Early Ed Checkout Kits

Discover Magnets

***Introductory Exploration:** Use the provided Exploration Jars or lay out an assortment of small objects on a plate or tray. Allow kids to explore for themselves which objects respond to the magnet and which do not. Ask: what is it about the object that makes the magnet pick it up? Use vocabulary: attract, repel, push, pull, magnetize, poles, magnetic metals.

***Exploration Extension:** Some learners may notice that magnets pick up metals. Ask: Do magnets pick up all metals? Include examples of non-magnetic metals, such as coins, to demonstrate that magnets only pick up certain kinds of metals.

***Magnetic Scavenger Hunt:** Hunt around your classroom, collecting objects that are attracted to the magnet. Kids can practice early observation skills by drawing or writing the names of the objects they find. Count the number of objects found by each child, or give them a target number of objects to find.

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Enhance Sensory Learning

Providers: Please help us keep these droppers clean! If doing any activities involving colored water or other liquids, flush thoroughly with warm water immediately afterwards.

***Sensory Bin:** Add these droppers to a sand and water table, or any water-based sensory bin, to add a new dimension to water play.

***Ice Melt:** Use the droppers with warm water in an ice melting activity. Freeze letters, numbers, plastic animals or other themed objects inside an ice tray and challenge your kids to "rescue" them from the ice. Incorporate other melting methods, such as rock salt or a heat lamp, or conduct an experiment to see what method melts ice the fastest (include methods that won't work well, like sugar or cold water, along with those that will!) Freeze colored water and melt different colors together for a hands-on lesson in color mixing!

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Explore the Natural World

***Sensory Bin:** Use as an accessory at your sensory bin or table and encourage kids to "take a closer look!"

***Nature Walk:** Take your class on a nature walk. Collect objects to examine back at the classroom, or simply bring the magnifiers along. This is a great opportunity to introduce your kids to the distinction between biotic (living) things, such as plant and animal life, and abiotic objects such as rocks or soil.

***Letter Detective:** Write letters in small print on individual pieces of paper and hide them around your classroom. Invite kids to become "letter detectives" and find the missing letters. Challenge them by asking them to only find certain letters i.e., the letters in their own name, only upper-case letters, only the letter "P." Or have the class try and make words out of the letters they find. This activity can also be done with numbers or short words.

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***Reading "Closely":** Provide magnifying glasses during reading/book time so that kids can look closer at pictures or words. This is an especially great choice for a "Look-and-Find" or "I-Spy" book, where kids can use the magnifier as a tool to help spot the hidden objects. Find books like this at the library under call number E 793.7 (in the children's section).

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***Oil & Water Play:** Place a small amount of oil in a dish or cup. Set out one or more cups of colored water and allow kids to use the droppers to add drops of the water to the oil. Oil is less dense than water and oil and water don't mix, so the colored droplets will stay intact as they sink to the bottom of the cup.

***Chemical Reactions:** Add a new dimension to classic chemical reactions, such as vinegar & baking soda, and let the kids use the droppers to set off the reaction. The droppers allow for a more gradual release of the catalyst, making them great for activities such as hatching baking soda "dinosaur eggs." Freeze plastic dinosaurs in a paste of baking soda and colored water; squirt vinegar on them to "hatch."

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***Magnet Experiment:** How strong is the magnet? Invite kids to test how close an object needs to be before the magnet picks it up. Measure the distance using a ruler, or use non-standard units of measure such as pom-poms or popsicle sticks. Does the distance change if the magnet is next to the object versus held in the air? Explore how the magnet can work through objects. Place a piece of paper over the object and see if the magnet still picks it up. Repeat with a bottle cap, piece of cardboard or whatever else you have on hand.

***Magnet Motor Skills:** Use the magnet as a tool to manipulate a magnetic object (such as a ball bearing or paper clip) along a track, through a tube or through a maze. Kids can draw their own track on cardboard or a paper plate, place the object on top and move the magnet underneath.

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"Program" the Caterpillar's Path!

Note for Providers: *This is an electronic learning tool that uses flashing lights and sound and requires 80-100 square feet of open space to operate. To reduce the risk of kids fighting over the device, or of pieces being lost, misused or broken; we recommend the code-a-pillar be used as part of pre-planned, provider-led activities. Not recommended for children under 3.*

Guide to the Code-a-Pillar:

Green  = Move forward

Yellow  = Turn 90° to the right

Orange  = Turn 90° to the left

Purple  = Play a song

[Power]  = Start/stop

To turn the code-a-pillar on/off, flip the switch on the bottom of the head piece. Please make sure the switch is "Off" when adding/taking away segments, or when the code-a-pillar is not in use.

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Play to Learn

***Invitation to Play:** Set out Tegu blocks during centers or free time for open-ended play and discovery!For a more structured activity, build a structure and then challenge kids to copy it.

***2D Tegu:** For younger children struggling with stacking or the polarization of the magnets, provide a drip pan, refrigerator or other magnetic surface for them to build on. As kids become more comfortable, challenge them to build both up and out!

Early Ed Checkout Kits

Meet Botley, the Coding Robot!

Note for Providers: Please refer to the included "Coding Starter Guide" for more detailed instructions and troubleshooting tips. We recommend using Botley on your own and trying out a few sequences before introducing it to young kids.

***Getting Started**: Botley has two modes—LINE and CODE—which you can toggle between by using the switch. In CODE mode, each arrow button you press on the remote represents a step in your code. Transmit your code to Botley using the big green button, and he will execute all the steps in order. To make Botley repeat the code, simply press the Transmit button again. Otherwise, press CLEAR (the trash can) to delete the previous code and create a new one. Botley comes with coding cards which are color-coordinated to match the buttons on the remote programmer. Use the cards to plan your sequence before entering it on the remote.

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*__Black Line Following:__ Botley has a special sensor underneath him that allows him to follow a black line. Your students can draw a path for Botley to follow! Use a white piece of paper and a thick black marker. Hand-drawn lines should be 4-10mm thick and solid black against white. Put Botley in LINE mode, place him on the line and press the button on top once.

__*Obstacle Course:__ Botley has an Object Detection (OD) sensor that can help him "see" objects in his path. By pressing the OD button on the remote, you can enter a sequence Botley should follow when he detects an object. Engage your students in trying different sequences and testing them with obstacles!

__*Maze:__ Set up a maze and challenge students to code Botley to navigate through. Snap on Botley's robot arms to have him push an object through the maze. Add obstacles for more practice with object detection.

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__*Magnetic Interactions:__ Set out other magnets and/or objects attracted to magnets (paper clips, keys, etc.) to use alongside Tegu blocks. Or provide a variety of magnetic and non-magnetic objects and let them see what sticks.

__*Dramatic Play:__ Provide props (puppets, vehicles, dolls, etc.) for storytelling and dramatic play in a world built out of Tegu blocks.

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__*Using the Manipulatives:__ Before turning on the code-a-pillar, have the kids plan the sequence with you. Give each child a set of manipulatives to indicate what segment (green, yellow, orange or purple) should come next, or use the manipulatives to lay out a "code" before building the code-a-pillar.

__*Maze:__ Use strips of paper, masking tape or string to lay out a path for the code-a-pillar to follow. (Experiment on your own first to figure out how long the segments of the path need to be.)

__*Target Practice:__ When introducing the code-a-pillar with your students, have them first build sequences that are only 1-2 segments long. Place a target a few feet away and ask kids what they need to get the code-a-pillar from here to there.

__*Obstacle Course:__ Figure out how to move the code-a-pillar around furniture or toys without crashing. Extend this activity by having the kids use blocks to build bridges, tunnels or walls for the code-a-pillar to move around.