



TEACHER'S EDITION

Integrated Activities for Exploring, Experimenting, and Making Discoveries







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PART 1

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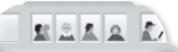
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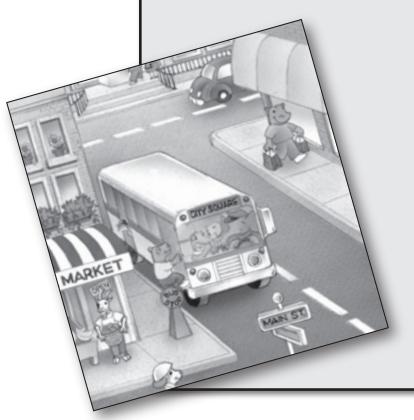


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Almost all children enjoy playing with toy cars, trucks, boats, planes, and trains. With these miniature vehicles and a bit of imagination they can go any place they choose. Wheeled vehicles and other forms of transportation are both fascinating and familiar to all children. The activities in Wheels and Wings are sure to generate interest, investigation, and invention and help satisfy children's yearning to get up and go! So tell everyone to buckle up their seatbelts and let the investigation begin!

Learning Centers

Have children rotate through Learning Centers each day while you meet with small groups.

Reading Center

Spanish Vocabulary



Assessment



Observe children as they handle the books in the Reading Center. Note which children show an active interest in reading and know how to view and read a book. Record your observations as anecdotal notes.

We Can Read!

Objectives

- Show interest in reading-related activities.
- Understand how to handle and care for books.
- Understand how to read or view a book.

Materials

 assortment of picture books about automobiles, boats, planes, and trains

Stock the Reading Center with picture books about automobiles, boats, planes, and trains. As children come to the Reading Center, they can each pick out a favorite book and take turns pretend-reading to each other. Encourage children to explain how to

handle a book carefully as it is read.



Writing Center

Spanish Vocabulary

draw
dibujar
write
escribir
learn
aprender
learning journal
diario de aprendizaje

Learning Journals

Objectives

- Represent experiences through pictures and dictation.
- Use a variety of forms of writing.

Materials

- drawing paper
- crayons
- markers
- construction paper
- yarn

Have children draw pictures that show something they learned about today. For example, a child might draw a picture of a fire truck. When drawings are done, have an adult helper write sentence starters that include the day of the week. For example: *On Tuesday, I learned* _____. Have the child dictate the rest of the sentence. Ask the helper to have each child write or trace several letters in the sentence. Children can create new pages each day and assemble them with yarn to make learning journals with construction paper covers.

Math Center

Spanish Vocabulary

freight train

tren de carga

boxcar

vagón de cartón

order

orden

Management

After children have had ample practice working with numbers 1 to 5, label the boxcars 6 to 10. Use sets of 10 smaller objects.

Freight Train

Objective

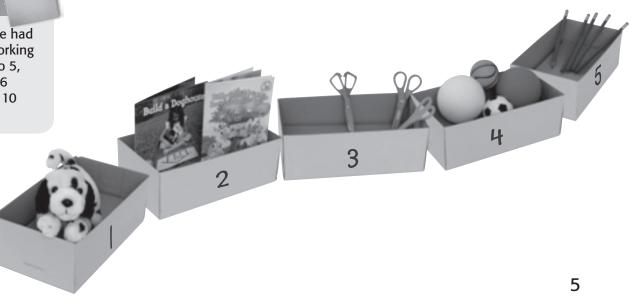
 Associate number concepts, vocabulary, quantities, and written numerals.

Materials

- 5 small boxes of the same size
- several sets of 5 similar objects

Make a boxcar freight train using the boxes. Cut off the tops of the boxes so children can place freight in the boxcars. Number each boxcar with a number from 1 to 5. When children come to the Math Center, they will fill freight orders by filling each boxcar with the correct number of items. Children may vary the orders as they wish as long as the correct number of items is in each boxcar. Children can "ship" the freight to a partner. Their partner can then count the items in each boxcar to make sure the correct number of items was sent.





faster

bajo

rápido fastest

Ramp Races

Objectives

- Manipulate materials with simple equipment.
- Test observations, draw conclusions, and form generalizations.

Materials

- toy vehicles with wheels
- flat boards or pieces of cardboard

Stock the Science Center with toy vehicles and materials for making ramps of various heights. Show children how to make ramps with different degrees of incline by laying one end of each board on different numbers of blocks. Hold up one vehicle and ask children: Will this car go faster if I place it on the lowest ramp or the highest ramp? Why do you think so? Instruct children to have car races down the ramps by releasing two cars on different ramps at the same time. Have children predict which car will go faster: the one on the ramp with fewer blocks or the ramp with more blocks. Allow children to explore the vehicles on the ramps.

Social Studies Center

Spanish Vocabulary

store tienda factory fábrica worker trabajador shopper comprador

From Factory to Home

Objectives

- Cooperate with others in an activity.
- Understand the role of a consumer.

Materials

- paper money
- various items to stock a factory and store
- toy telephone
- toy cash register (optional)
- empty boxes
- toy tools

Assign each child one of these roles: factory worker, store owner, and shopper. Have shoppers role-play driving to the store to purchase items with paper money. The store owner should call the factory to order items that are out of stock. Children can role-play making items and shipping them in boxes to the store. Factory workers might want to take a break and drive to the store to spend their earnings.

Art Center

Spanish Vocabulary

shape forma car carro bus autobús

truck
camión
plane
avión
boat

barco

train tren

For 3-year-olds

Provide younger children with precut shapes. Have them choose a picture to replicate and help them plan their design by outlining the shapes in the picture with a marker.

Transportation Shapes

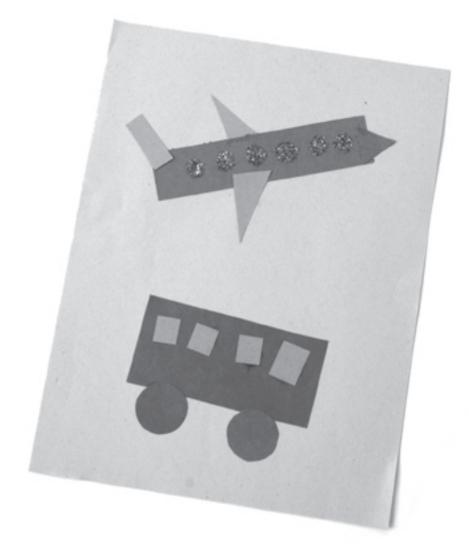
Objectives

- Use art media and materials.
- Plan and complete art projects.
- Create form and meaning using shapes.

Materials

- pictures of various vehicles cut from magazines
- paper shapes
- construction paper
- glue
- scissors
- glitter, stickers, markers (optional)

Display geometric shapes and pictures of various types of vehicles, including cars, buses, trucks, planes, boats, and trains. Provide glue, scissors, and construction paper for children to make transportation shape collages. Have children cut out shapes and experiment with arranging them to create vehicle designs. Children then glue their designs to a single sheet of construction paper. Children may use glitter, stickers, and markers to add embellishments if they wish.



Technology Center

Spanish Vocabulary

tourist
turista
destination
destino
postcard
tarjeta

Assessment



Note which children understand how to use a computer and can understand and use technical terms such as *keyboard*, *mouse*, and *monitor*. Record your observations as anecdotal notes.

World Tour

Objectives

- Use various types of technology.
- Use a variety of input devices such as mouse and keyboard.

Materials

- computer station
- word processing program
- index cards
- crayons or markers
- Internet access or pictures of tourist destinations

Have an adult helper access a web site about a tourist attraction such as the Grand Canyon, Eiffel Tower, pyramids, or Niagara Falls. If Internet access is not available, show and discuss photographs gathered from magazines and other sources. Then have children dictate a message to write on a postcard to JT Gator. The postcard should tell about the place they "visited." The helper should have children help find letters on the keyboard as the message is typed on the computer. Children can also take turns using the mouse to help click on items. Print out the postcard message and affix it to an index card. Have children decorate their "postcards."



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Learning Centers 8

Spanish Vocabulary



Management

To keep children on task, ensure that children have listened and understand what they are supposed to do by having them explain how they plan to make their boats.

Boat Float

Objectives

- Observe and discuss properties of objects and materials.
- Understand cause-effect relationships.

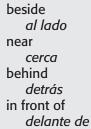
Materials

- sand and water table filled with water
- paper bowls or plates
- construction paper
- stickers, crayons or markers
- clay
- wooden craft sticks
- glue

Fill the sand and water table with water. Have children make boats out of paper bowls or plates by gluing paper triangles to craft sticks to serve as sails, and then securing their sails to the boats' centers with small pieces of clay. Children can use stickers and crayons or markers to decorate their boats. Have children launch their boats and experiment with ways to make them move. For example, children can push their boats, blow on the sails, or make waves.

Block Center

Spanish Vocabulary



Drive Around the Block

Objectives

- Understand directional and positional
- Coordinate movements when playing.

Materials

- masking tape
- squares of paper for tickets
- pictures of city streets
- wooden blocks
- toy cars, trucks, buses

In advance, build roads on a table using strips of masking tape. Include intersections where roads meet. Display pictures of city streets.

Have children create a city around the roads by using blocks to make buildings. Provide toy vehicles for children to explore traveling around the city. Encourage children to talk about where they are going and give driving directions, such as "Turn down the street beside the school. The museum is near the mall. Park in front of the mall."

Learning Centers 9

Dramatic Play Center

Spanish Vocabulary

job trabajo taxi driver taxista bus driver chofer de autobús ticket salesperson vendedor de boletos train conductor conductor del tren boat captain capitán de barco pilot piloto flight attendant azafata

For 3-year-olds

Help younger children join in the dramatic play by assigning them a role that will be more familiar to them, such as train conductor.

Globe-trotters

Objectives

- Assume different roles in dramatic play activities.
- Describe people's jobs.

Materials

- variety of dramatic play props and dress-up clothes associated with transportation and travel
- pictures of taxis, bus stations, train depots, cruise ships, and airports

Display pictures and props associated with various types of travel. Group props by transportation type. Engineer and captain's hats, tickets, ink stamps, suitcases, paper money, food serving trays, cameras, passports, mechanic's tools, maps, and travel brochures are a few ideas. To introduce the center, briefly describe jobs associated with transportation, such as taxi driver, bus driver, ticket salesperson, train conductor, boat captain, and flight attendant. Allow children to explore the props and pretend that they are travelers or workers in the travel industry.



Part 1 The Wheels Go 'Round

To introduce Wheels and Wings, remind children that they are members of the InvestiGator Club. Explain that investigators are good listeners and explorers and like to learn new things just like Dilly and her friends. Then tell children: We are going to investigate vehicles on wheels like cars, trucks, vans, and buses that take us to places we want to go. We will take an imaginary road trip, learn map skills, ride along on a fire truck, experiment with wheels, and much more.

Opening Circle Time

Spanish Vocabulary



Oral Language: On the Road

Objectives

- Listen to and understand conversations.
- Understand complex and varied vocabulary.

Tell children that the InvestiGators are always eager to take a road trip somewhere. Say: **The bus is the easiest way to get around City Square.** Point out to children that roads, streets, and highways where they live are always busy with traffic too. Cars, vans, trucks, and buses carry people and things from place to place. Ask children to think of their favorite places to go. Then invite them to take turns describing how to get to their favorite places as you ask questions such as these:

- How do you get to your favorite place?
- How many streets do you travel to get there?
- What do you see along the way?



Phonological Awareness

Rhyme and Ride

Objective

Recognize rhymes.

Materials

- toy passenger vehicle
- figurines of people or animals

Tell children that words such as *truck/duck*, *wheel/peel*, and *drive/hive* rhyme. Have them say the pairs several times to listen for the rhyming sounds.

Set out a toy passenger vehicle and toy figures to serve as passengers. Say pairs of words, having children repeat them after you. For each pair that rhymes, have a child put a passenger in the vehicle. When the vehicle is full of passengers, drive them to their destination. Begin with these word pairs:

go/slow hood/wood trunk/seat road/load ride/wide



Alphabet Knowledge

Management

If children name the same letter, they can share the card and work as a team to find more than one example of the letter in print.

Favorite Letter

Objectives

- Know that letters of the alphabet are a special category of visual graphics.
- Match and sort letters.

Materials

• index cards or Dilly's Alphabet Cards

In advance, write each letter of the alphabet on an index card, or use **Dilly's Alphabet Cards.** Tell each child to think of his or her favorite letter of the alphabet. Then invite children to tell about their favorite letters. If children have trouble deciding on their favorite letters, suggest that the first letter in their name or the name of a friend might be a good choice. Give each child an **Alphabet Card** that matches the one he or she named. After each child has received a card, tell him or her to look for that letter in various places around the room. Suggest that children look at labels, in books, and other printed materials.

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Spanish Vocabulary



calle

For 3-year-olds

Make a simple map of the school and label your classroom, bathrooms, cafeteria, playground, and other important places. With the classroom as the starting point, help children trace routes to various places on the map.

Social Studies: My Spot on the Map

Objectives

- Understand different functions of printed forms.
- Identify common features of the local landscape.

Materials

- map of your community
- magazines or paper and crayons
- scissors
- tape

Remind children that JT loves to travel. He has been to many places and likes to bring back a souvenir of each place he has visited. Tell children that JT always gets a map when he visits a new place. Explain that visitors to your community need a map. Display a map of your community.

- Tell children: A map shows where places are. Maps show how you can get from one place to another.
- Explain what the lines and symbols on the map represent. Call attention to the names of places and streets and point out geographical features, such as lakes, rivers, bridges, or forests.
- Show children where the school is located on the map. Have each child choose a destination in the community, such as the library or a favorite park. Then demonstrate how to use a finger to trace a route from school to that place.
- Then have each child draw and cut out a small vehicle or cut one from a magazine. Help each child tape a vehicle to the map to show the place he or she would like to go.



Whole Group

Spanish Vocabulary

sign cartel

For 3-year-olds

To help younger children better understand that signs carry meaning, read a sign in the book and pantomime an associated action, such as walk and don't walk.

Whole Group

Spanish Vocabulary

most
 mayor cantidad
some
 algunos
more
 más
fewer
 menor cantidad

Assessment



Note which children do not understand concept words such as *most, some, more,* and *fewer.* Plan to spend time with them to teach these concept words.

Literacy: Read a Book About Signs

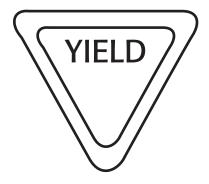
Objectives

- Show interest in reading-related activities.
- Understand different functions of printed forms

Materials

a book about signs

Read a book about signs, such as *I Read Signs* by Tana Hoban or *City Signs* by Zoran Milich. Track the print as you read the title and author's name aloud. As you read the book, discuss the signs in each photograph. Talk about each sign's meaning and where it might be found. Ask questions, such as: **How many words are on this sign? What should you do if you see this sign?** Encourage children to look for signs when they are traveling to and from school or around their neighborhood.





Math: Getting to School

Objectives

- Use numbers and counting to solve problems and determine quantity.
- Use real and pictorial graphs.

Materials

- toy vehicles or pictures of vehicles
- transportation stickers
- chart paper

Display toy vehicles: car, bus, truck, and van, or show pictures of each. Say: Dilly and her friends walk to school. Some of you may walk too. Or, you may ride in a vehicle such as a car, bus, truck, or van. How do you get to school?

- Make a chart that lists the different modes of transportation children mention. Read the words and have children repeat.
- Give each child a sticker (transportation stickers, if available). Ask each child: How do you get to school? Then have the child place the sticker on the chart under the word that names the mode of transportation.
- Count together the number of children who travel each way. Write the number on the chart. Ask questions, such as: How do most of you travel to school? Are there fewer car riders than bus riders?

Closing Circle Time

Spanish Vocabulary

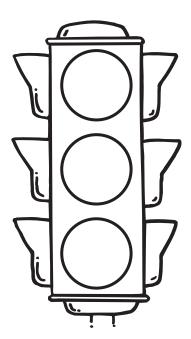
traffic light
semáforo
green
verde
yellow
amarillo
red
rojo
go
adelante
slow
despacio

stop

pare

Differentiation

Inclusion A child who is not able to race can be the traffic light.



Gross Motor Skills: Red Light, Green Light

Objectives

- Understand and follow directions.
- Show proficiency, control, and balance when moving.

Materials

- chart paper
- red, yellow, and green construction paper
- crayons or markers

On chart paper, draw a traffic light: a rectangle with three circles in the middle. Color the top circle red, the middle circle yellow, and the bottom circle green. Talk about the meaning of traffic light colors. Use the following rhyme to teach this:

What does a traffic light say to you?

Does it tell you what to do?

Green tells you that you may go.

Yellow says be careful, go slow.

Red is the light that's at the top.

When you see red, you must stop!

Play a version of the classic game "Red Light, Green Light." Use three large circles cut from red, yellow, and green construction paper. One child is the "traffic light" and holds the three circles. Have children get in their imaginary cars, buckle up their seatbelts, and line up along one side of the playing field. When the traffic light shows green, the drivers race their cars across the field toward the opposite side. When the traffic light wants drivers to slow down and then stop, the yellow circle is held up to give a warning. Then the red one goes up. If any car continues to move, that driver must go back to the starting line. Once all the cars have reached the opposite side, the game is over.



Daily Check Up

While you present each lesson, note the following:

- Opening Circle Time: Can children answer questions about their favorite place and communicate their ideas effectively?
- Phonological Awareness: Can children recognize rhyming words?
- **Alphabet Knowledge:** Can children match letters to an example in their environment?
- **Small Group:** Do children understand that the map represents features in their community?
- Whole Group 1: Do children understand the purpose of signs?
- **Whole Group 2:** Do children understand the concepts of *most, some, fewer,* and *more*?
- **Closing Circle Time:** Are children able to follow directions and control their movements?

Record your observations as anecdotal notes.

Day 1 16

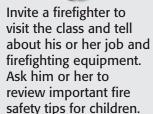
photo ©Stockdisc

Opening Circle Time

Spanish Vocabulary

firefighter bombero





Social Studies/Oral Language: Firefighters' Song

Objectives

- Listen to and understand songs.
- Describe people's jobs.

Sing the following song to the tune of "She'll Be Comin' 'Round the Mountain." Tell children to listen closely to the song and guess whom the song is about.

They'll be riding in a big red truck when they come.

They'll be riding in a big red truck when they come.

They'll be riding in a big red truck,

They'll be riding in a big red truck,

They'll be riding in a big red truck when they come.

Continue with these lyrics.

They'll be bringing a hose and ladder when they come . . .

They'll be sounding a loud siren when they come . . .

They will put out the fire when they come . . .

Ask: **In the song, who is coming?** (firefighters) Have children share what they know about a firefighter's job. Then sing the song again together.



Phonological Awareness

Differentiation

Advanced Invite children to add words to a sentence and count the number of words. For example: The fire alarm is very loud when it rings. (9)

How Many Words?

Objectives

- Discriminate and identify sounds in spoken language.
- Show awareness of separation of word sounds.

Say this short sentence: **Fire is hot.** Say it again, and clap once as you say each word. Repeat the sentence several times, encouraging children to clap the words. Repeat with these sentences:

Fire trucks are red.

The fire alarm rings.

Do not play with matches.

Fire is dangerous.

Alphabet Knowledge

Differentiation

Kinesthetic Place soap foam on a tray and allow children to practice writing the letters *F* and *f* with their fingers.

F Is for Firefighter

Objectives

- Know that letters of the alphabet are a special category of visual graphics.
- Notice beginning letters in familiar words.

Materials

chart paper

Write the letters *F* and *f*. Remind children that the word *fork* starts with a small *f*. Write the letters again slowly to show how *F* and *f* are formed. Have children practice writing the letters in the air. Say: *Firefighter* is another word that starts with *f*. Write the following sentence on chart paper: *On Friday, firefighters fought forest fires*. Read the sentence aloud as you track the print. Have children repeat. Guide children to identify each *F* and *f* in the written sentence.

Small Group

Spanish Vocabulary

pattern patrón

For 3-year-olds

If younger children have trouble extending the pattern, reduce the number of variables or focus only on colors.

Math: Traffic Patterns

Objective

 Recognize, duplicate, and extend patterns.

Materials

toy vehicles

Tell children: Manny Salamander and Rosalita Sausalita like to watch the traffic go by from their apartment windows. City Square is a very busy place. There goes a car, then a truck, then a bus. Now three cars and a van go by. The traffic patterns keep changing.

Talk about patterns using vehicles. Line up vehicles to form a pattern: car-truck-car-truck-car. Have children tell what comes next. (truck) Then repeat with this pattern: car-car-fire truck-car-car. (fire truck) You can also show a color pattern: red car-red car-black car-red car-red car. (black car) Continue with other patterns for children to finish. Have children work in pairs. One child lines up vehicles to form a pattern. Then the other child duplicates the pattern.



Whole Group

Spanish Vocabulary

firefighter
bombero
fire truck
camión de
bomberos

siren sirena hose manau

manguera ladder escalera helmet

casco

Literacy: Read a Book About Firefighters

Objectives

- Listen to and understand stories.
- Understand that illustrations carry meaning.
- Understand roles, responsibilities, and services of community workers.

Materials

a book about firefighters

Read a book about firefighters, such as *Firefighters A to Z* by Chris Demarest, *Big Frank's Fire Truck* by Leslie McGuire, or *Tito, the Firefighter* by Tim Hoppey. Pause to allow children to view one page at a time, going from left to right. Have them look at the illustrations and talk about them. Point out important details on each page.

After reading, talk about the gear firefighters use—jacket, helmet, boots, gloves, air pack, face mask—and what's special about a fire truck—its hose, ladder, lights, and siren.

Spanish Vocabulary

move mover dance bailar

Transition Time



To transition children from this activity to the next, have the "firefighters" pretend to pack up their gear, hop on the truck, and ride along with you back to the station.

Music and Movement: Sound the Fire Alarm

Objectives

- Listen to and understand songs.
- Participate in various musical activities.

Sit where each child will have space to stretch out. Teach children the song to the tune of "Frére Jacques." Ask them how they might show each action. Encourage children to move and dance to the song as you sing together.

Sound the fire alarm.

Get your gear on.

Climb in the truck.

Climb in the truck.

Hurry to the fire.

Hurry to the fire.

Ding, ding, ding, ding, ding,

Reach the fire.

Climb the ladder.

To the top. To the top.

Hurry to the fire.

Hurry to the fire.

Help is here. Help is here.

Turn the hose on.

Squirt the water.

Put it out. Put it out.

Fire is all out now.

Everyone is safe now.

Ding, ding, ding, ding, ding,

Day 2 20

Closing Circle Time

Safety/Shared Writing: Safety List

Spanish Vocabulary

• Engage in written exploration.

Objectives

Materials

rv T

Engage in written exploration.
 Follow basic health and safety rules.

chart paper

safety list

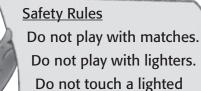
lista de seguridad
fire

fuego
dangerous
peligroso

Remind children about fire safety and the importance of not playing with matches or lighters, not touching a lighted candle, and not playing with electrical cords. Tell children that you will write down some safety rules to help remember them. Ask children to help you with the list. Make a list on chart paper as children dictate. Pause to have children describe how to write familiar letters. For example, say: I want to write the word Safety. Safety begins with an S. Who can show me how to write the letter S? Once the list is complete, have children choral read it with you as you track the print.

ELL

For English learners, reinforce the meaning of each safety rule by drawing a related picture next to each item on the list.



candle.

Do not play near electrical cords.

Investi Gator



Daily Check Up

While you present each lesson, note the following:

- **Opening Circle Time:** Are children able to understand the song?
- **Phonological Awareness:** Can children segment spoken words?
- Alphabet Knowledge: Can children recognize Ff?
- Small Group: Can children extend patterns?
- Whole Group 1: Do children understand the role of a firefighter?
- Whole Group 2: Do children's movements relate to the song?
- Closing Circle Time: Do children understand important safety rules?

Record your observations as anecdotal notes.

