

# DOWNLOAD PDF LEARNING ABOUT THE WAY THINGS MOVE (LITTLE SCIENTISTS HANDS-ON ACTIVITIES)

## Chapter 1 : Hands On Activities for the Seven Continents: For Young Elementary Students

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Thank you for your input. Materials and preparation Swing, Slither, or Swim: Stockland Animal Pictures sheet 1 small plastic baggie per student Key terms locomotion Learning objectives Students will be able to learn that different animals move in many different ways and be able to sort animals based on their locomotion. Introduction 10 minutes Explain to your students that they will be learning about animal locomotion, or the ability to move from one place to another, today. Make a word web and ask your students to brainstorm different ways animals move. Write down their answers. Explain to them that you will read a book about animal movement and that you want them to listen carefully and think about the different ways the animals are moving. Read Swing, Slither, or Swim: A Book About Animal Movements to your students. Point out some of the animals in the book, and explain how they move to the students. Discuss with the students that some animals are able to move in more than one way, for instance, dogs can run and swim. Explain to the students that they will be going to sort animals based on how they move. Independent working time 20 minutes Ask your students to go back to their desks. Explain to them that they will receive two sheets of paper with pictures of animals and that they will need to cut out the animals and sort them by the way they move. Hand out the animal picture sheets and have the students begin to cut out and sort. As you move through the classroom, remind your students that they might sort the animals differently than their friends. Tell your students to discuss with their friends why they sorted their animals the way they did. Choose some students to explain to the class how they sorted their animals. Hand out a plastic baggie to each student and tell them to put their animals in it so they can use them again another day. To challenge students, ask them to think of and draw other animals that would go under the different categories of movement. Give only one sheet of animals to the struggling student, or help cut out the animals if the student has difficulty using scissors. Assessment 10 minutes Make notes of how the students sorted the animals and why they sorted them that way. Review and closing 10 minutes Invite students to add to the original word web by telling you any additional ways animals move.

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### Chapter 2 : Science Activities on Air for Preschool Ages | Sciencing

*Learning About the Way Things Move (Turtleback School & Library Binding Edition) (Little Scientists Hands-On Activities) [Heidi Goldworkin] on calendrierdelascience.com \*FREE\* shipping on qualifying offers.*

These hands-on activities on seven continents use multiple senses to help accommodate different learning styles. Use a small, unlabeled globe to teach the names of the continents. Use a song to help them remember the names. When the children are comfortable with the globe, demonstrate how a globe becomes a map. Roll a ball of Play-doh to represent the globe. Let the children explore this as an activity. Take out the continents and put them back in. Use a control map to help with placement. If you do not use a puzzle map, such as the Montessori maps, you can make your own. Print out a map, color it in, and cut it apart into pieces for them to put back together as a hands-on continents activity. Let children make their own maps. With puzzles that have individual pieces, children can trace around each piece and punch it out with a stylus, or cut them out with scissors. Children can glue the pieces on a blue background. Or, glue the pieces on two blue circles. Staple the two circles together, and stuff them with the scraps from the continents to make a paper globe. Make a tracing paper map of the seven continents by tracing the control map. Color it in with colored pencils. Paint a map by tracing the pieces on newsprint, and then using either tempera or watercolor paints. Color the continents and cut out around them. Laminate the pieces for durability. Children can roll out a large ball of blue Play-doh to make the map background. Press in the plastic pieces where they belong. Cut continents out of colored felt. Children can place them in their proper places on a blue background. Place these on the floor, and have children "travel" around the world as they move from one continent to another, based on your verbal directions, or written directions on cards. Children can also learn to recognize the shapes of the continents by coloring in little booklets, word strips and printable maps. Make three-part matching cards for a hands-on way to practice the names of the continents. The control set of cards has a picture of the continent, with its name below it. The second set of cards has the continent picture and name separated. Younger children who are learning how to read can match the separated cards to the control cards. Those who can read the continent names should match the separated cards first and then check themselves with the control cards. These hands-on activities on the seven continents will get children engaged in the process of learning geographical skills. The more of a variety you provide, the more ways they can learn.

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## Chapter 3 : Classroom Activities and Demonstrations

*Young kids generally love to move, move, move. Sneaking in learning activities with gross motor activities is a lot of fun for kids!*

Wind is moving air. Discuss that the wind can move things. The wind moves the clouds in the sky. It can move sailboats on the water. Together with children, think and demonstrate different ways they can make the air move and create a breeze blowing, waving the hands, using a fan, etc. Ask if they know of any tools or machines that move air hair dryers, fans, etc. Explain that when air moves it is called wind. Strong winds are able to move heavy objects effortlessly. Explain to children that air is invisible to the human eye and impossible to feel until it moves. Ask children to hold their breath for five seconds and then breathe out and while holding a hand in front of their mouth to feel the air. Talk about how air helps to move things such as kites, parachutes, birds, leaves, etc. Hand out a ping pong ball to each child and let them blow and move the ball around the floor. Experience with different strengths of blowing and different distances and angles from the ball. Science Table Provide a variety of objects straw, twigs, wooden blocks, ping pong balls, Lego blocks, leaves, different sized rocks, paper, balloons, etc. Let children use their breath or a straw to blow and try moving the objects around the table without touching them. Let children record their findings. Let children use a blow-dryer to move the objects. Cup hands and pretend to blow like the wind. He swept the clouds out of his way. Make a sweeping motion with hands. He blew the leaves and away they flew. Make fluttering motions with fingers. The trees bent low and their branches did too! Lift arms up high and lower them. The wind blew the great big ships at sea. The wind blew the kite away from me. Cup hand over eyes and tilt head as if watching kite go. I See the Wind.

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### Chapter 4 : Hands and Feet Activities, Crafts, Rhymes, and Books | KidsSoup

*Activities for preschoolers are more advanced than most of the activities marked for toddlers. While a lot of them are learning activities, they don't necessarily have to be. While a lot of them are learning activities, they don't necessarily have to be.*

EMAIL Second-grade teacher Becky Hicks has learned that there is no substitute for activities that require kids to use their hands as well as their minds. In the ABC corner, students thumb through clues to find mystery words. In the math corner, students stack buttons, plastic fruit, and toy bugs to create graphs. And in the spelling corner, they manipulate alphabet puzzle shapes to piece together vocabulary words. Concepts are explained through tactile procedures, and skills are bolstered as children practice new ideas and test out theories. In her classroom, Hicks has figured out what research has revealed: According to Cindy Middendorf, educational consultant and author of *The Scholastic Differentiated Instruction Plan Book* Scholastic, , between the ages of four and seven, the right side of the brain is developing and learning comes easily through visual and spatial activities. When you combine activities that require movement, talking, and listening, it activates multiple areas of the brain. Indeed, even adults benefit from the "busy hands, busy brain" phenomenon: Recent research has shown that people who doodle during business meetings have better memory recall. A report in the journal *Applied Cognitive Psychology* demonstrated that volunteers who doodled during a dull verbal message were 29 percent better at recalling details from the message. Researchers suggest that engaging in a simple hands-on task, such as cutting out a shape with scissors, can help prevent daydreaming and restlessness during a learning experience. If adults in business settings can benefit from mnemonic tricks such as doodling, then students should certainly be encouraged to try these strategies. Currently, LaChance is teaching a student who is a gifted artist but has poor language skills. He fidgets during large-group activities but can spend hours drawing or building. LaChance nurtures his interest and talent by allowing him to make projects; she recalls one day when he carefully constructed bird beaks out of recycled materials, then gave them to other kids to wear in class. We know our students learn in many different ways: Hands-on projects obviously engage kids who are tactile or kinesthetic learners, who need movement to learn best. For social learners, the time spent in small group conversation will strengthen their knowledge. Just as Hicks has found in her classroom, hands-on activities let students become teachers. Endless Benefits Using tools such as markers, scissors, and glue in hands-on projects also builds the fine motor skills that children will need to use for functional activities throughout their lives. Simple tasks such as buttoning, tying shoes, and using a key to open a lock all require manual precision. The best way to build that precision is, of course, through practice. Yet practice need not be dull and repetitive. The more arts and crafts that teachers can bring into the classroom, the more opportunity they have to reach every child in the room, from kids with sensory difficulties to those who need an extra challenge in order to stay focused. Hands-on, creative, and artistic activities help students to focus and retain knowledge, and at the same time emphasize the importance of beauty and design in our world. Hands-on activities naturally lend themselves to differentiation, but Cindy Middendorf suggests adding in tools, such as number charts, for kids to use at each center to help them work independently. Judy Dodge suggests creating flip books with a page for each center so children can record what they learn at each station. Dodge suggests using rotation stations that change every few minutes. Then pass the baskets from table to table instead of moving the students. Group students by interest: As students move into third grade and beyond, the amount of language used in class will increase. Prepare them by incorporating speaking skills into your assessment of tactile activities: Kindergarten teacher Terri LaChance admits that during hands-on activities, her classroom is louder. To manage the volume level, LaChance limits the number of students in each activity to two. As you plan your next unit, consider incorporating these hands-on activities to engage every student in your classroom. Former kindergarten teacher Mrs. Perdue has a variety of literacy centers and photos of how to set them up. Lanise Jacoby, a second-grade teacher , has examples of her class projects on her Web site. Jacoby

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also recommends MathWire for standards-based math games and activities. Take an online inventory to figure out your personal learning style. Then, find out more about learning styles so you can incorporate activities that will grab all your students.

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### Chapter 5 : Science for Kids: Exploring Ramps and Friction - Pre-K Pages

*The best science experiments guide for kids ages This is YOUR go-to resource for all things STEM and science all year round! STEM stands for science, technology, engineering, and math. You can make STEM and science exciting, educational, and inexpensive for young kids. Fun and easy science.*

Engaging activities about air helps teach young kids about all the things that air benefits. Air activities can be used alongside lessons about the environment, the changing seasons and music and movement. After reading the story, the children can discuss what they think about the air and how it is important to us. With sheets of paper and crayons, children can draw pictures about what they learned about air from the story. The wind is air blowing, and creating a windsock shows the movement of the air. Help children create windsocks by giving them byinch sheets of construction paper. Children can use oil pastels to draw wavy lines on the construction paper representing the wind. Glue long strips of crepe paper along one of the long sides of the construction paper. Help children create their windsocks by rolling the construction paper into a tube, with the oil pastels lines on the outside, and staple the touching edges together. Punch two holes on the opposite end of the windsock from the hanging crepe paper and children can lace string through the holes to hang the windsock outdoors. Children can watch the windsock move in the air. Breathing provides air to our lungs, which help us move and be active. Take children outdoors or to a cleared indoor area. Children can sit on the floor and place their hands on their stomachs, feeling their bodies moving while breathing air. They can also use a straw to move pieces of cotton around with their breath. Have preschoolers run around or do jumping jacks and see what happens with their breathing. Being physically active causes our bodies to require more air. Provide children with a variety of wind instruments and have them experiment with making sounds using air. Children can blow bubbles and watch them float through the air. Blowing bubbles uses air. Have children experiment with how much air is needed to blow bubbles and how big of a bubble they can make, watching as the air fills the bubble. References Science for Preschoolers: Lipoff has worked as a K art teacher, museum educator and preschool teacher. She holds a Bachelor of Science in K art education from St.

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### Chapter 6 : Science Experiments and STEM Activities for Kids

*Force, Motion, and Weight* This six day lesson integrates the standards of learning from Science, Math, Language Arts, and Technology. Students will be exposed to different videos and activities that will expand their vocabulary and understanding of force and motion.

Students see things as either moving or not moving. This viewpoint may not be substantially changed until at least Level 4 or 5, and may still be present in the senior secondary years. Objects, particularly living things, are seen to experience pushes and pulls only when they move; importantly, these pushes and pulls are seen as necessary to keep these objects moving. Pushes and pulls can act on, and can be exerted equally well by both living and non-living objects. For stationary objects and objects moving with unchanging speed and direction, all the pushes and pulls balance each other, i. The total effect of all the pushes and pulls is the same as if there were no forces acting on the object. Critical teaching ideas We can describe how something moves by saying how fast it is going and what sort of path it takes. The way to start an object moving or change how it is moving is to give it a push or a pull. The shape of things can be changed by pushes and pulls. Sometimes these changes in shape are permanent. They need experiences that help them understand that to change how something is moving it needs to be given a push or a pull. Their everyday experiences of pushes and pulls such as shaping clay and plasticine or kicking a bean bag need to be explicitly discussed so that students are aware that another effect of pushes and pulls is that they can change the shape of things. Choose contexts for discussion that assist students to move towards understanding that pushes and pulls act on both non-living and living things. Teaching activities Promote reflection on and clarification of existing ideas Students should be encouraged to observe many kinds of objects moving in diverse ways with the purpose of identifying how the movement is different in each case. Ask the students to describe and discuss whether the motion is in a straight line, fast or slow, speeding up or slowing down etc. Everyday activities should be used as examples to highlight experiences of getting things to move or slowing their movement for example: Students need opportunities to change the shapes of things by squashing, stretching, and bending them with pushes and pulls. For example, they could manipulate clay, balloons, rubber bands, springs and cushions, or move paint around on a page. Provide opportunities for students to focus on detail and describe what they observe. Open up discussion via a shared experience Students should be encouraged to explore the movement of their peers on playground equipment such as slides and swings, and discuss how the motion of students is different on each. For example, when going down a slide, a student usually keeps speeding up; while on a swing, a student regularly speeds up, slows down and stops momentarily during each back and forth movement. Promote and reward discussion which compares and contrasts one type of movement with another. Students can work in small teams to make observations and records that help them to draw up their own treasure maps showing the location of playground equipment that promotes different types of movement. Explore their opinions on the importance of reducing speed to improve road safety.

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### Chapter 7 : Hands-On Is Minds-On | calendrierdelascience.com

*But more than simply moving materials around, hands-on activities activate kids' brains. According to Cindy Middendorf, educational consultant and author of The Scholastic Differentiated Instruction Plan Book (Scholastic, ), between the ages of four and seven, the right side of the brain is developing and learning comes easily through.*

STEM stands for science, technology, engineering, and math. You can make STEM and science exciting, educational, and inexpensive for young kids. Fun and easy science for kids starts here! Create passion, Create an opportunity for kids to push the limits of what they can do. See details at bottom of page. Now how cool is that. We are enjoying quite a few edible science projects lately because I have a growing kiddo who loves to help out in the kitchen. Science that involves tasting is always a hot ticket event around here. Follow along with days of summer STEM activities. My son is 8 and we started around 3 years of age with simple science activities for kids. We show you what to work with from around your house. Kids are curious and always looking to explore, discover, check out, and experiment to find out why things do what they do, move like they move, or change like they change! Indoors or outdoors , science is definitely amazing! Science surrounds us, inside and out. Kids love checking things out with magnifying glasses, creating chemical reactions with kitchen ingredients, and of course exploring stored energy! There lots of easy science concepts that you can introduce kids to very early on! You might not even think about science when your kid pushes a car down a ramp. See where I am going with this list! What else can you add if you stop to think about it? Science starts early, and you can be a part of that with setting up science at home with everyday materials. Or you can bring easy science to a group of kids! We find a ton of value in cheap science activities and experiments. We will be sharing a monthly STEM calendar sent to subscribers a week before the end of the month! As we try awesome new science, I will leave the activities here for you to check out. This collection will make a terrific resource filled with go-to science ideas that are sure to please.

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### Chapter 8 : Science Activities for Kids | calendrierdelascience.com

*Ask some students to come up to the book and then have them point to the animals and say how they move. Discuss with the students that some animals are able to move in more than one way, for instance, dogs can run and swim. Explain to the students that they will be going to sort animals based on.*

Ready to teach smarter and save time? Sign up for the FREE newsletter and receive my ebook 7 Pre-K Teaching Hacks email address posted by Editor filed under lesson plans , science affiliate disclosure Kids love to send cars down ramps! The faster the better, but did you know that this favorite playtime activity is also an awesome science lesson for kids of all ages? Explore ramps, angles, and friction with just a few simple materials. This physics activity is a fun way to introduce friction, ramps, and angles to kids through hands-on play! Variety of toy cars Variety of textured materials to create friction “ There are so many ideas! We used a hand towel, sandpaper, and rubber grippy mats. You could also use foil or parchment paper, a piece of rug, or even dirt. Tape to secure materials if necessary so they do not slip off the ramps Stopwatch and measuring tape. These are optional but a fun way to extend the activity and encourage making predictions. Ramps and Friction Activity Set Up Determine how many materials you want to test and how many ramps you want to have available. This is fun inside or outside! Leave one ramp free of materials as a test ramp. Secure your materials to the other ramps as needed. Determine how you will set up the ramps. We used stairs, but you can also stack books. Gather your cars and kids! They are going to be super excited to play, so it is often best to let them explore the activity freely for a bit first! You can also test out angles at this point. Which ramp angles are faster or slower? Which cars move faster? Heavier, lighter, longer, or shorter cars move at different speeds. This is a great way to get them thinking about the way things move! You may want to split this activity into two learning times since exploring the ramps is great fun all in itself and is still a simple physics lesson. When the kids are ready, move on to your textured ramps. Let the kids feel the textures and describe them to you. Read a little bit about friction below and keep it simple for young kids! Ask lots of questions! Before they test out the cars, invite the kids guess which texture might slow down the car or speed it up as it goes down the ramp. Make predictions on which cars will go faster or slower. Let the kids race cars down the different ramps. If appropriate, you can use a measuring tape to see how far the cars travel off the ramp. Which car goes the farthest? Which car is the slowest? Young kids learn by exploring, observing, and figuring out the way things work by experimenting. Exploring ramps and friction encourages all of the above. Kids will learn that friction can be two surfaces rubbing against one another. We experience this when we rub our hands together when they are cold. Friction is also the resistance an object meets when moving over another surface. The materials you attached to the ramps changed the surface of the ramp. The different cars will experience different amounts of friction when going down these ramps causing the cars to speed up or slow down some. Simple STEM activities like this ramps and friction experiment are a wonderful way to get kids thinking, exploring, problem solving, and observing what is happening around them. There are many ways you can explore ramps, angles, slopes, and friction. Get creative with the supplies you have on hand and you can set up this science activity today! She is also the proud mom of a busy little boy. Check out their favorite science experiments and STEM projects all year long! You can connect with her on Facebook and Pinterest.

### Chapter 9 : Pushes and pulls

*hands-on experiments and investigations, discuss science ideas as a class, watch videos, complete writing tasks, and take assessments. Resources are available for printing or projecting, and many student.*