



The InvestiGator Club™ Prekindergarten Learning System

Investigation

TEACHER'S
EDITION

Integrated Activities for Exploring, Experimenting,
and Making Discoveries



Wheels and Wings



THE EARLY CHILDHOOD COMPANY®

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PART 2

Contents

Part 2 Riding the Rails

Day 3

Introduce Riding the Rails	4
Opening Circle Time	
Oral Language: Choo-choo Train	4
Everyday Literacy: Phonological Awareness	
Train Whistle	5
Everyday Literacy: Alphabet Knowledge	
Two-by-Two Alphabet March	6
Small Group	
Math: Ten Little Train Cars	7
Whole Group	
Literacy: Read a Nonfiction Book About Trains	8
Music and Movement: Railroad Rhythm	9
Closing Circle Time	
Dramatic Play: Imagine Where the Train Goes	10
Assessment: Daily Check Up	11

Day 4

Opening Circle Time	
Oral Language: Passing Scenery	12
Everyday Literacy: Phonological Awareness	
"Did You Ever?"	13
Everyday Literacy: Alphabet Knowledge	
R Is for Railroad	14



Day 4 (cont.)

Small Group

Science: Factory Goods 14

Whole Group

Literacy: The Name Train 15

Math: Now Boarding 16

Closing Circle Time

Oral Language: Found Treasures 16

Assessment: Daily Check Up 17

Day 5

Opening Circle Time

Oral Language: What Is in Your Suitcase? 18

Everyday Literacy: Phonological Awareness

Sounds on a Train 18

Everyday Literacy: Alphabet Knowledge

Letter or Number Delivery 19

Small Group

Math: Train Shapes 20

Whole Group

Literacy: Read a Book About Trains 21

Health: Tasty Train 22

Closing Circle Time

Oral Language: Pass a Conductor's Hat 23

Assessment: Daily Check Up 24



Part 2

Riding the Rails

Remind children that they have been learning about different kinds of transportation—ways to get from one place to another. Refer to the chart you made in Part 1 on page 14 that shows ways children go to school. Tell children they have already learned that cars, vans, trucks, and buses are ways to travel on roads, streets, and highways. All these vehicles have wheels. Tell children: **Now we will discover another kind of transportation that has wheels. We will learn about trains! We will pack our bags, pretend to travel on a train, and go to far away places. There is so much to learn. So all aboard to start investigating!**

Opening Circle Time

Spanish Vocabulary

train
tren
forward
hacia adelante
back
hacia atrás

Oral Language: Choo-choo Train

Objective

- Listen to and understand finger plays.

Lead children in this finger play.

This is a choo-choo train

(Bend arms at elbows.)

Puffing down the track.

(Rotate forearms forward to mimic train.)

Now it's going forward,

Now it's going back.

(Rotate forearms backward.)

Now the bell is ringing,

(Pretend to pull bell cord.)

Now the whistle blows.

(Hold fist near mouth.)

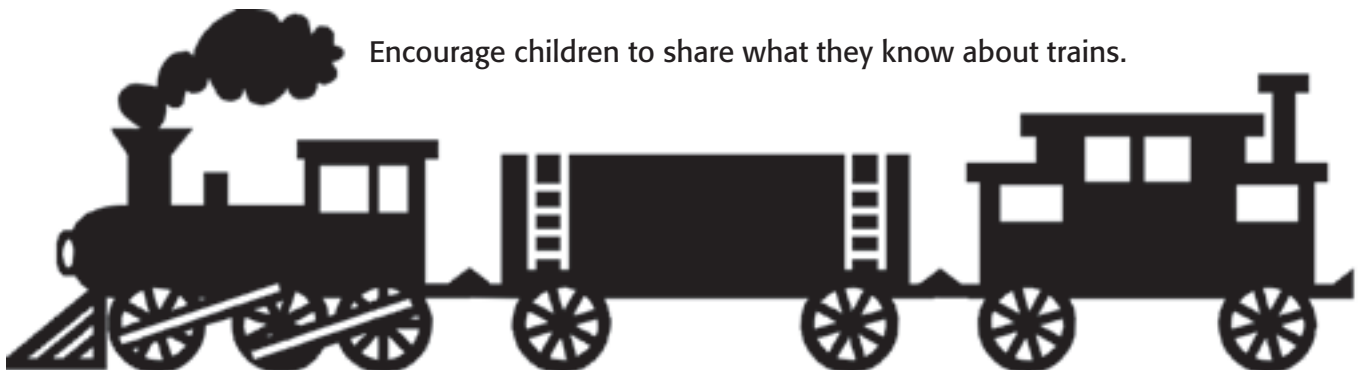
What a lot of noise it makes

(Cover ears with hands.)

Everywhere it goes.

(Stretch out arms.)

Encourage children to share what they know about trains.



Train Whistle

Objective

- Listen for different purposes.
- Recognize matching sounds in familiar games.

Materials

- whistles or wind instruments

Tell children that Great Auntie Lu has traveled on many trains in her lifetime. Say: **Great Auntie Lu knows to listen to the conductor's whistle when she is at the station.** Explain that a train conductor blows a whistle to tell passengers when a train is about to move. A conductor also blows a whistle to tell passengers that a train is coming into the station. Recite the following rhyme with children:

Train, train, coming down the track.

Listen for my whistle and then whistle back.

Tell children to listen carefully. Say the following and demonstrate by blowing the whistle:

- **One long blast means a train is coming into the station.**
- **One short blast means the train is stopping.**
- **Three short blasts means the train is starting to move.**

Tell children to close their eyes and listen carefully. Blow the whistle for each pattern noted above. Have children repeat the pattern by blowing their whistles.

Then tell children to listen carefully as you blow the whistle twice. Use varying and matching patterns, and ask: **Were the whistle sounds the same or different?**

Follow up by having children line up to form a train. As the train moves around the room, have an engineer sound a whistle to indicate the upcoming motion.



Two-by-Two Alphabet March

Objective

- Listen to and sing along with alphabet songs.
- Match and sort letters.

Materials

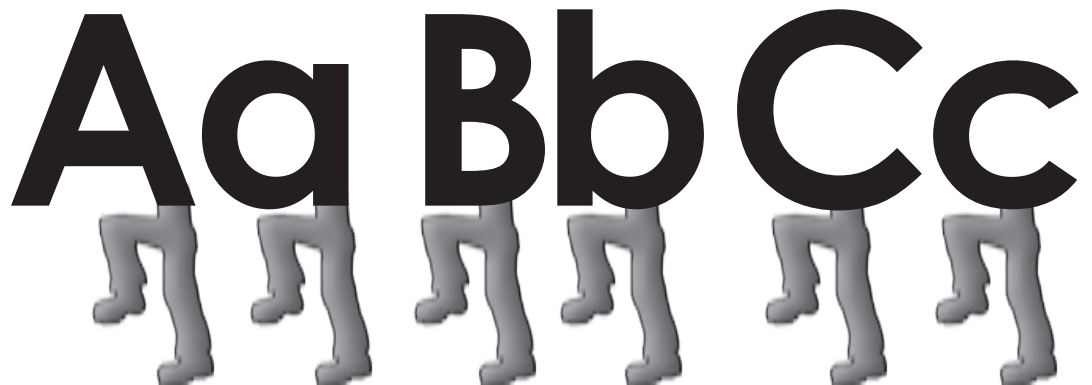
- index cards or **Magnetic Foam Letters**

Use **Magnetic Foam Letters** or two sets of index cards, one with capital letters written on them and the other with small letters written on them. Give half the children a capital letter, and the other half a small letter. Have children stand side by side in two groups facing one another, each child holding up his or her letter for the other group to see. Call on children one by one, in order of the alphabet, to find the letter that matches their own. Then have those two children pair up and stand together in another line. After all children have formed pairs, say:

Two by two we go marching along,

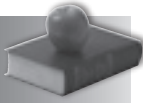
Singing Dilly's Alphabet Song!

Lead pairs of children to march in a circle singing "Dilly's Alphabet Song."



Small Group

Spanish Vocabulary



- one
uno
- two
dos
- three
tres
- four
cuatro
- five
cinco
- six
seis
- seven
siete
- eight
ocho
- nine
nueve
- ten
diez

Math: Ten Little Train Cars

Objective

- Combine, separate, and name “how many” objects.

Materials

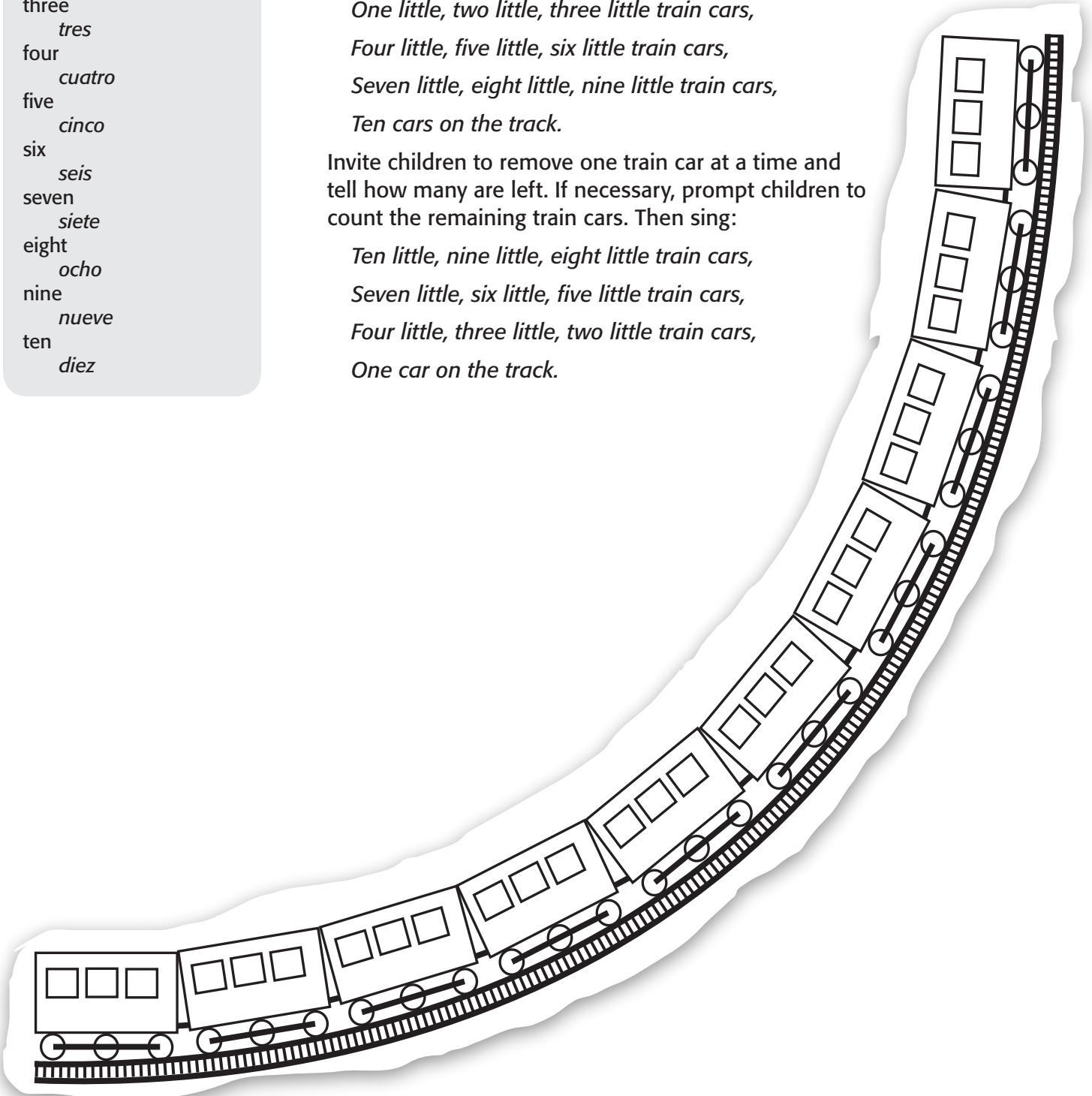
- 10 toy train cars or 10 paper train cars
- toy or paper train tracks

Display a train track and ten toy train cars. Invite children to place cars on the track one at a time as they count them aloud. After all ten train cars have been placed, point to the train cars as you sing “Ten Little Train Cars.”

*One little, two little, three little train cars,
Four little, five little, six little train cars,
Seven little, eight little, nine little train cars,
Ten cars on the track.*

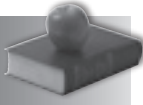
Invite children to remove one train car at a time and tell how many are left. If necessary, prompt children to count the remaining train cars. Then sing:

*Ten little, nine little, eight little train cars,
Seven little, six little, five little train cars,
Four little, three little, two little train cars,
One car on the track.*



Whole Group

Spanish Vocabulary



subway train
tren subterráneo
freight train
tren de carga
steam train
locomotora a vapor
passenger train
tren de pasajeros

Literacy: Read a Nonfiction Book about Trains

Objective

- Ask questions and comment on book information and events.
- Listen to and discuss books.
- Notice beginning letters in familiar words.

Materials

- a nonfiction book about trains

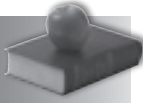
As children gather, ask questions such as: **Have you ever seen a train? What did it sound like? Was it loud or quiet? What are trains used for?**

Read a nonfiction book about trains, such as *This Train* by Paul Collicutt, *My Train Book* by Ellen Kirk, or *My Big Train Book* by Roger Priddy. Start by showing children the cover of the book. Point to a letter in the title, such as the *T* in *Train*, and ask: **What letter is this?** Read the title and author's name aloud. As you read the book, pause to allow children to view the pictures and ask questions. After reading the book, talk about the different types of trains that might be seen near your community.



Whole Group

Spanish Vocabulary



rhythm
ritmo

Differentiation

Inclusion Hearing-impaired children often enjoy playing vibratory musical instruments. Allow them to test different instruments and choose their favorites.

Music and Movement: Railroad Rhythm

Objective

- Experiment with musical instruments.
- Experiment with music concepts, volume, tempo, and sound.
- Move and dance to music.

Materials

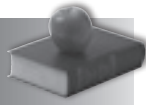
- percussion and wind instruments
- recording of orchestral music with a train theme (optional)

Invite children to come to the circle. Say: **Today we are going to investigate the rhythm of trains.** Provide percussion and wind instruments such as triangles, maracas, and recorders. Have children stand in a circle. Use the maracas or another instrument to establish the rhythm of a train: **CHOO choo choo, CHOO choo choo . . .** Invite children to join in. Gradually increase and decrease the volume and tempo as the imaginary train speeds up and slows down. Children can use a recorder or another wind instrument to add the sound of a train whistle or use a triangle to mimic the sound of a railroad crossing.

Listen to an orchestral recording related to trains such as “The Little Train of Caipira” composed by Heitor Villa-Lobos, “Pacific 231” composed by Arthur Honegger, or “Jernvags-Galopp” composed by Jean Meyer. Invite children to move or dance around the circle in time to the music.



Spanish Vocabulary



city
ciudad
mountain
montaña
beach
playa

Dramatic Play: Imagine Where the Train Goes

Objective

- Participate in dramatic play activities.
- Participate in games, outdoor play, and exercise.

Explain that JT Gator loves to read books about places he might visit on a train. He looks at pictures of cities, mountains, and beaches, and pretends he is in that place. Explain: **We are going to play “Let’s Pretend!” Listen carefully, think of some ideas, and then show me what you can do.** Have children pantomime the following:

- **Our train has just stopped in a big city. Let’s get off and see the sights. Look at all the tall buildings! Here we are in front of the art gallery. Let’s buy a ticket and go inside to investigate. Which of these paintings do you like best?**
- **Our next stop is a small mountain town. Let’s hike up the mountain. My backpack is so heavy. What kind of bird is that? Let’s get out our binoculars and see.**
- **Next, the train stops at the beach. It’s very important to put on sunscreen. I’ll race you to the water! Swimming is so much fun. But now I want to dig in the sand. Oh, look! I found something!**

Conclude by having children suggest what they found in the sand.





Daily Check Up



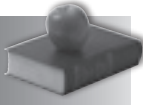
While you present each lesson, note the following:

- **Opening Circle Time:** Are children able to understand and follow the finger play?
- **Phonological Awareness:** Are children able to distinguish the different whistle patterns?
- **Alphabet Knowledge:** Are children able to identify letters and match capital to small letters?
- **Small Group:** Are children able to count the number of train cars?
- **Whole Group 1:** Do children ask and answer questions and engage in discussion about the book?
- **Whole Group 2:** Do children respond appropriately to changes in rhythm, volume, and tempo?
- **Closing Circle Time:** Do children participate in the game and respond appropriately?

Record your observations as anecdotal notes.

Opening Circle Time

Spanish Vocabulary



passenger
pasajero
ticket
boleto
window
ventanilla

For 3-year-olds **3**

Provide various pictures of scenery for children to choose as they describe what they see through the train window.

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Oral Language: Passing Scenery

Objective

- Speak clearly without contextual clues.
- Express thoughts, feelings, and ideas using language and gestures.

Materials

- hole punch
- construction paper
- suitcases and other travel props (optional)

Create the inside of a passenger train by setting up chairs in rows with an aisle down the center. Use slips of construction paper to create tickets. You may wish to provide children with props to carry such as small suitcases, brief cases, or duffle bags.

- **Say: A train stops near City Square. Great Auntie Lu often rides the train to visit her sister.** Tell children to imagine they are going to ride a train just like the one Great Auntie Lu rides. Give each child a ticket.
- Call out **All Aboard!**, and have children board the train with their tickets.
- After passengers board the train, pretend the train is starting to move. Have children imagine what they might see through the train window.
- Walk down the aisle saying, **Tickets, please!** as you greet children. Before punching a child's ticket, have that child describe what he or she sees through the window. For example: *I see a tall building with a lot of windows. People are walking on the sidewalk in front of the building.*
- Punch children's tickets after they have had a turn to speak.

Remind children to sit quietly and listen to one another so as not to repeat the same things.



“Did You Ever?”

Objective

- Recognize matching sounds and rhymes in songs.

Sing the following song to the tune of “If You’re Happy and You Know It.” Then ask children to name the words with matching ending sounds, such as *duck/truck* and *goat/boat*.

Did you ever see a duck in a truck? (Repeat.)

No, I never! No, not ever! (Repeat.)

No, I never saw a duck in a truck.

Continue with these lyrics.

Did you ever see a goat in a boat? . . .

Did you ever see an eel fix a wheel? . . .

Did you ever see a bear in the air? . . .

Did you ever see a moose in a caboose? . . .



Alphabet Knowledge

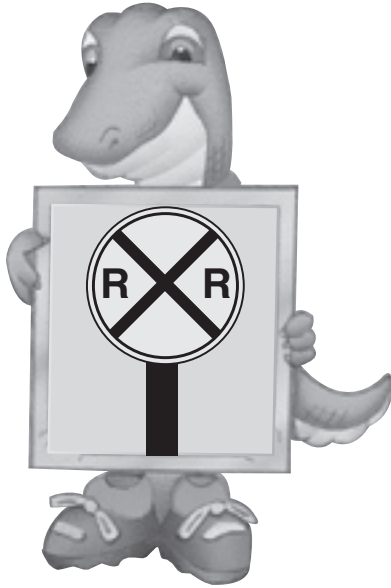
R Is for Railroad

Objective

- Know that letters of the alphabet are a special category of visual graphics.
- Associate the names of letters with their shapes and sounds.

Materials

- chart paper
- marker
- picture of a railroad crossing sign
- glue
- yarn
- yellow paper



Write the letters *R* and *r* and Rosalita's name. Say: **Rosalita's name begins with a capital *R*. The letter *r* stands for the /r/ sound. Can you make the /r/ sound with me?** Elongate the sound as children say it with you.

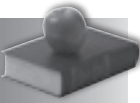
Write the letters again slowly to show how *R* and *r* are formed. Have children practice writing the letters on their palms using their fingers. Say and write other words that begin with *Rr*: *rabbit, read, red, and rock*.

Tell children: ***Railroad* is another word that begins with *R*.** Show children a picture of a railroad crossing sign. Have a volunteer point to each *R* on the sign. Talk about the sign's meaning. Have each child make a railroad crossing sign by gluing pieces of colored yarn or another material to paper to form a large *X* with an *R* on each side.

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Small Group

Spanish Vocabulary



factory
fábrica
goods
bienes
boxcars
cajas

Science: Factory Goods

Objective

- Identify human-made things.

Materials

- picture of a factory
- construction paper
- crayons or magazines, scissors, and glue

Show children a picture of a factory. Tell children that people make all kinds of things in factories. Explain: **Freight trains carry these things from the factory to places all around the country. The factory goods are then sold in stores. Boxcars are often filled with things made in a factory.** Discuss different objects that might be made in a factory, such as cars, clothes, toys, chairs, and pencils. Then give each child a sheet of construction paper. Have children draw pictures of factory goods on their paper, or have them cut and paste pictures from a magazine. Children can use construction paper to cut out circles and paste wheels onto their boxcar. Assemble children's boxcars, and display the train in the classroom.



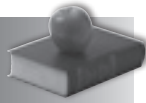
Whole Group

Transition Time



Have children move in a line to the next activity as they softly chant:
CHOO choo choo,
CHOO choo choo . . .

Spanish Vocabulary



name
nombre
conductor
conductor
passenger
pasajero
board (v.)
abordar

Literacy: The Name Train

Objective

- Know that letters of the alphabet are a special category of visual graphics.
- Identify own name.

Materials

- index cards

Write the name of each child on an index card and place the cards on a table. Create a name card for JT, too. Have children find their name cards and display them for the group.

Show JT's name card to children and read it aloud. Say: **JT is going on a trip across the country. He's going to ride the Name Train. He invites you all to ride along. But everyone must take turns boarding the train. JT listens carefully for his turn to board the train.** Then tell children to listen carefully to what the conductor says so they will know when it is their turn to board. When it is their turn to board the train, children should line up to form a train. Acting as the conductor, call out this statement:

- **Woo! Woo! Passengers whose names begin with an A may now board the train.**

Continue until each letter of the alphabet has been named.



Whole Group

Spanish Vocabulary

animal
animal

Management

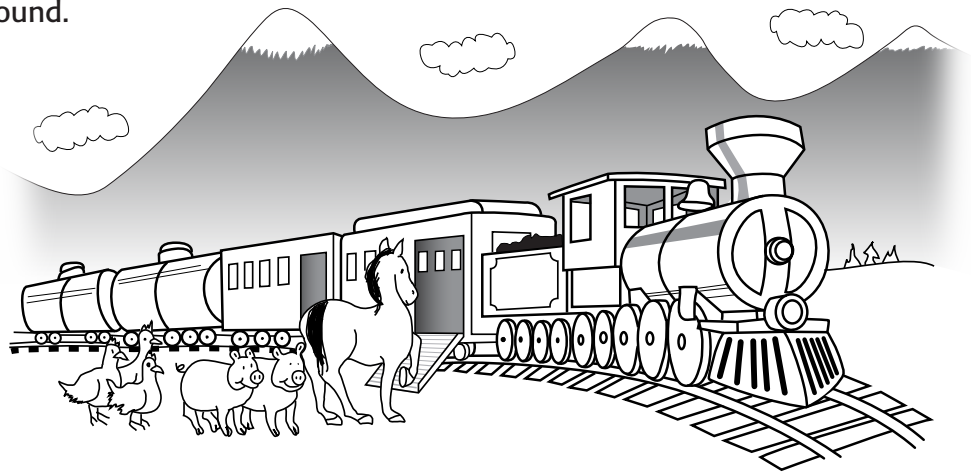
To help children concentrate and remember the animals named, have them close their eyes and picture the animals boarding a train.

Math: Now Boarding

Objective

- Listen for different purposes.
- Count in sequence to ten and beyond.
- Maintain concentration over time.

Have children sit in a circle. Play a memory game in which children imagine animals getting on a train. The first child names an animal that boarded the train, saying: *One _____ got on the train.* The second child repeats the first animal named and adds to the statement, saying: *One _____ and two _____ got on the train.* Have children continue in turns until someone makes a mistake. The same type of animal should not be repeated twice in the same round.



Oral Language: Found Treasures

Objective

- Ask and answer questions.
- Understand and use language to communicate.

Materials

- pillowcase or bag filled with props

Present a bag or pillowcase filled with props. Tell children that you will pretend you and the InvestiGators have just returned from a vacation in a far away place. Pull out an object and describe what you found and where you found it. For example, pull out a foreign coin and say: **Manny found this coin when we were walking along the beach. It is round and silver. Great Auntie Lu said someone must have dropped it.** Continue by having each child pull out a prop, describe it, and tell where they found it.

Closing Circle Time

Spanish Vocabulary

vacation
vacaciones
treasure
tesoro

For 3-year-olds

3

As you pull objects out of the bag, prompt each child with questions such as: **What is it?**
Where do you think it came from?



Daily Check Up



While you present each lesson, note the following:

- **Opening Circle Time:** Do children express their ideas without further prompting?
- **Phonological Awareness:** Can children identify the words that rhyme?
- **Alphabet Knowledge:** Are children able to recognize the shapes *R* and *r*?
- **Small Group:** Do children draw or choose human-made items?
- **Whole Group 1:** Are children able to identify the card with their own name on it?
- **Whole Group 2:** Do children listen attentively and remember what was said before their turn?
- **Closing Circle Time:** Do children use appropriate language to describe the item from the bag?

Record your observations as anecdotal notes.

Opening Circle Time

Spanish Vocabulary



suitcase
maleta
trip
viaje



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Phonological Awareness

Oral Language: What Is in Your Suitcase?

Objective

- Ask and answer questions.
- Use appropriate language and style.

Materials

- small suitcases or boxes
- variety of props that might be found in a suitcase

In advance, place props such as a toothbrush, hairbrush, clothing, wallet, and toy camera in individual suitcases or boxes. Tell children that you have packed items for them to take on a trip. Call a child to choose a suitcase or box and look inside it without telling anyone what is in it. Challenge the remaining children to guess what is in the suitcase by asking yes or no questions to find clues. Model with questions such as these:

- **Can someone wear it?**
- **Can it fit in my pockets?**
- **Is it soft?**
- **Is it shiny?**

Sounds on a Train

Objective

- Identify environmental sounds.

Materials

- fork and ceramic dish
- pitcher of water and cup
- book or magazine
- bag, jacket, or other item with a zipper

In advance, gather the materials in the back of the classroom and cover them with a cloth. Tell children: **Great Auntie Lu told me that she rode a train all the way across the country to visit her cousin. She said the train had tables where people could eat and beds to sleep in!** Stand behind children. Tell them to face forward in their chairs and close their eyes. Have them imagine they are on a passenger train like the one Great Auntie Lu rode. Have children listen carefully to the sounds heard on the train. Use the props and have children guess what is making each sound:

- someone eating
- water being poured
- someone snoring
- someone turning the pages of a book
- someone zipping their jacket or bag

After each sound has been identified, repeat them in a different order and have children guess again.

Letter or Number Delivery

Objective

- Differentiate between letters and numbers.
- Identify at least ten letters of the alphabet.

Materials

- index cards or **Magnetic Foam Letters and Numbers**
- small bag

Use **Magnetic Foam Letters and Numbers**, or write each letter of the alphabet and the numerals 1 through 10 on individual index cards. Place all the letters and numbers in the bag. Have children stand in a circle. Say the following chant, pausing in front of each child to allow him or her to pull an item from the bag:

Clickety clack, clickety clack.

Here comes the freight train down the track.

Chugga chugga choo! Chugga chugga choo!

It has something just for you!

After the child pulls from the bag, have him or her tell if it is a letter or a number and tell which letter or number is on the card as it is shown to the class.

ABC 123

DEF 456

GHI 789



Small Group

Spanish Vocabulary

rectangle
rectángulo
square
cuadrado
circle
círculo
triangle
triángulo

Math: Train Shapes

Objective

- Recognize, describe, and compare shapes.
- Name shapes and their parts and attributes.
- Use size and shape to compare and contrast shapes.
- Identify primary colors.

Materials

- construction paper in various colors and shapes (see train pattern on this page)
- glue

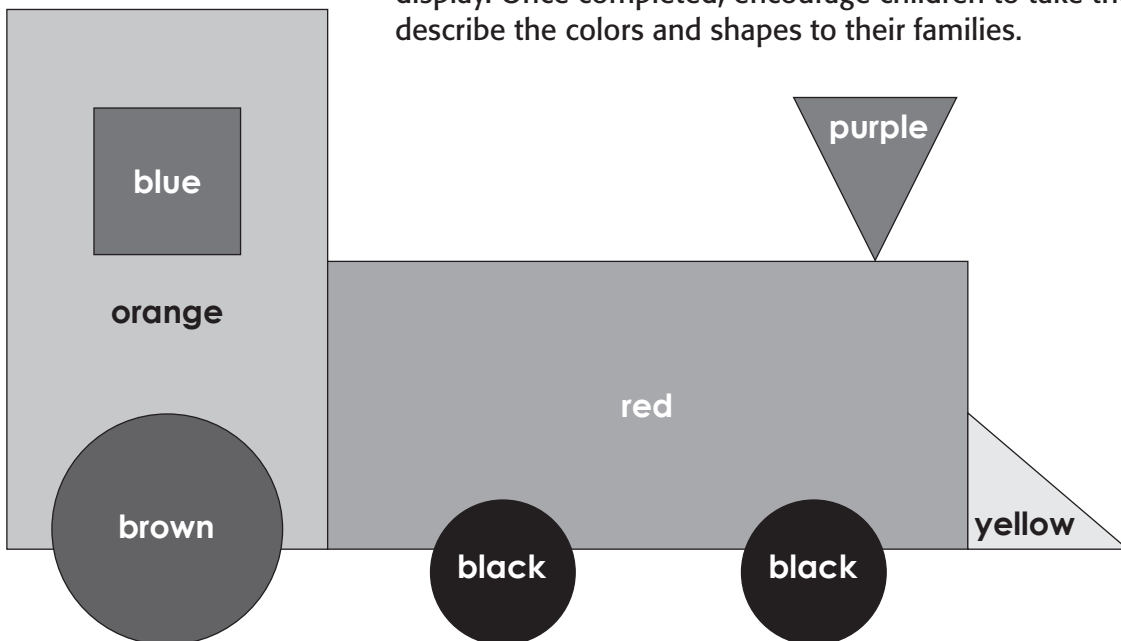
In advance, make several sets of train shapes using the colors and shapes indicated in the pattern below. Make one set of shapes for demonstration purposes, and make a set for each child. Tell children that you will show them how to build a train using different shapes. Give each child one or more paper shapes from the demonstration set. Ask questions such as these:

- **Who has a big, red rectangle?**
- **Who has a small, black circle?**

As children hold up the shapes, have them place them on the table. Show each child where to put his or her shape to build the train. After the train is complete, have children describe and compare the shapes by asking questions such as these:

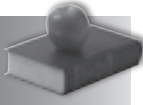
- **Which is bigger, the blue square or the red rectangle?**
- **Which shapes have four sides?**
- **What is the name of the purple shape?**

Give each child a full sheet of paper, a set of train shapes, and access to glue. Have children make their own trains by following the example on display. Once completed, encourage children to take their train home and describe the colors and shapes to their families.



Whole Group

Spanish Vocabulary



title

título

author

autor

write

escribe

illustrator

ilustrador

pictures

fotos

Literacy:

Read a Book About Trains

Objective

- Understand book features: title, author, illustrator.
- Listen to storybook reading.
- Recognize that letters are grouped to form words.

Materials

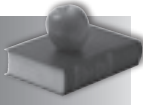
- a book about trains

Read a storybook about trains such as *And the Train Goes...* by William Bee, *Freight Train* by Donald Crews, *Chugga-Chugga Choo-Choo* by Kevin Lewis, or *The Goodnight Train* by June Sobel. Start by pointing out the book's title, author, and illustrator. Discuss what an author does and what an illustrator does. Point to the word *train* in the book's title or in the story. Say: **This is the word *train*. How many letters are in the word *train*? Let's count them together.** (five) Pause to discuss the illustrations as you read the book aloud.



Whole Group

Spanish Vocabulary



healthy
saludable
snack
merienda
food
alimentos

Safety



Utilize unused egg cartons, or disinfect cartons before use. Also check for food allergies before allowing children to choose snacks.

Health: Tasty Train

Objective

- Recognize and select healthy foods.
- Prepare healthy snacks.

Materials

- pictures of various snack foods and sweets
- egg cartons, thoroughly cleaned
- small construction paper circles
- glue
- hole punch
- yarn
- small healthy snacks such as raisins, dried fruit, granola, grapes, baby carrots

Display pictures of various food items, including sweets, and briefly discuss which foods are healthy. Help children sort the pictures into two groups, separating healthy snacks from the others.

Tell children: **When Dilly and JT ride in the car with their family, they sometimes have to stop the car at a railroad crossing. Dilly and JT try to guess what cargo is in each boxcar of a freight train. Is it fuel, or is it building supplies? Is it some kind of food?**

Have each child make a freight train. Give each child three connecting cups cut from a clean egg carton (four freight trains can be made from one carton.) To make wheels for the boxcars, give each child six small construction paper circles to glue onto both sides of each car. Then punch a hole in the end of each carton and help children thread yarn through it and tie a knot. Then say: **What will your cargo be? Tasty treats, of course!** Recite the following rhyme:

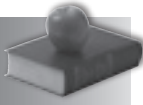
*Freight train, freight train,
Coming down the track.
Freight train, freight train,
Clickity clack.
What do you carry
To market today?
Tasty treats
Are on their way!*

Then have children fill their train cars with tasty cargo. Ask children to name the cargo they have chosen for their freight trains. After sharing, tell children to enjoy their cargo.



Closing Circle Time

Spanish Vocabulary



conductor's hat
gorra del conductor
take turns
turnarse

ELL



If children are hesitant about speaking but want to share something they made, have them hold up their work while you ask yes and no questions.

Oral Language: Pass a Conductor's Hat

Objective

- Cooperate with others in an activity.
- Listen to and understand conversations.
- Initiate and respond in conversations and discussions with peers and adults.

Materials

- conductor's hat (optional)

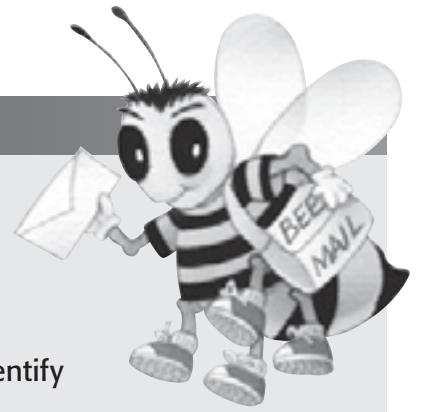
Pass around a conductor's hat. As children take turns putting on the hat, have them share with the class something they learned today or earlier in class. For example, a child might:

- explain what a freight train is
- retell the story in a book about trains
- name a letter and draw it in the air
- name the shapes in a picture of a train
- explain the job of a train conductor





Daily Check Up



While you present each lesson, note the following:

- **Opening Circle Time:** Are children able to ask and answer relevant questions?
- **Phonological Awareness:** Can children identify each sound?
- **Alphabet Knowledge:** Can children distinguish between letters and numbers and name the letter or number chosen?
- **Small Group:** Can children identify colors and identify, compare, and describe shapes?
- **Whole Group 1:** Do children understand the story and participate?
- **Whole Group 2:** Can children identify healthy foods?
- **Closing Circle Time:** Do children speak in turns and express themselves appropriately?

Record your observations as anecdotal notes.