Peter Bedrick Books, NY:NY, 1993.  
Lauber, Patricia. Seeing Earth from Space. Orchard Books: New York, 1990.  
Walker, Niki. Satellites and Space Probes. Crabtree: NY, 1998.

## Websites:

- <http://www.csr.utexas.edu/grace/>
- <http://www.stsci.edu./EPA/Pictures.html>
- <http://www.images.jsc.nasa.gov/>
- [http://www.jpl.nasa.gov/missions/missions\\_index.html](http://www.jpl.nasa.gov/missions/missions_index.html)

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# Satellite Song

Sung to the tune of "Wheels on the Bus" or "This is the Way We Wash Our Hands."  
Repeat as many times as desired.

**This is the way GRACE  
launches into space,  
launches into space,  
launches into space.  
This is the way GRACE  
launches into space  
on this climate mission.**

**This is the way GRACE  
orbits the earth,  
orbits the earth,  
orbits the earth.  
This is the way GRACE  
orbits the earth  
on this ocean mission.**

**This is the way GRACE  
travels in space  
travels in space  
travels in space.  
This is the way GRACE  
Travels in space  
on this gravity mission.**