



MAGNA-TILES®

LESSON PLANS

These Lesson Plans have been created by teachers across the US to inspire different ways to use MAGNA-TILES sets in the classroom.



PreK LESSON PLANS



MAGNA-TILES® LESSON PLAN

Grade Level:
PreK

Subject:
Math

Standards:

Mathematics

3.c. Develops understanding of patterns.

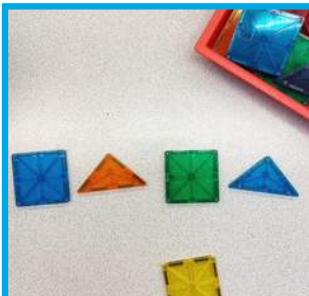
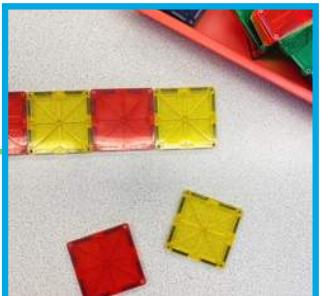
Indicator: Recognizes, duplicates, and extends simple patterns (i.e., ABAB) using attributes such as color, shape, or size.

Learning Objectives:

Students will successfully be able to use the MAGNA-TILES pieces to create an AB pattern by color, size and/or shape.

Materials:

MAGNA-TILES set, pattern cards (optional)



Procedure:

- Teacher should model an AB pattern using the MAGNA-TILES pieces.
- Have students complete the pattern.
- Create an AB pattern by color, then by size (big piece, little piece), then by shape.
- The teacher may also set out pattern cards for the students to replicate using the MAGNA-TILES pieces.
- Teachers should encourage the students to also create their own AB pattern using the MAGNA-TILES pieces by color, size and/or shape.
- Have students take turns sharing their patterns with the class.
- Encourage students to describe their patterns and to explain how they created them.

Assessment:

Teachers will be able to visually assess students' abilities based on observation.



MAGNA-TILES® LESSON PLAN

Grade Level:
PreK

Subject:
Phonics

Standards:

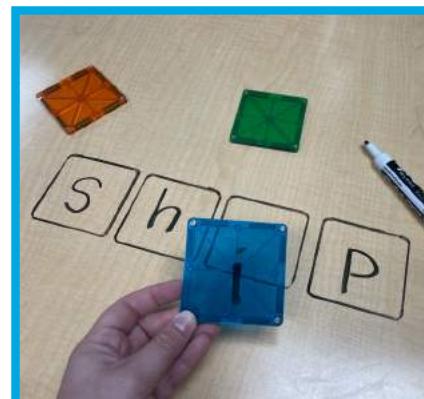
Phonological Awareness (phonemes), Vocabulary and Concept Development

Learning Objectives:

Identify matching letter case, distinguish letter sounds, identify and sort letters into basic categories (upper/lowercase).

Materials:

MAGNA-TILES set, table, dry erase markers



Procedure:

- Teacher will trace the various MAGNA-TILES shapes on the table using dry erase markers.
- Write letters using any case inside each shape and write the opposite case on the MAGNA-TILES tile that is the same shape.
- Have the students match the MAGNA-TILES shapes to the correct shape/letter.
- To extend the lesson you can incorporate sight words, CVC words, numbers, addition/subtraction problems etc.

Assessment:

Use observations to assess student's performance. Checklist indicating correct letter sounds, letter matching, or any learning objective can inform students understanding of the concept.



MAGNA-TILES®

KINDERGARTEN LESSON PLANS



MAGNA-TILES® LESSON PLAN

**Grade Level:
Kindergarten**

**Subject:
English Language Arts**

Standards:

- RF.K.1.d. Recognize, name, and match all uppercase and lowercase letters of the alphabet.
- RF.K.2.d Isolate and produce the initial, medial vowel, and final sounds (phonemes) in a CVC word.
- RF.K.2.e Add or substitute individual sounds (phonemes) in CVC words to make new words.

Learning Objectives:

- Students will work in a small group at the teacher table to identify, name, and match all uppercase and lowercase letters.
- Students will work in a small group at the teacher table to practice phonemic awareness skills by isolating the beginning, middle, and ending sound of a spoken word.
- Students will begin exposure to phoneme chaining by substituting one sound in a CVC word with another sound in order to produce a new word.

Materials:

MAGNA-TILES set, dry erase markers, magnetic white board, small group table

Procedure:

Set Up

- Grab 4 MAGNA-TILES triangles out of the box.
- Grab all small square and rectangle MAGNA-TILES pieces out of the box, and match them in sets of two, using the same color for each set.
- Use the squares for consonants and the rectangles for vowels.
- Write an uppercase letter on one tile, and then the corresponding lowercase letter on the other tile using a black dry erase marker.

Lesson

- Students will arrive at the small group table during ELA center time.
- Phonemic Awareness Warm Up:
 - A phonemic awareness warm up drill will begin the lesson. This drill will allow the children to isolate beginning, middle, and ending sounds in a CVC word.
 - Three triangle MAGNA-TILES pieces will be placed on the table.
 - The teacher will explain that we will be listening to the sounds we hear in words, and pulling out just one of the sounds at a time.
 - Begin with the word CAT: touch each of the three magnets moving from left to right in the child's direction /k/ /a/ /t/ (note- no letters are on the magnets).
 - Tell the children that CAT has three sounds, a beginning, middle, and end sound.
 - Ask the children what sound was at the beginning of the word, touching the first of the three triangles.
 - If they need extra support, tap out the word a second time.
 - Once the children can isolate the /k/ sound, move on to find the ending sound.

Procedure Continued:

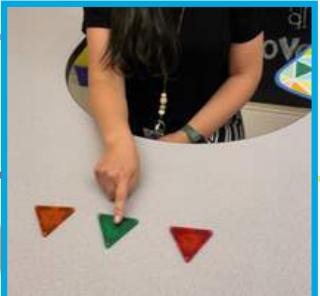
- If additional support is needed, say the word slowly and tap out each of the three sounds by touching the three triangles.
- Once the /t/ sound is isolated, move on to ask the children to find the middle sound.
- Say the word slowly, and tap each of the 3 MAGNA-TILES pieces again to find the middle sound that opens our mouth.
- Repeat with words: BIG, PET, and FOX.
- Daily Lesson:
- Now explain that we will be naming and matching uppercase and lowercase letters, and making the sound of that letter only if we know it.
- Present the square MAGNA-TILES pieces with uppercase and lowercase consonants (written on with a dry erase marker) scattered randomly on the magnetic white board.
- Present the rectangle MAGNA-TILES pieces with uppercase and lowercase vowels presented the same way.
- Touch any letter and remove it from the board. Ask the children what letter you grabbed. If they respond with “i”, ask them if it is uppercase (large gesture) or lowercase (small gesture). Then ask a child to come up to the board, find the corresponding match, and then stick them together! Make the most common sound for that letter while you match them together, and encourage the children to echo you.
- Repeat this process, gradually giving more responsibility to the children until all 26 letters are matched. Discuss the difference in shape between the vowels and consonants.
- Separate all of the letters and scatter them randomly on the board or table.

Procedure Continued:

- After the lesson: Give each child in the group a chance to match the uppercase and lowercase letters together.
- Advanced Phonemic Awareness Exposure Extension:
- Grab 4 triangles and set up 3 in a line with 1 additional triangle up above the line.
- Tell the children that we are going to try a tricky game where we use our sound triangles again, but this time we are going to add an extra triangle up top.
- Tell the children that we will start with a word, and then by changing only one sound, make a new word!
- Have the children say CAT, and tap out the word cat by making one sound on each tile /k/ /a/ /t/. Then touch the beginning tile, and say “change the /k/ in CAT to /b/ and swap the first triangle out for the extra triangle. Tap the new word out until kiddos understand that the new word is BAT.
- Repeat with the following sequence:
 - Turn the /t/ in BAT to /k/... back.
 - Turn the /b/ in back to /p/... pack.
 - Turn the /a/ in pack to /i/... pick.

Assessment:

- Informal assessment notes by teacher throughout small group instruction.
- Photograph of student work after each child has had a chance to match all letters together at the end of the week.





MAGNA-TILES® LESSON PLAN

Grade Level:
Kindergarten

Subject:
Math

Standards:

K. OA. 1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

NY-K. OA

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

1. Represent addition and subtraction using objects, fingers, pennies, drawings, sounds, acting out situations, verbal explanations, expressions, equations, or other strategies.

Learning Objectives:

Students will be able to represent and carry out subtraction problems using MAGNA-TILES magnetic tiles.

Materials:

MAGNA-TILES set, ball, subtraction bowling worksheet

Procedure:

- Discuss the math term -subtraction and that it means to take away, or take from
- Ask children if they have ever been bowling before. Discuss what they know about bowling and explain the game of bowling.
- Explain that today students will go bowling but instead of pins they will be using MAGNA-TILES pieces. They will set up a certain number of MAGNA-TILES pieces so that they are standing up and then roll a ball at them. They then will count how many MAGNA-TILES pieces they knock down and how many are still standing and then record their results.
- Partner students up and give them their materials.
- Students will set up their MAGNA-TILES pieces so that they are standing. Before students start, determine what total you want them to work with (6, 8, or 10 work best for bowling. For 6 MAGNA-TILES pieces, students will set them up in a triangle formation, 3 in a row in the back, 2 in the middle row and 1 in the front. For 8 MAGNA-TILES pieces they will have 4 in the back, 3, in the middle, 1 in the front. For 10 MAGNA-TILES pieces they will have 5 in the back, then 4, then 3, then 2, then 1.
- Students record the number of MAGNA-TILES pieces they start with on their worksheet.
- The first student rolls the ball towards the MAGNA-TILES pieces.
- Then they count how many were knocked down and record that number on their worksheet.
- Students then count how many MAGNA-TILES pieces are still standing to determine how many are remaining.
- Set the MAGNA-TILES pieces back up, now it is the second student's turn.
- Continue taking turns until students have completed the worksheet.

Assessment:

Assessment is mostly ongoing and observational. The teacher observes as students participate in the whole group introductory discussion and the teacher is assessing student participation. They are also checking for understanding as they review student worksheets to ensure that they have written equations that make sense.





MAGNA-TILES® LESSON PLAN

**Grade Level:
Kindergarten**

**Subject:
ELA and Math**

Standards:

Math: Model shapes/solids in the world by building or drawing them.

ELA: With prompting and support, orally retell familiar stories, including key details.

Learning Objectives:

Model shapes by building them.

Retell stories using key details.

Materials:

MAGNA-TILES set, 3 Little Pigs book, small pig figures or images, small fan (optional)



Procedure:

- The teacher will introduce the book The 3 Little Pigs. Students will describe a prediction based on the cover. The teacher will read the book aloud to students.
- Students will take turns acting out the story.
- Have students work in small groups to retell the story of The Three Little Pigs using MAGNA-TILES pieces and small pig figures. Students can use the MAGNA-TILES to represent the setting, and events of the story.
- Students will build shapes (houses) with MAGNA-TILES pieces.
- Challenge students to build a house that will withstand the Big Bad Wolf's huff and puff.
- Allow students time to build their houses, and then use a small fan to test their structures.

Assessment:

The teacher will informally assess students on their ability to retell the story using key details as well as their ability to build a structure found in the real world using simple shapes. Students will complete a brief "exit ticket" by drawing a house using simple shapes.



MAGNA-TILES® LESSON PLAN

Grade Level:
Kindergarten

Subject:
Science, Social Studies, Literacy

Standards:

K.SS.
K.LA.
K.Sci.

Learning Objectives:

- Given MAGNA-TILES magnetic tiles, students will accurately create trees.
- Given read aloud, students will accurately identify the life cycle of an apple tree.
- Given craft poms, students will accurately show the lifecycle of an apple tree in the correct stages of the life cycle.
- Given read aloud, students will accurately understand that a tree changes over time.

Materials:

MAGNA-TILES set, pink, green, red, and yellow craft poms, The Apple Pie Tree book by Zoe Hall

Procedure: 2-Day Lesson

Before:

- Teacher will show students an apple tree and ask them what it is?
Students will tell their partner what it is.
- Teacher will say how do we think an apple tree might grow?
Optional - Teacher will give students their own paper to draw how they think an apple tree grows. Students will share their ideas together on rug
- Teacher will explain today we are going to find out how an apple tree grows. Are you ready to learn how?

During:

- Teacher will read The Apple Pie Tree by Zoe Hall and discuss the life cycle of an apple tree.
- Teacher will draw and write the stages on a sentence strip to be used for 2nd part of lesson.
- Teacher will explain they will be using MAGNA-TILES pieces to build their own apple trees.
- Teacher will give students MAGNA-TILES pieces at tables to build their own apple trees. Each table group can create their own stage of the apple tree.
- Students will add the craft poms to show the stage they are building.
- Teacher will be observing and discussing with students how and why they built it this way.

After:

- Have students present each stage of the apple tree and/or draw to show how an apple tree changes over time (stages).

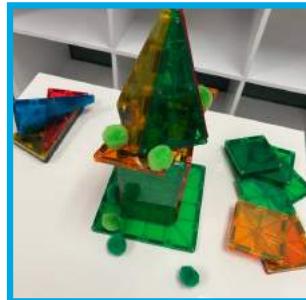
Assessment:

Observations:

- Can students accurately identify and create a tree in the correct life cycle stage.
- Can students explain the stages to understand the apple tree in their stage (what comes before, what comes after).

-Representations:

- Can students represent their apple tree through a 3d model and/or from their paper drawing from the “before” lesson.
- Can students draw their apple tree in the “after” to depict the apple tree life cycle accurately.





MAGNA-TILES®

FIRST GRADE LESSON PLANS



MAGNA-TILES® LESSON PLAN

Grade Level:
First Grade

Subject:
Math

Standards:

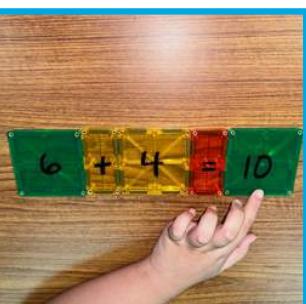
Mathematical Process Standards - Use Models to Represent and Solve Addition Word Problems with Sums up to 10.

Learning Objectives:

Apply basic fact strategies to add within 10, including making 10 and decomposing a number leading to a 10.

Materials:

MAGNA-TILES set, dry erase marker, dry erase cleaning spray



Procedure: Whole Group Lesson

- Prepare your MAGNA-TILES set for this activity by writing numbers 0-10 and “+” and “=” on your tiles using a dry erase marker.
- Introduce the concept of addition word problems. Explain to students that an addition word problem is a story that tells us about two or more numbers that are being added together. The goal of an addition word problem is to find the sum of two or more numbers.
- Model how to solve an addition word problem using numbered MAGNA-TILES. Choose an addition word problem and solve it aloud, using numbered MAGNA-TILES pieces with the “+” and “=” tiles to represent the numbers in the problem. For example, you could use the problem "There are 3 red socks and 5 blue socks. How many socks are there in total?" As you solve the problem, point out how the MAGNA-TILES numbered tiles paired with the “+” and “=” tiles help you set up the equation.
- Now read an addition word problem for the students to solve themselves. Using the MAGNA-TILES numbered tiles, students will represent the word problem in numerical form. Students are to represent the word problem correctly using the appropriate numbers and the addition and equal sign in the appropriate spot.

Assessment:

Individual practice: Using the numbered MAGNA-TILES, students will create geometric shapes that equal the sum of 10.



MAGNA-TILES®

SPECIAL EDUCATION LESSON PLANS



MAGNA-TILES® LESSON PLAN

Grade Level:
**Early Intervention,
students with disabilities**

Subject:
Music

Standards: NJ Preschool Teaching & Learning Standards

0.1.3 Actively engage in activities and interactions with teachers and peers.

0.5.2 Engage in pretend play.

9.2.3 Use multiple means of communication to creatively express thoughts, ideas, and feelings

(e.g., sing a song and act out the story of the life cycle of a butterfly).

0.2.4 Attend to tasks for a period of time.

0.5.4 Take turns.

Learning Objectives:

Students will learn about the concepts of “open” and “shut.”

Students will also explore the MAGNA-TILES farm animal manipulatives. Lastly, students

will use their voices, sign language, gestures, and/or assistive technology to join in on singing “Old MacDonald.”

Materials:

MAGNA-TILES Farm Animals 25-Piece Set, communication board, Big Mack switch, American Printing House LED Light Box

Procedure:

- Teacher will introduce the MAGNA-TILES farm animals.
- Teacher will create a square barn out of the red tiles in the MAGNA-TILES set.
- Teacher should place one animal at a time in the barn. Then sing “Old MacDonald” for each animal.
- The students will have the opportunity to use the Big Mack switch to help say the repetitive phrase “E-I-E-I-O.”
- Model opening the barn to reveal the animal inside. Model signing and saying “open” and “shut” (shown on the communication board) as you do this part of the lesson.
- Continue until you have sung about all the given animals. Students can explore the animals and extra tiles on the American Printing House LED Light Box as well. This can be very engaging for students with visual impairments.
- Model pointing and verbalizing the different related words and phrases on the communication board throughout the lesson.

Assessment:

Repetition is key with this age group and population of students. Continue to give more opportunities to explore the concepts of “open” and “shut.”

