Chapter 5: Sample Learning Strategies Lessons

This chapter contains sample lessons for a variety of tasks in the content areas. We hope that you will find them useful as examples of how to integrate learning strategies into your existing curriculum. They are written for a specific target language, but each can be adapted to suit almost any language.

The lessons follow the CALLA framework outlined in Chapter Three. Their procedures outline what the teacher and students do to work through the five phases of the framework: prepare, present, practice, evaluate, and expand in each sample lesson. In theory, they present a clean sequence; in practice, teachers use the phases recursively during a single lesson. They revisit each phase of the CALLA model several times.

All of the lessons identify their grade level, content area, and content strategy as well as their language, content, and learning strategies objectives. Many include both a new and a review strategy appropriate for the grade level in order to illustrate how you can integrate more than one strategy at once. These lessons provide examples of how strategies may be recycled and transferred to different subject areas and tasks. It is assumed that students have been explicitly taught strategies and had at least several opportunities to use them with different learning tasks before the strategies become review. All strategies in the lessons were chosen based on scope and sequence.

When possible, worksheets, self-assessment forms, and other supplementary materials unique to the lessons are provided. Otherwise, the materials are clearly described so that teachers can recreate them. The lessons are meant to be examples that show teachers how to make learning strategies instruction explicit for their students. While reading them, teachers should focus on how the strategy matches the language and content objectives. Teachers may also think about how they could adapt the lessons for their own purposes.

The majority are authentic lessons that have been used in immersion classrooms. Teachers from the Fairfax County Public School System developed many of the lessons in this chapter with ideas based on the county’s current elementary immersion curriculum. We would like to thank Fairfax County Public Schools as well as the teachers and translators who generously contributed their time, skills, and lessons to this project.
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Classification of Objects

**Level:** First Grade  
**Content Area:** Math

**Content Objective:** Students will count and sort by color.

**Language:** French

**Language Objective:** Students will use the names of colors and numbers.

**New Strategy:** *Group / Classify (Groupez / Classifiez)*

**Strategy Rationale:** *Group / Classify* helps us put things in order so that we can learn and remember them.

**Strategy Objective:** Students will group objects by color.

**Materials:** Journals, markers or crayons, paper, manipulatives

**Vocabulary:**

<table>
<thead>
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<th>English</th>
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<tr>
<td>le type</td>
<td>type</td>
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<tr>
<td>le genre</td>
<td>kind, type</td>
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<tr>
<td>classifier</td>
<td>classify</td>
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<tr>
<td>grouper</td>
<td>group</td>
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<tr>
<td>le groupe</td>
<td>the group</td>
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<tr>
<td>rouge</td>
<td>red</td>
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<tr>
<td>bleu(e)</td>
<td>blue</td>
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<tr>
<td>vert(e)</td>
<td>green</td>
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<tr>
<td>jaune</td>
<td>yellow</td>
</tr>
<tr>
<td>violet(te)</td>
<td>purple</td>
</tr>
<tr>
<td>orange</td>
<td>orange</td>
</tr>
<tr>
<td>noir(e)</td>
<td>black</td>
</tr>
<tr>
<td>brun(e)</td>
<td>brown</td>
</tr>
</tbody>
</table>

**Language Structures:**

- *Combien d’ours jaunes as-tu?*  
  How many yellow bears do you have?

- *J’ai ___ ours jaunes dans un groupe.*  
  I have ____yellow bears in a group.

**Procedures**

**Preparation:**

1. Tell the students that you are going to do an activity with groups. Have the students divide themselves by gender: Ask the boys to go to one side of the room and girls to go to the other. Pause and let students do this.

2. Tell students that now you want them to make groups by the colors that they are wearing. Ask them to move to different parts of the room according to what color shoes they are
wearing (if students have multi colored shoes, have them choose a color from the shoes and join that group).

3. Ask students how else they could group themselves. Have students choose one or two more attributes and group themselves.

4. Ask students questions to check the concept, using the target vocabulary. Make sure each group answers "yes" to some questions and "no" to others.


Are you in that group because you have the same color hair? pants? shirts? Do the people in your group have yellow shirts? No. Do you have white shirts? No. Do you have blue shirts? Yes.

Presentation:
1. Introduce the strategy Group / Classify to students. Tell students: Aujourd’hui nous allons grouper ensemble les choses qui sont de la même couleur. (Today we are going to make groups of things of the same color.)

Groupez / Classifiez est un autre terme pour décrire l’acte de mettre ensemble des choses qui se ressemblent ou partagent les mêmes caractéristiques. Si vous faites ceci, vous trouverez plus facile de vous souvenir de nouvelles idées. Par exemple, si je vous groupe par la première lettre de vos prénoms, je me souviendrai de vos prénoms plus facilement.

Group / Classify is another word for putting things together that are like each other. Doing this will help you remember new ideas. For example, if I put you into groups by the first letter in your names, I can remember your names better.

2. Model the strategy: Grab a handful of counting bears (or other manipulative of varying colors). Put the bears into groups by color.

Think aloud. Say, for example: Voyons, Je vais faire un tas d’ours jaunes, un tas d’ours bleus et un tas d’ours rouges. Cet ours sera dans le groupe de jaunes… (Let’s see, I will make one pile of yellow bears, one of blue bears, and one of red bears. This bear goes in the yellow group…)

3. With students' help, count the number of bears of each color and tell a story: J’ai __ ours jaunes dans un groupe. J’ai __ ours bleus dans un groupe. (I have ___ yellow bears in a group. I have ____ blue bears in a group.)
Practice 1:
If necessary, engage in extra practice of vocabulary.

Practice 2:
1. Review concept with the class: *Aujourd’hui nous groupons les ours selon leur couleur.*
   *(Today we are grouping bears by color).* Give each student a handful of bears. Working
   individually, students group bears by color.

2. Students record the number of bears they have in each group on their worksheet by drawing
   the number of bears and writing the correct number.

Evaluation:
1. Monitor students while practicing the strategy Group / Classify. Evaluate students’ counting
   and sorting skills.

2. Monitor pair activity to evaluate students’ ability to ask and answer questions about the
   groups.

3. Provide a set of cards or pictures with different fruits (or other type of manipulative). Divide
   the fruits by color and ask if you are grouping. Divide the pictures randomly and ask the
   students if you are grouping similar things.

4. Ask students to raise their hands if they think Group / Classify will help them remember
   things. Have students raise their hands if they think they will use Group / Classify again.

Expansion:
1. Ask students if they could group other things. Provide other manipulatives or pictures.
   M&M candies are a favorite manipulative to group by color. Put students in pairs or small
   groups and have them group items by attributes. If they have difficulties finding similarities,
   suggest color, shape, type, flavor, texture or first letter of the word.

2. Ask students to find examples of things at home or outside that can be grouped together.
   Have students record their groups by drawing pictures of items, counting and recording the
   number in each group, and, when possible, writing the names of items in French.

3. Tell students that they can use grouping in math, but also in other subjects such as science
   and geography.

*This lesson was adapted from the original written by a Fairfax County Public Schools teacher. Translated by Alisa Belanger.*
Characteristics of Shapes

Level: First Grade

Content Area: Science

Content Objective: Students will identify different shapes and the number of sides and corners they have.

Language: Spanish

Language Objective: Students will ask and answer questions about the shapes.

New Strategy: Cooperate (Cooperación)

Strategy Rationale: Cooperate helps students complete certain learning tasks better. Sharing knowledge about a task with a classmate and working together to complete a task provides different perspectives and increases knowledge; it therefore increases success with the task.

Strategy Objective: Students will work together to identify shapes and to practice target language structures and vocabulary.

Materials: plastic shapes, student copies of pictures with many common objects that contain the shapes listed below, student copies of pictures of the shapes, poster with pictures and names of shapes.

Vocabulary: Language Structures:
el cuadrado square Third person singular of tener (to have).
el triángulo triangle The indefinite article un (a).
el rectángulo rectangle ¿Qué forma es? (What form is it?)
el círculo circle Un ___ tiene ___ lados. (A ___ has ___ sides.)
el rombo rombus Un ___ tiene ___ esquinas. (A ___ has ___ corners.)
el óvalo oval Un ___ no tiene ni lados ni esquinas. (A ___ has no sides or corners.)
lados sides
esquinas corners

Procedures
Preparation 1:
1. Show students a picture or drawing of two children on a seesaw. Ask the students what would happen if one of the two children had to leave and only one child were left. Elicit from students that two children are needed to play on a seesaw and that they must help each other in order to make the seesaw work.
2. Ask the students to think about other times when they needed someone else in order to do something. Conclude by stating that just as there are many ways we can play together on the playground and many ways to help each other at home, there are many ways we can work together and help each other at school.

**Presentation 1:**

1. Using plastic shapes of a circle and rectangle, ask students if they remember the names of these shapes. Elicit “un círculo” (circle) and “un rectángulo” (rectangle). Identify for students one or two examples of classroom objects, furniture or materials, etc. that are shaped like a circle or a rectangle. Point out these objects to children, by saying, for example, "Ah, la ventana es un rectángulo" (Ah, the window is a rectangle) etc.

2. Next give students copies of pictures that have many different examples of objects that are circles and rectangles. Ask students to identify by name some of the objects they see in the picture. Point out that some of the objects are shaped like circles and others like rectangles. Then explain that you want them to find as many rectangles as possible in the picture. Ask them to underline with a red crayon these examples of rectangles. Give them three minutes to identify all the rectangles they see in the picture by themselves.

3. Ask one student to give his or her examples of rectangles and to either name the object or point to it in the picture. Write the total number of objects on the board. Then ask another student to do the same thing. Point out instances when the second student comes up with a different example than the first student, and keep track of these additional examples on the board. Write the number of objects the second student found that were different from those the first student found. Point out that by putting together the number of objects the first and second students identified, this number is more than either the first student or second student identified on his/her own.

4. Explain the strategy to students:

   *When we work together to help each other do something, like finding as many rectangles in the picture as possible, we are using a learning strategy called **Cooperate or Working Together**. We use Cooperate when we know that two or three people can do something better than one person working alone.*

5. Remind them of all the examples they gave about when they need someone else to help them do something. Explain that these are all examples of **Cooperate**.

**Practice 1:**

Tell students that they are going to practice using **Cooperate**. Explain that they will work with a partner to identify as many objects as possible in the picture that are circles. This time students should circle the examples of circles with a blue crayon. Give partners 3 minutes to find as many examples as possible. Praise students who are cooperating well with each other.
end of 3 minutes ask several pairs to tally and identify their examples and to report these to the class. Again, remind students of the importance of using Cooperate to help each other complete tasks.

Presentation 2:
Next point to a different shape, such as a square, and ask the students to identify it in Spanish (“un cuadrado”). Next ask students to describe the shape. Guide the students into identifying that a square, for example, has four sides (lados) and four corners (esquinas) and that they can answer “Un cuadrado tiene cuatro lados y cuatro esquinas.” (A square has four sides and four corners.) Follow these same steps for the other shapes.

Practice 2:
1. Explain to students that they are again going to use the strategy Cooperate to help each other practice asking and answering questions about the shapes. Model how the pair work will proceed by asking two students to come to the front of the class. Give one student a set of pictures with the shapes on them. Guide that student into asking the questions, “¿Qué forma es?” Guide the other student into responding using the names of the shapes and the response “Es un ____. Un ____ tiene ___ lados.” or “Un ____ no tiene lados.” (i.e., the circle and the oval).

2. Put students into pairs, giving one student in each pair the set of pictures. After a short time, have the students exchange roles so that all students have the opportunity to both ask and answer questions.

Evaluation:
1. Evaluate students’ understanding of the strategy Cooperate by giving students some examples and non-examples of Cooperate. You may wish to use some of the examples students provided during the preparation phase of the lesson. Ask students to raise their hands when they think the strategy Cooperate is being used.

2. Evaluate students’ ability to identify the shapes by giving them the names of various shapes and having them draw the shapes you name on a piece of paper. You can also ask them to draw the shape by listening to a description of it. For example: “This shape has four sides and four corners.” Students could draw either a rectangle or a square in response to this description.
Expansion:
Ask students to find as many examples as possible of the shapes at home. Give them some items to check out (e.g., the dining room or kitchen table, their bed, the television set, etc.). Tell them they may use the strategy of *Cooperate* to ask a parent or older sibling to help them identify common household items that are circles, rectangles, squares, etc. Explain that the next day they will be asked to tell about the items they found at home and the shapes of these items.

*This lesson was adapted from the Spanish original created by Christine Pegorraro, Elementary Immersion Teacher, Fairfax County, VA. Translated by Aristides Diaz.*
Clothing and Weather

Level: First Grade

Content Area: Language Arts

Content Objective: Students will identify weather conditions and the different seasons based on clues in pictures in order to make inferences to improve reading comprehension.

Language: Spanish

Language Objective: Students will use weather, season, and clothing vocabulary.

New Strategy: Make Inferences (Inferir que)
Review Strategy: Use Real Objects / Role Play (Improvisar)

Strategy Rationale: Make Inferences helps us make guesses based on contextual clues using previous knowledge.

Strategy Objective: Students will use pictures and prior knowledge of weather and seasons to Make Inferences about the story.

Materials: El Ratón de Colores, selection from “Quieres que te cuente?”, by Alma Flor Ada, or Froggy Se Viste (Froggy gets Dressed), by Jonathan London and Frank Remkiewicz, outdoor dress up clothes, manipulatives or posters of children dressed in various types of clothing, paper, and crayons or markers.

Vocabulary:
inferir que  infer that
poner se  putting on
usando  wearing
tengo puesto  I am wearing/I have put on
quitar  take off
preparar  prepare

Review of weather, season, and clothing vocabulary.

Procedures
Preparation 1:
1. Ask the students to tell you about the weather today. Ask them to describe the weather in the summertime, the wintertime, etc.

2. Explain that sometimes we understand things in a story because of what we know already. Show the students a picture from the story Él Ratón de Colores and ask them: ¿Para qué tipo de clima se está preparando Él Ratón? (What kind of weather is the mouse preparing for?) Write their responses on the board.
Presentation 1:
1. Read the book *Él Ratón de Colores* or *Froggy Se Viste* to students. The premise of both books is that Mouse is putting on different articles of clothing to prepare for the weather outside.

2. Ask students again: ¿Para qué tipo de clima se está preparando Él Ratón? (What kind of weather is Mouse preparing for?) Ask students if they were right before, when they guessed what weather Mouse was preparing for by looking at the picture.

3. Tell students that they are learning to guess what a story is about using a picture and information that they already know.

   *Using the pictures to guess what a story is about is a strategy called Make Inferences. In Spanish, we can call it Inferir que. Using this strategy can help you understand a story that you are reading or listening to in Spanish.*

4. Model the strategy by thinking aloud. Say, for example, “I can see Matthew rubbing his eyes today. I guess that he is tired. Or say, “In this picture the girl has an umbrella. I think it is raining.”

Practice 1:
1. Have the children dress up and act out / retell the story. Remind them that acting out a story helps them to understand and remember the story better. Encourage use of review vocabulary and target language structures.

2. Show picture cue cards that depict different children modeling several different types of clothing. Ask them which picture would be appropriate for them or any friend of Mouse accompanying him on his walk.

3. Have the students draw an animal friend to go with Mouse. Have them draw the appropriate clothing for the animals’ walk. Have them describe the articles of clothing in their pictures.

Preparation 2:
1. Ask students what season it is now. Ask them to name the four seasons.

2. Ask them what month it is now. Ask them to name some of the months in a year. For example, ¿Cuál es el mes de tu cumpleaños? (What is the month of your birthday?)
Presentation 2:
1. Reintroduce the strategy:

   You can use what you know about weather and seasons to figure out what month of
   the year the story takes place in even though the book does not say. This is another
   way to use the strategy Inferir que.

2. Show the students the picture again, and have them guess which season and month it
   might be. Ask them how they know. Remind students that they are using the strategy
   Make Inferences.

Practice 2:
1. Show pictures of children dressed for various weather conditions. Have the students
   guess what season and month it is.

2. Remind them that they are using the picture to help them understand.

Evaluation:
1. Ask students to raise their hands if they guessed what kind of weather Mouse was
   preparing for. Ask them to raise their hands if they guessed what season the children
   in the pictures were dressed for.

2. Ask the students to raise their hands if making guesses before reading a story helps
   them understand it more easily. Ask them if they are going to make guesses about
   other stories from pictures.

3. Students retell the story using pictures and short sentences.

Expansion:
1. Make Inferences to talk about the temperature. Using the same pictures, have the
   children guess if it is cold, cool, warm or hot outside.

2. Tell students that Make Inferences is also a helpful strategy to use while reading.
   Have students make guesses from cover pictures about stories they are going to read.

This lesson was adapted from the original created by Christine Pegorraro, Elementary Immersion Teacher,
Fairfax County, VA. Translated by Aristides Diaz.
Telling Time by the Hour

Level: First Grade

Content Area: Math

Content Objective: Students will tell time to the hour.

Language: Spanish

New Strategy: Use Real Objects / Role Play (Improvisar)
Review Strategy: Use Selective Attention (Prestar Atención Enfocada)

Strategy Rationale: Use Real Objects / Role Play helps students understand and remember important information. Use Selective Attention helps students focus on important information.

Strategy Objective: Students use Use Real Objects by moving hands on the clock to help them learn to tell time. Students use Use Selective Attention by paying specific attention to the hour hand to help them learn to tell time.

Materials: floor clock; sentence strips: ¿Qué hora es?, Es la una en punto, Son las ___ en punto. (What time is it? It is exactly __________.); book: Rene El Reloj; samples of different types of clocks.

Vocabulary:        Language Structure:
reloj de pared    clock       ¿Qué hora es?       What time is it?
agujas o manecillas hands     Es la una en punto.     It is exactly one o’clock.
el horario        hour hand   Son las ___ en punto.   It is exactly ___ o’clock.
el minuterio      minute hand
carátula         face
reloj de pulcera  wrist watch
de/ por la mañana in the morning/a.m.
de / por la tarde in the afternoon/p.m.
de / por la noche at night/p.m.
reloj digital    digital clock

Procedures

Preparation:
1. Have children sit in a circle and display different kinds of clocks. Ask students: ¿Qué ves? ¿Se parecen o se diferencian? ¿Para qué se usa un reloj de pared? ¿Por qué son importantes los relojes? What do you see? Are they alike or different? What do we use a clock for? Why are clocks important?

2. Read a story about clocks, such as Rene El Reloj. Discuss the book.
3. Elicit from the students some examples of what they do at different times during the day:

<table>
<thead>
<tr>
<th>Write/Say:</th>
<th>Student example:</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 am</td>
<td>Desayuno. I eat breakfast</td>
</tr>
<tr>
<td>8:00 am</td>
<td>Voy a la escuela. I go to school</td>
</tr>
<tr>
<td>12:00 pm</td>
<td>Almuerzo. I eat lunch</td>
</tr>
<tr>
<td>3:00 pm</td>
<td>Voy a casa. I go home</td>
</tr>
</tbody>
</table>

4. After this exercise, ask again why clocks are important. Elicit from students that clocks are important to help us know what time it is and when to do certain things.

5. Ask students to look at the strategy posters around the room. Ask them what strategies they could use to help them learn to tell time and report time in Spanish. Write their ideas on the board.

Presentation 1:
1. Guide students to place large numbers on the floor to make the clock: Encourage them to use the sample clocks to place numbers correctly—12 opposite 6, 9 opposite 3, etc.

2. Introduce the two hands of the clock and their names. Hay dos manecillas: El horario y el minutero (There are two hands: the hour hand and the minute hand). Put the hands in place to read 3:00, for example, and model telling time. Say: Son las tres en punto (It is three o’clock). Continue giving examples until all students begin to participate. Display model language on the board or on sentence strips.

3. As you give examples, talk aloud to explain where the hands are and then read the time. Ask students what they notice about the hands—encourage students to observe that the minute hand in each example was always on the 12. The hour hand changed each time to indicate a new time. Give a few more examples to illustrate the point. Have students tell you where the hour and minute hand are each time. Encourage students to use their new vocabulary words, such as hour hand and minute hand.

4. Ask students what strategy that they are using by paying attention to the hour hand. Elicit the strategy Use Selective Attention. Refer students to the strategy poster for Use Selective Attention and remind them that Use Selective Attention means focusing on what is important or interesting to help them learn. Ask students to remember other times that they used Use Selective Attention. Model the strategy:

   Put the hands on the clock to represent three o’clock and say, Yo sé que tengo que fijarme en las manecillas del reloj para saber qué hora es. Las manecillas apuntan a las tres, así que, debe ser las tres. (I know that I need to focus on the hour hand to tell me what time it is. The hour hand is on the three, so it must be three o’clock.)

Practice 1:
1. Students use Use Selective Attention to focus on the hour hand—the one that will tell them the time. Ask students: ¿Qué hora es? Students take turns answering: Son las ___ en punto. Students can refer to the model on the chalkboard.
2. Remind students to *Use Selective Attention* and focus on the hour hand.

**Preparation 2:**
Ask students to recall some occasions when they used objects or acted out ideas to learn. Ask them how they could do this to learn to tell time. Put their ideas on the board.

**Presentation 2:**
1. Tell students that you want to share another strategy with them that will help them learn to tell time.

   Say, for example, *I know another strategy that will help us. It is called Use Real Objects. Use Real Objects means use your hands or body to act out a new idea. It is a good strategy to help you remember new things.*

2. Tell students that they have been using this strategy already today every time they moved the hands on the clock to read the correct time.

3. Model the strategy: Show a time on the analog clock, for example 1:00. Place the hands on the floor clock to match the hour.

   Say, *Moving the hands on the clock to the correct time is an example of the strategy Use Real Objects. Manipulating the hands on the clock helps us learn more easily.*

**Practice 2:**
1. Show different time on the analog clock. Students take turns placing the hands on the floor clock to match the hour. Have students explain why they placed the hands on the clock the way they did. Have the students ask: *¿Qué hora es? (What time is it?)*. Another student responds with the correct time. Repeat until all students have had a chance. Students refer to model language if necessary.

2. Students continue to practice in pairs with small clocks. Students ask each other what time it is and respond with the correct time.

**Evaluation:**
1. To evaluate students’ ability to tell time to the hour, write a variety of times on the board and have students draw the correct hand position. Then, show different times on the clock and have students write the time.

2. To evaluate their use of the strategies, ask students to name the two strategies they used today: *Use Selective Attention* and *Use Real Objects*. Discuss the use of both strategies. Have students complete a simple questionnaire to evaluate their strategy use.

**Expansion:**
1. Expand use of *Use Selective Attention* to listening skills: say a time aloud to students without showing it on the clock and have students draw the clock. Students *Use Selective Attention* to focus on the number that you say.

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2. Expand *Use Real Objects* by having students physically represent different times with their bodies. One student represents the hour hand and another represents the minute hand.

3. Ask students to make a list of other situations where they can *Use Real Objects*. Make a poster for *Use Real Objects* and include their ideas.

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*This lesson was adapted from the original created by Evelyn Alfaro and Dione Avalos, Elementary Immersion Teachers, Fairfax County, VA. Translated by Aristides Diaz.*
# Telling Time Lesson Questionnaire

Name: __________________________  Date: ______________

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<thead>
<tr>
<th>Strategy</th>
<th>I used it</th>
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<td>Use Real Objects</td>
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<td>Use Selective Attention</td>
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The Shape of Teeth

**Level:** Second Grade  
**Content Area:** Health

**Content Objective:** Students will understand and explain the concept of form and function of animal and human teeth.

**Language:** Spanish

**Language Objective:** Students will label human and animal teeth with the appropriate names, name foods in different animal diets and classify animals according to diet.

**New Strategy:** *Make Predictions (Predecir)*

**Strategy Rationale:** *Make Predictions* helps students prepare for the task by anticipating information they may encounter based on what they already know.

**Strategy Objective:** Students will Make Predictions about the type of animal diet based on their knowledge of teeth.

**Materials:** poster of dentistry, diagram of baby and adult teeth, cards with animal pictures and names, sorting mats

**Vocabulary:**

**Animales/ Animals**  
| Spanish       | English     
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<tr>
<td>la cabra</td>
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<td>el caballo</td>
<td>horse</td>
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<td>la marmota</td>
<td>groundhog</td>
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<td>el conejo</td>
<td>rabbit</td>
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<td>el tigre</td>
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<td>el cocodrilo</td>
<td>crocodile</td>
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<td>el gato</td>
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<td>el perro</td>
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<td>el oso</td>
<td>bear</td>
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<td>el mono</td>
<td>monkey</td>
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<td>la zarigüeya</td>
<td>opossum</td>
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**Types de Dientes/ Type of Teeth**  
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<td>dientes de leche/niños</td>
<td>baby teeth</td>
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<tr>
<td>dientes permanentes/adultos</td>
<td>adult teeth</td>
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<td>incisivos</td>
<td>incisors</td>
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<tr>
<td>caninos</td>
<td>canines</td>
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<td>molares</td>
<td>molars</td>
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**Tipos de Dietas/ Types of Diets**  
<table>
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<th>Spanish</th>
<th>English</th>
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<tr>
<td>carnívoros</td>
<td>meat eaters/carnivores</td>
</tr>
<tr>
<td>herbívoros</td>
<td>plant eaters/herbivores</td>
</tr>
<tr>
<td>omnívoros</td>
<td>plant and meat eaters/omnivores</td>
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</tbody>
</table>

**Procedures**

**Preparation:**
1. Introduce the topic of teeth by activating students’ background knowledge: discuss their experiences of going to the dentist, of losing a tooth, of getting an adult tooth, and of difficulty in chewing and eating food after losing a tooth. Allow children to share experiences regarding their teeth. Write their ideas on the board. Show students the poster of elements of dentistry.
2. Show a short video or read a book about the dentist. Allow students to *Make Predictions* about what will happen before and during the video/book. Discuss it as a class.

**Presentation:**
Explain to students the three main types of teeth (incisors, canines and molars) and their function. Use your teeth or a diagram as a model. Guide students in finding different teeth in their own mouths.

**Practice 1:**
Give students a chart of baby teeth and adult teeth. Students identify and label teeth using your poster as a model.

**Preparation 2:**
Distribute to each child a set of drawings, illustrating the heads and teeth of eleven animals and one human, along with a sheet of animal names. Students name the animals aloud and then match names to animals. Ask students to pay attention to the teeth of the different animals. Ask how they are different. Focus on the shapes of the teeth. Encourage students to use the correct names for the different types of teeth.

**Presentation 2:**
1. Introduce to students the concepts of carnivores (meat eaters), herbivores (plant eaters) and omnivores (meat and plant eaters).

2. Remind students of the video or book. Remind students that they made predictions about what would happen during each scene. Tell students that they were guessing what was going to happen based on what they already know about the dentist. Tell students that they are going to use a new strategy today, called *Make Predictions* to categorize animals into carnivores, herbivores, and omnivores.

*Esta estrategia se llama Predecir. Va a divinar de acuerdo a lo que ya conoce sobre otros animales, cómo son, dónde viven, y qué comen, y sobre lo que acabamos de aprender con respeto al uso de los diferentes tipos de dientes. Esta estrategia le ayudará a aprender nueva información usando conceptos que usted ya sabe.*

*This strategy is called Make Predictions. You will make guesses based on what you know about different animals, what they look like, where they live, and what they eat and also on what we just learned about the uses of different teeth. Make Predictions helps you learn new information by using what you already know.*

**Practice 2:**
Based on what they know about the animals, and what they just learned about teeth, ask students to guess the type of diet for each animal. To complete the task, distribute to students a sorting mat with areas for carnivores, herbivores, and omnivores.
**Evaluation:**
1. Students share results with the entire class and discuss. Allow students time to self-assess their ability to *Make Predictions* and whether their predictions were correct.

2. To further assess students’ grasp of the concept, ask students to write the animal names in categories. Then, show a picture of a new animal and its teeth. Ask students to add the animal to the correct category.

**Expansion:**
For homework, have students use *Make Predictions* with another science task. For example, if the next lesson is about weather, ask students what the weather will be tomorrow based on what they know. They can check their predictions by listening to the news/weather in Spanish.

*This lesson was adapted from the original created by Pier McGrath and Rosa Pezol, Elementary Immersion Teachers, Fairfax County, VA. Translated by Aristides Diaz.*
Fantastic Frogs

Level: Second Grade

Content Area: Science

Content Objective: Students will identify the series of changes that a frog goes through in its life cycle. Students will review that frogs camouflage themselves for protection and hibernate in the winter.

Language: Spanish

Language Objective: Use sequence in narration primero, luego, después, más luego, finalmente (first, then, after, finally) to explain the life cycle of a frog.

Review Strategy: Use Background Knowledge (Activar El Conocimiento Previo)

Strategy Rationale: Use Background Knowledge helps bring to mind information you already know about a topic that will be helpful in learning new information.

Strategy Objective: Students will activate their background knowledge of life cycles to prepare to learn about the life cycle of the frog.

Materials: chart showing the life cycle of a frog, short reading that describes the frog’s life cycle and that uses sequence words such as those below, picture of the frog’s life cycle stages that are not in the correct order, scissors, glue, pencils and crayons.

Vocabulary: Language Structure:
el huevo egg
el renacuajo tadpole

Sequence in narration
primero first
luego, más luego then
finalmente finally

Procedures
Preparation:
Remind students of the strategy Use Background Knowledge that they have learned and used previously by asking them to brainstorm other times they have used this strategy. Write these other instances on the board. Remind students that this strategy is important in many different subjects because it helps us understand new information better by connecting what we already know to what is new in that subject. Explain that they are going to use the strategy Use Background Knowledge to help them learn about the life cycle of frogs.

Presentation 1:
1. Ask students to Use Background Knowledge to tell what they already know about frogs. Elicit from students that frogs usually live in or around water.
Model *Use Background Knowledge* to get them started: “Let’s see…what do I already know about frogs? Frogs jump, they can be green, they are hard to catch, they swim…”

2. Relate students’ background knowledge to the term “habitat,” and ask them: ¿Cuál es el hábitat de las ranas? (What is the habitat of frogs?) Tell them that frogs live in wetlands. Explain to students that frogs have life cycles just like crickets, butterflies, etc. Tell students that they can help themselves learn about the life cycle of a frog by using what they already know about the life cycle of the cricket, butterfly, or whatever previous life cycle they have studied.

**Practice 1:**
1. Ask students to practice using *Use Background Knowledge* to remember what they know about the life cycle of crickets, butterflies, etc. Ask students to draw a picture of the previous life cycle studied. Students should number the stages of the life cycle on their drawings.

2. Review the life cycles of the creatures chosen.

**Presentation 2:**
1. Elicit the stages of the life cycle of a frog by asking students to refer to their drawings of the other creatures. Emphasize the sequence of events by using appropriate sequence words primero, después, luego, finalmente (first, then, after, finally). Elicit from students that there is an egg and that a baby frog will have a very different form than the adult frog (there will not just be a change in size).

2. Using a chart of the life cycle of frogs, explain/read a description of the life cycle. Emphasize the sequence of events.

> Las ranas viven in lugares húmedos, charcas. Tienen pies fuertes y pueden saltar grandes distancias. Pueden nadar rápido. Las ranas tienen una lengua larga y pegajosa con la que pueden atrapar a los insectos.

> Primero, las ranas nacen de huevos gelatinosos. Luego, estos huevos se convierten en renacuajos. Después, les crecen las patas traseras. Más luego, les crecen los pies delanteras. La cola se hace más corta a medida que crecen las patas y los pulmones. Cuando la cola termina de encogerse, ya es una rana joven. Finalmente, la rana crece y se convierte en una rana adulta. El ciclo de la vida de las ranas hasta la adultez tarda aproximadamente diecisésis semanas.

> Frogs live in wet places called wetlands. They have strong legs and can jump far. They can swim quickly. Frogs have long, sticky tongues that they use to catch insects.

> First, all frogs start as eggs. Then, these eggs become tadpoles. Next, the tadpoles grow two back legs. Later, they grow two front legs. The tail shrinks while the legs grow. When the tail is done shrinking, then they are young frogs. Finally, they grow more and become adult frogs. The life cycle of a frog takes approximately sixteen weeks.
Practice 2:
Give students copies of the picture of the frog’s life cycle stages out of order. Ask them to cut apart the pictures and rearrange them in the correct order by gluing them on another blank sheet of paper. Ask students to write a sentence for each stage and to use the appropriate sequence words.

Evaluation:
1. Using a checklist, evaluate students on how well they were able to both correctly order the stages in a frog’s life cycle and how well they used the sequence words. Discuss your evaluations with students, indicating when necessary whether they need to reconsider their ordering or the sequence words they chose. Allow students time to self-correct, then check back with them again.

2. Have a short discussion with students asking them how the strategy Use Background Knowledge helped them to learn about the life cycle of frogs. Ask them if they will use this strategy again and when they might use it to help them learn new information.

3. You can have students keep a learning log of strategy use over the next several weeks (this log can contain all the strategies they have been taught, including Use Background Knowledge, listed down the left-hand side and the days of the week listed across the top). Students can keep track of their use of this strategy by making a check mark next to Use Background Knowledge each time they use it. They can also write a short sentence telling when they used the strategy.

Expansion:
After several weeks of learning log use, ask students to review their learning log and to give examples for the rest of the class of times when they used the strategy Use Background Knowledge. Make a chart for this strategy listing examples of student strategy use.

This lesson was adapted from the original created by Monica Urtecho, Elementary Immersion Teacher, Fairfax County, VA. Translated by Arstides Diaz.
Las Ranas

Primero, las ranas nacen de huevos gelatinosos. Luego, estos huevos se convierten en renacuajos. Después, les crecen las patas traseras. Más luego, les crecen las patas delanteras. La cola se hace más corta a medida que crecen las patas y los pulmones. Cuando la cola termina por encogerse ya es una rana joven. Finalmente, la rana crece y se convierte en una rana adulta. El ciclo de vida de las ranas hasta la adultez tarda aproximadamente 16 semanas.

Las ranas viven en lugares húmedos, charcas. Tienen patas fuertes y pueden saltar grandes distancias. Pueden nadar rápido. Las ranas tienen una lengua larga y pegajosa con la que pueden atrapar a los insectos.

¿Sí o No?

1. Las ranas ponen huevos.
2. Las ranas comen flores.
3. Las ranas tienen ojos grandes.
4. Los renacuajos no tienen cola.
5. Las ranas tienen una cola larga.
6. El ciclo de las ranas, de huevo a rana adulta tarda unas pocas semanas.
Colorea, corta y pega los dibujos en el lugar correcto. Después, escribe en forma ordenada el ciclo de vida de las ranas. Utiliza las palabras de abajo.

antes de más adelante finalmente más luego

rana joven huevos rana adulta renacuajo con patas delanteras
renacuajo sin patas renacuajo con patas traseras y delanteras
Worksheet courtesy of Fairfax County Public Schools
## LEARNING LOG

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Ancient Egypt

Level: Third Grade
Content Area: Social Studies

Content Objective: Students will write a brief report about life in ancient Egyptian society. Students will compare and contrast lifestyles of people in ancient Egypt with their own lifestyles.

Language: Spanish

Language Objective: Students will use target vocabulary to describe elements of a society and compare two societies.

New Strategy: Use Graphic Organizers/Take Notes (Apuntar)
Review Strategies: Use Background Knowledge, Make Predictions (Activar El Conocimiento Previo, Predecir)

Strategy rationale: Use Background Knowledge allows students to use what they already know to help complete a task. Make Predictions helps students create interest in, prepare for, and give direction for the task. Use Graphic Organizers/Take Notes helps students identify important words and concepts and retain information for future use.

Materials: supplementary Egypt materials such as pictures, music, video, web site, flash cards, books, etc, worksheet identifying categories of society, Venn diagram.

Vocabulary:
la arquitectura    architecture
el arte y el entretenimiento    art and entertainment
los comercios    commerce and trade
la agricultura    agriculture
los comestibles/la comida    food
la religión    religion
la escritura    writing
la ropa    clothing
comparar    compare
contrastar    contrast
las similitudes    similarities
las diferencias    differences
parecerse a    be similar to
diferr    differ

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Procedures
Preparation:
1. Write the word EGYPT on the front board.

2. Have students work in groups and brainstorm what they know about the ancient Egyptian civilization. If possible, provide Egyptian music and pictures of pyramids, mummies, etc, to help them generate ideas.

3. Record their comments on the board in a diagram or chart.

4. Tell students that in this lesson you are going to talk about ancient Egyptian society and our society. Have them work with a partner and make a list of the parts of a community that you may talk about in class. Give an example from the list, like commerce and trade.

Presentation 1:
1. Ask students what strategies they used to complete the brainstorming task. If they have trouble coming up with strategies, elicit the information using clues. Review importance and uses of the strategies; for example, remind students that Use Background Knowledge means thinking about what they already know about a topic. This will help them learn more information about the topic. Remind students that Make Predictions helps them prepare to hear or read new information by guessing what they might learn.

2. Introduce the new strategy:

   *You are going to learn about a new strategy today. The strategy, called Use Graphic Organizers/Take Notes, means writing important things down in an organized way, for example in an outline or diagram. Writing things down helps us organize our thoughts and remember things better.*

3. Refer back to their ideas about Egypt. Think aloud to organize the list into an outline or diagram. Explain that you just wrote key words or phrases and not entire sentences. Then, use this information to write a brief report about what the class knows about Egypt. Point out to students the importance of and purpose of having these notes in writing the report about Egypt.

4. Present a worksheet divided into the different categories of society that you want to target (these are listed above in target vocabulary). Put the list of words that the students have brainstormed into these categories. With students’ help, identify which categories need more information in them. Tell them that these are areas that they will investigate further. Tell students that this is a form of Use Graphic Organizers/Take Notes that they will practice.

5. During this activity, present target language vocabulary.
Practice 1:
1. Provide a (language level appropriate) video, history book, web site, or flash cards about Egypt. Working in pairs, have students extract information from the source to fill in the categories. Ask the students what strategy they are using.

2. Discuss the material in order to share information and verify.

3. Students use these notes to write a report about ancient Egypt. Students share finished reports with the class.

Presentation 2:
1. Explain to the students that since they have learned more about ancient Egypt, they can now compare and contrast different aspects of that culture with their own culture. To facilitate understanding of this comparison, they can use a Venn Diagram. Provide an example of this type of diagram and explain that this is another form of Use Graphic Organizers/Take Notes.

2. Choose one of the categories such as food and model how to make a Venn Diagram comparing and contrasting foods common in ancient Egypt with foods we have in our own daily diets. Then, write two or three sentences to summarize the comparisons:

   Hay algunas similitudes entre los comestibles/la comida. Por ejemplo, ambas dietas de los egipcios y los americanos incluyen la carne, el pescado, el pan, y la verdura. Los dos incluyen bebidas como el vino, la cerveza, y el agua. La diferencia es que nuestra dieta tiene bastante más comidas y bebidas.

   There are some similarities between foods. For example, both ancient Egyptian and American diets include meat, fish, bread, and vegetables. Both diets include drinks such as wine, beer, and water. The difference is that our diet has many more foods and drinks.

Practice 2:
Have students work in groups, choose one of the categories, and construct a Venn Diagram. Then have students write three sentences to summarize their diagram.

Evaluation:
1. Using a checklist, observe and evaluate students’ use of the strategy Use Graphic Organizers/Take Notes. Share general comments with the class to strengthen students’ use of this strategy.

2. Have students present their Venn Diagrams to the class. During the presentations, use concept-checking questions to assess whether students understood all elements of the lesson: ¿Cómo les han ayudado sus apuntes para organizar su presentación? ¿La comida de los egipcios ancianos es igual o diferente a nuestra comida hoy en día?
(How did your notes help you organize your presentation? Is Ancient Egyptian food the same or different from our food?)

3. Ask students to name the different types of Use Graphic Organizers/Take Notes they used. Lead an evaluation of the strategy Use Graphic Organizers/Take Notes. For example, have students raise their hands if Use Graphic Organizers/Take Notes made writing easier and more organized. Ask them to raise their hands if they will use that strategy again.

4. Post Venn diagrams and Egypt reports around the room and allow students to walk around to collect ideas and give feedback.

Expansion:
1. Ask students to brainstorm other ways they could Use Graphic Organizers/Take Notes in social studies. What about other subjects? Provide examples to help them come up with ideas. For example, students can apply Use Graphic Organizers/Take Notes in science to record observations of experiments in chart form; in language arts to write notes to share ideas, reactions, and opinions about different literature in oral presentations; and in math to extract necessary information to solve a story problem.

NOTE: This lesson would be conducted over the course of several days.
Sunny Day

Level: Third Grade

Content Area: Science

Content Objective: Students will conduct a simple scientific investigation to test a hypothesis about the light and heat that the sun emits.

Language: Russian

Language Objective: Students will be able to describe solar energy and to express directions using appropriate vocabulary and language structures.

Review Strategies: Make Predictions (Предсказывание), Organize / Plan (Организационное Планирование), Evaluate (Проверка Предсказаний)

Strategy Rationale: Make Predictions helps learners to prepare for a task by guessing its possible outcomes. Organize / Plan helps them determine and follow the steps required to accomplish a task. Evaluate allows them to evaluate their work and progress.

Strategy Objectives: Students will use Organize / Plan to devise and carry out a simple science investigation. They will use Make Predictions to formulate their hypothesis and Evaluate to make their conclusions.

Materials: one plastic bottle painted black, one plastic bottle painted white, one small black balloon, one small white balloon, aluminum cans painted black, aluminum cans painted white (one can of each color for every pair of students), water, thermometers, plastic wrap, worksheets

Vocabulary:
- тепло
- свет
- солнечный
- энергия
- поглощать
- отражать
- гипотеза
- надуваться
- промежуток
- повышаться/ увеличиваться
- понижаться/ уменьшаться
- схема

Language Structure:
- heat
- light
- solar
- energy
- absorb
- reflect
- hypothesis
- inflate
- interval
- rise/ increase
- diminish/ decrease
- chart

Procedures
Preparation:
1. On a sunny morning, invite students to describe the weather and guess how the weather will be in the afternoon. Ask them if they Made Predictions about whether it would be a sunny day and why or why not. Observe that a forecast is a type of scientific prediction, and then have them briefly discuss how they have used the learning strategy Make Predictions (Предсказывание) in science class. Tell students that today they will Make Predictions in an investigation on solar energy.

2. Ask them: Why must people learn about the sun? Why is it so important? (Why do they prefer white? Do they prefer to sit on light sidewalks or black pavement? For example, ask whether on hot, sunny days they prefer to wear black or white. Why?)

3. Activate students’ background knowledge about colors that absorb and reflect light. For example, ask whether on hot, sunny days they prefer to wear black or white. Why do they prefer white? Do they prefer to sit on light sidewalks or black pavement? Why?

4. Think-aloud:

I planned to do this activity with you today because the weather forecaster Made Predictions that it would be sunny, and this morning it checked out. That was my plan because we must conduct this investigation on a sunny day for it to work. I painted these bottles and aluminum cans. I planned ahead so they would be dry and ready to use now. Then I gathered the other materials you need and organized them all so they’ll be easy for you to find.

Ask them to name what strategy your think-aloud describes. Solicit the response Organize / Plan. Have them Make Predictions about why you prompted them to bring this strategy to mind: Организационное планирование мы также будем сегодня использовать. (We will use Organize / Plan in the investigation, too.)
Presentation 1:
1. Explain that the bottles are materials for a class investigation and they will use its results later to help them plan their own. Tightly wrap each balloon (so no air can escape) around the opening of the bottle that matches its color. Place both bottles under intense sunlight.

2. While students wait to see a change in the balloons, help them use Make Predictions to formulate a hypothesis. For example, ask them: Что происходит с поверхностью, когда она поглощает энергию? Она нагревается. Что происходит с газами, когда они нагреваются? Они расширяются. Значит, какое предсказание мы можем сделать? ... И т.д. (What happens to matter that absorbs energy? It gets warmer. What happens to gases that get warmer? They expand. And so what can we Make Predictions about...? Etc.) Students may vote to decide which students’ predictions will be the class hypothesis.

Practice 1:
1. Have students take turns touching the bottles and comparing their warmth while the black balloon gradually inflates. Students should notice that the white balloon remains flat.

2. Ask the students to suggest ways to wrap up the investigation. Emphasize the importance of checking the class hypothesis. Encourage them to think aloud as they check, and point out that Evaluate can be effective to help structure a scientific conclusion.

3. Pass out Worksheet 1. Have students use the class discussion and the predictions recorded on the board to fill it out.

Presentation 2:
Ask students to compare what they know about plastic and aluminum. Tell them: Некоторые материалы, и особенно металлы, такие как алюминий, легко поглощают и проводят тепло. Они могут очень сильно нагреваться. Для нашего эксперимента вам надо решить, как вы будете измерять повышение температуры. (Certain materials, especially metals like aluminum, absorb and conduct heat easily. They can reach very high temperatures. In your investigation, you must decide how to measure the increase in temperature.)
Practice 2:
1. Have students divide into pairs and designate one student from each pair to retrieve their materials, which should include two thermometers and two sheets of plastic wrap.

2. Illustrate that thermometers will not easily read the temperature of solid aluminum. Encourage the idea of filling the cups with water and measuring its temperature instead. Use the language structures обязан/ нужно/ должен (have to/ need/ must) to express directions as the students formulate them:

Значит, вы считаете, что мы не можем измерить температуру твердого тела с помощью термометра. Зато мы можем налить в банки воду, и измерить температуру воды. Вы правы, нам надо налить одинаковое количество воды в банки, тогда они будут нагреваться одинаково. Мы должны следить, чтобы термометры были одинаково глубоко погружены в воду.

So you’re saying we can’t measure the temperature of a solid with these thermometers. Instead, we must fill the cups with water and measure the liquid’s temperature. You’re right that we have to fill the cups with the same amount of water; the amount of energy needed to heat it has to be equal. We must be careful to submerge both thermometers equally deep in the water.

3. Model the language structures while you announce basic directions: Каждый из вас должны до конца урока. (You must each take at least three temperature readings for your group. You need to finish your investigation before the end of the class period.) Tell students to write down their individual responsibilities and directions, using the same language structures, in spaces given on Worksheet 2.

4. Ask each group to use Make Predictions to create a hypothesis about what the temperatures of the water in the cups will be over time: Which cup will have warmer water? Advise students to remember the Plastic Bottle Investigation and refer to Worksheet 1 while they formulate their hypotheses.

5. While they decide when and how many times to check the temperatures, mention how long it took to see results in the balloon investigation. Suggest they use that information to help Make Predictions (Предсказывать) and Organize/Plan (Планировать) the intervals between their temperature readings. Remind them to plan at least six measurements to ensure accuracy in their findings.

6. Require that they record a start time and calculate at what times they need to read the thermometers. Have them choose a student to conduct each reading, taking turns and recording the observer’s name and observations on the chart. Point out that these steps are all examples of Organize / Plan.
7. Have students conduct the investigation throughout the class period. Then ask students to look over their data, find the average temperature of each cup’s water, and identify trends in the temperature changes.

**Evaluation:**
1. Have students continue working in pairs to write a short summary about the plan and process they used to conduct their investigation. Tell them to think aloud as they are writing. Ask them also to use Evaluate to evaluate the accuracy of their hypothesis.

2. Match pairs of students together to form groups of four so they can compare their hypotheses, their plan, and their results.

3. Hand out a questionnaire about strategies’ use in the Aluminum Cups Investigation. Questions may include: How did the Plastic Bottle Investigation help you Make Predictions (Предсказание)? How did Organize / Plan (Организационное Планирование) help you determine your procedure? How often did you Evaluate (Проверка Предсказаний) and did it make drawing a conclusion easier? How might your investigation have been different if you hadn’t used these strategies?

**Expansion:**
1. In a social studies lesson, have students investigate ways in which people throughout the world use solar energy. Ask them to Make Predictions on the areas of the world where people rely on it most. Have them Evaluate as they research the topic and learn more about it. They can use Organize / Plan either to determine how they will conduct their research (i.e. first using a text book for general ideas and later looking up specifics online) or how they will organize a summary of what they learn.

2. Explain to students that in the 1830’s British astronomer John Herschel invented something called a solar collector that he used to cook food during an expedition to Africa. Divide students into groups of four or five to research different types of solar collectors they can make. Have them use Make Predictions, Organize / Plan, and Evaluate to conduct their own investigations on solar collectors and share the results with the class.

*This lesson was adapted from the Fairfax County Public School System curriculum by Alisa Belanger. Translated by Natalia Bessergeneva.*
Sunny Day Worksheet 1
Plastic Bottle Investigation

Name ___________________________     Date _____________________

What I know about heat: _________ colors absorb heat. _________ colors reflect heat.

Class Predictions:
1) _________________________________________________________________
2) _________________________________________________________________
3) _________________________________________________________________

Class Hypothesis:
____________________________________________________________ ______________________________
                                                                                           __________________________________

What happened to the black balloon?
____________________________________________________________ ______________________________
                                                                                           __________________________________

What happened to the white balloon?
____________________________________________________________ ______________________________
                                                                                           __________________________________

Why?____________________________________________________________________________________
                                                                                           __________________________________

Conclusion

Check Prediction: How accurate was the class hypothesis? What did I learn?
____________________________________________________________ ______________________________
                                                                                           __________________________________
                                                                                           __________________________________
                                                                                           __________________________________
# Sunny Day
## Aluminum Cup Investigation Chart

<table>
<thead>
<tr>
<th>Time</th>
<th>Water Temperature (Black Cup)</th>
<th>Water Temperature (White Cup)</th>
<th>Observer</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sunny Day Worksheet 2
Aluminum Cups Investigation

Name: ________________________________ Date: ______________

Materials: two aluminum cups

two __________________________________

two __________________________________

two __________________________________

two __________________________________

Hypothesis: __________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

Organize / Plan: Responsibilities

• _______________ must retrieve the materials.

• _______________ must put the materials away.

• We must each read the thermometers _________ times.

• __________________________________________________________

• __________________________________________________________

Organize / Plan: Directions

1. We need to place _____________ and _________________ inside each aluminum cup.

2. Then we have to

   __________________________________________________________

3. Next we ________________________________________________
4. 

5. 

6. 

7. 

Summary:  

Evaluate: Was my hypothesis accurate?
Sunny Day Investigation
Learning Strategies Questionnaire

How did the Plastic Bottle Investigation help you *Make Predictions*?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

How did *Organize / Plan* help you determine your procedure?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

How often did you *Evaluate* and did it make drawing a conclusion easier?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

How might your investigation have been different if you hadn’t used these strategies?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

How often do these learning strategies help you?

<table>
<thead>
<tr>
<th></th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Almost Every Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make Predictions</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Organize / Plan</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Evaluate</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
Mystery Ending

Level: Third Grade  Content Area: Language Arts

Content Objective: Students will become aware of adjective declension, work with literary interpretation, and practice presentation skills.

Language: German

Language Objectives: Students will recognize adjective endings and why they exist.

Review Strategy: Cooperate (Zusammenarbeit), Monitor (Überwachen)

Strategy Rationale: Cooperate helps students complete certain learning tasks better by combining their strengths and making the task more interesting for them. Monitor helps students figure out solutions to problems by eliminating illogical ideas.

Strategy Objectives: Students will work in pairs to identify adjectives in a poem and use them to interpret the poem’s ending. Students will need to see if their interpretations are logical and defensible.

Materials: large sheets of paper, thin red markers, crayons or colored pencils, “Der Hahn” poem by Robert Reinicks, “Was wird hier beschrieben?” worksheet, a poster (drawn by the instructor) of the object being described.

Vocabulary: die Beschreibung description  die Interpretierung interpretation  die Vermutung guess
logisch logical  erraten/vermuten to guess
erklären to explain  beschreiben to describe
verteidigen to defend

Language Structures: Adjektivendungen Adjective endings

Procedures
Preparation:
1. This lesson is intended to help students become comfortable with the multiple possibilities of literary interpretation, along with the need to support and validate their interpretations. The language objective of this lesson helps students to think metacognitively about the importance of gender in language and how adjectives reflect the gender of the noun they modify. Students will learn that adjective declensions do not form new words, but create variations of one adjective that maintains the same meaning.
2. If you do not wish to use the poem provided, find a poem or a part of a poem that describes an object with many varying adjectives but without a large number of case variances. You might also choose a long riddle.

3. Since there is no presentation of a strategy in this lesson, use the Monitor worksheet as a warm-up activity to reintroduce and to review the strategies with students. Have them work in small groups to see who can finish the worksheet first. Emphasize that, in addition to using Monitor, they are working together through Cooperate to complete the task. Discuss the worksheet as a class and tell students that they will use both strategies in this lesson.

**Presentation:**

1. Write the word *blau* and one of its variations on the board e.g. *blau, blauen*. Ask students: *Meint ihr, dass die zwei Wörter auf der Tafel verschieden sind?* Do you think that these two are different words? Then write *rot (red) and der rote Hut (the red hat)* on the board, underlining the adjective.

Point to the words as you tell students: *Beide Wörter sind hier Adjektiven, und sie sind dieselbe Adjektiven. Adjektiven sind vom Genus des Substantives, die sie modifizieren, abhängig. Adjektiven, wenn sie Substantive beschreiben, haben Endungen, die auf den Genus des Sustantives hinweisen.*

*These are both adjectives. These two words are in fact the same. Depending on the gender of the noun the adjective modifies, the ending of the adjective changes.*

2. Point to the example on the board. *Wenn ihr schon wisst, dass das Wort ein Adjektiv ist, bleibt es immer so ohne Rücksicht auf die Endung. (The adjective itself never changes.)* Point to the root on the board. *Die Adjektivendungen sind –e, -es, -en, -em und -er. Ihr hört die Adjektivendungen beim Sprechen. ZB. The ending on the adjective does not change its meaning, but lets us know what noun the adjective modifies. Common adjective endings are –e, -es, -em, -er, and –en. You can hear the ending when you speak.*

3. Give examples:

<table>
<thead>
<tr>
<th>German</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>die grüne Pflanze</td>
<td>the green plants</td>
</tr>
<tr>
<td>der alte Mann</td>
<td>the old man</td>
</tr>
<tr>
<td>eine junge Frau</td>
<td>a young woman</td>
</tr>
<tr>
<td>eine glückliche Schildkröte</td>
<td>a happy turtle</td>
</tr>
<tr>
<td>ein furchterregendes altes Haus</td>
<td>the scary old house</td>
</tr>
<tr>
<td>eine schwarze Kuli</td>
<td>a black pen</td>
</tr>
<tr>
<td>ein gestreiftes Kleid</td>
<td>a striped dress</td>
</tr>
<tr>
<td>unter dem großen Bett</td>
<td>under the big bed</td>
</tr>
<tr>
<td>mit einer goldenen Blume</td>
<td>with the golden flower</td>
</tr>
</tbody>
</table>

Write these on the board and ask students to identify the adjective and the ending.
4. Tell Students: *Jetzt lesen wir ein sehr altes Gedicht mit vielen Adjektiven darin. Dieses Gedicht ist ganz besonders, weil ein Teil davon nicht auf euerem Arbeitsblatt steht. Ihr müsst vermuten, was in diesem Gedicht beschrieben wird.* (Now we are going to read a poem with many adjectives in it, but there is a catch—part of the poem is missing.) Distribute the “Was wird hier beschrieben?” worksheet which includes the incomplete poem. Read that version of the poem to the class. Have them listen carefully for the adjectives. Then have some students read verses or couplets a second time aloud.

Practice:

Now that you have heard the poem, you are probably wondering what object it describes. You have to figure it out. Get in pairs with the person next to you and work with him or her using the learning strategy Cooperate to figure out what is being described in the poem. Once you have made your guess, you will draw a large poster of it.

2. Distribute paper, crayons or colored pencils, and thin red markers.

3. Ask students to pay close attention to the adjectives in the poem that help them solve the mystery and underline each adjective they find with red marker. Remind them: *Use the learning strategy Monitor to make sure that your guess is logical, because after you illustrate your guess you will present your poster to the class and defend your reasons for making your guess.*

Tell students: *Während ihr lest, achtet auf die Adjektiven, um mehr genau zu wissen, was beschrieben wird. Unterstreicht die Adjektiven mit dem roten Kuli. Nachdem ihr euere Vermutung gezeichnet habt, verwendet die Lernstrategie Überwachen? Ihr müsst ganz klar verstehen, was ihr gezeichnet habt. Er muss sehr logisch sein, damit Sie euere Poster der Klasse vorstellen können. Während ihr euere Posters vorstellt, müsst ihr der Klasse erklären, warum ihr diese Vermutung gemacht habt und welche Adjektiven euch geholfen haben.*

4. Once students have interpreted the poem and illustrated their guesses, have them present their posters to the class. Ask them to answer the following questions: *What is it that you drew? Why did you choose it? Which adjectives helped you make your guess?* After each pair presents its poster, hang it up.
Tell students: *Also gut. Ihr habt erratet und interpretiert das Gedicht von allen ausser einem Paar Zeilen. Wenn ihr euer Poster vorstellt, erzählt der Klasse das Poster, und welche Adjektiven des Gedichts haben euch geholfen.*

*Ok good. You have worked with and interpreted almost all of the poem except for a few lines. When you present your poster to the class make sure to explain what you drew and what adjectives you used to help you.*

5. After all the presentations, tell students: *Jetzt lese ich euch das ganze Gedicht. I am now going to read you the end of the poem. Read the whole poem and show them your poster of what the poet is describing. Ask students: Seht ihr die Adjektive des Gedichts im Poster? Welche seht ihr? (Do you see the adjectives in the Posters? Which ones do you see?)*

6. Pass out copies of the completed poem, with title, for students to read in their free time.

**Evaluation:**
1. While students work in pairs, circulate around the room. Listen to make sure students are cooperating and assessing whether their decisions are logical. During the presentations, check that the students answer their three questions. Collect the students’ poems with the underlined adjectives to evaluate their understanding.

2. After students answer the final questions about your poster, tell them: *Jetzt habt ihr literarische Interpretierung geübt. Ohne Rücksicht auf die echte Beschreibung seid ihr alle richtig, weil ihr euere Meinung/Vermutung verteidigt habt. Ihr habt euere Posters logischerweise erklärt. Die Logik bei der Interpretierung ist sehr wichtig.*

*You have all done an excellent job interpreting the poem. Regardless of what the author meant to describe, all of you are correct. You could defend your interpretations because you explained them logically and checked to be sure they made sense. That is the key to interpreting literature.*

**Expansion:**
1. Have students play “Guess Who” as a class, giving several of them the opportunity to pick another person in the room to describe using adjectives. Record lists of these adjectives on the board, complete with their various endings, while the rest of the class guesses the person being described. Then designate students to draw a line on the board between different adjectives with the same ending.

2. Ask students to brainstorm ways they can use the learning strategy *Monitor* in other subject areas, such as math or science.

*This lesson was written and translated by Shana Semler, Georgetown University.*
Der Hahn

In der Sonne steht der Hahn,
Redet seine Hennen an:
“Seht mich an! Wo ist der Mann,
Der mit mir sich messen kann?
Seht dies Auge groß und mächtig,
Meine Federn golden, prächtig,
Meines Kammes Majestät,
Diese rote Krone, seht!—
Meine Haltung stolz und schlank,
Meines Ruf's Trompetenklang,
Und mein königlicher Gang,
An den Füßen diese Sporen,
Alles zeigt euch einen Mann,
Der wahrhaftig sage kann:
Dass zum Helden er geboren!”

*sich messen mit – to match me
*prächtig – splendid, glorious
*die Haltung – stance
*schlank – slender
*der Gang – gait, the way a person walks
*die Sporen – spurs

Was wird hier beschreiben?

“Seht mich an! Wo ist der Mann, 
Der mit mir sich messen* kann?
Seht dies Auge groß und mächtig,
Meine Federn golden, prächtig*,
Meines Kammes* Majestät,
Diese rote Krone, seht!—
Meine Haltung* stolz und schlank*,
Meines Rufs Trompetenkläng,
Und mein königlicher Gang*,
An den Füßen diese Sporen*,
Alles zeigt euch einen Mann,
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*sich messen mit – to match me
*prächtig – splendid, glorious
*die Haltung – stance
*schlank – slender
*der Gang – gait, the way a person walks
*die Sporen – spurs
Was wird hier beschreiben?
(Answer Key)

“Seht mich an! Wo ist der Mann,
Der mit mir sich messen kann?
Seht dies Auge groß und mächtig,
Meine Federn golden, prächtig,
Meines Kammes Majestät,
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Meine Haltung stolz und schlank,
Meines Rufes Trompeterklang,
Und mein königlicher Gang,
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*sich messen mit – to match me
*prächtig – splendid, glorious
*die Haltung – stance
*schlank – slender
*der Gang – gait, the way a person walks
*die Sporen - spurs
Monitor Worksheet

Name__________________________

Date_________________

Instructions: use the learning strategy Monitor to complete this worksheet.

1. Would Makram pay three dollars for one apple at the grocery store?
   - Yes   - No
   Why? ___________________________________________________
   _________________________________________________________

2. Would Sylvia measure the temperature of the sun with a thermometer?
   - Yes   - No
   Why? ___________________________________________________
   _________________________________________________________

3. Would you search the Internet to find the definition of a word you don’t know?
   - Yes   - No
   Why? ___________________________________________________
   _________________________________________________________

4. Would a mathematician say that a square is a rectangle?
   - Yes   - No
   Why? ___________________________________________________
   _________________________________________________________

5. Would Jake multiply by two to find half of a number?
   - Yes   - No
   Why? ___________________________________________________
   _________________________________________________________
6. Would Vanessa use a pair of binoculars to observe an insect?
   Yes  No
   Why? ___________________________________________________
   ___________________________________________________________

7. Would a train travel 300 kilometers per hour?
   Yes  No
   Why? ___________________________________________________
   ___________________________________________________________

8. Would Chris drive a car from Australia to New Zealand?
   Yes  No
   Why? ___________________________________________________
   ___________________________________________________________

9. Would a geographer say that Eskimos live in a desert?
   Yes  No
   Why? ___________________________________________________
   ___________________________________________________________

10. Would you build a tree house out of Styrofoam?
    Yes  No
    Why? ___________________________________________________
pH: Don’t Forget the Cabbage

Level: Fourth Grade

Content Area: Science

Content Objective: Students will distinguish between acids and bases using litmus tests and cabbage juice tests.

Language: German

Language Objective: Students will practice creating sentences with the conjunction whereas. They will use the subjunctive tense to formulate If… then statements.

New Strategy: Find/Apply Patterns (Schlußfolgerung ziehen)

Strategy Rationale: The learning strategy Find/Apply Patterns helps students use a rule that they know to help them learn new things.

Strategy Objective: Students will Find/Apply Patterns to detect the presence of an acid or a base using scientific evidence.

Materials: several household acids and bases such as soda pop, citrus juice, white vinegar, baking soda, cornstarch, or aspirin dissolved in water, buttermilk, ammonia, rubbing alcohol, hydrogen peroxide, window cleaner, and various soaps (diluted if necessary), containers labeled with the liquids’ names; containers labeled with letters; litmus paper; cabbage juice¹; distilled water; worksheets

Vocabulary: Language Structures:
die Flüssigkeit liquid während whereas
der Stoff solid wenn If … then …
die Lösung solution
destilliertes Wasser distilled water
die Säure acid
die Lauge/basisch alkali / alkaline / basic
die Schärfe acidity
das Lackmuspapier litmus paper
der Indikator indicator
das Augtropfglas eye dropper

¹ Boil a red cabbage in water until the vegetable is tender and the liquid becomes bright purple. Remove the cabbage and allow the cabbage juice to cool. Blackberries, red onions and hibiscus flowers also work.
Procedures

Preparation 1:
1. To best participate in this lesson, students will need a preliminary understanding of acids and bases. Ask students to read the section of their textbook that discusses acids and bases or show them a video to familiarize them with the material.

2. Introduce the topic in class by discussing the taste of orange juice, milk, vinegar, baking soda, etc. Explain to students that these are some examples of weak acids and bases. Review the definitions of “acid” and “base.”

3. Have students describe the different properties of acids and bases. Model a description of the properties using the target language. For example: Säure schmecken sauer, während Base bitter schmecken. Säure wandeln blaues Lackmuspapier rot, während Base wandeln rotes Lackmuspapier blau. (Acids taste sour whereas bases taste bitter. Bases feel slippery to the touch, whereas acids feel watery. Acids turn blue litmus paper red, whereas bases turn red litmus paper blue.) Encourage them to use the conjunction “whereas” in their descriptions.

4. Record the sentences on the board where students will be able to see them and refer to them throughout the course of the lesson.

5. To elicit students’ prior knowledge of learning strategies, have students explain which strategies they have used to conduct science experiments. Tell them that for this experiment they will be using a new strategy called Find/Apply Patterns.

Presentation 1:
1. Point out that the recorded statements express rules. Activate students’ background knowledge about rules by having them come up with examples of other rules they already know and apply on a regular basis. For instance, classroom rules guide their behavior at school and grammar rules tell them how to construct sentences or conjugate verbs in German.

2. Introduce the learning strategy Find/Apply Patterns. Tell students: Wenn wir die Regeln anwenden, die wir schon wissen, können die uns zusätzliche Information lernen. Heute verwenden wir den Lernstrategie “Schlußfolgerung ziehen,” um unsere Experiment mit Säuren und Basen anzustellen.

When we apply rules we already know to new situations, they can help us learn additional information. Using rules in this way is a learning strategy we call Find/Apply Patterns. Today we will use the learning strategy Find/Apply Patterns to conduct our experiment with acids and bases.

3. Explain to them how the pH scale is used to express the strength of acidic and basic solutions on a scale from 0 to 14 using the conjunction “whereas.” Säure haben ein pH Wert unter 7, während Base ein pH Wert über 7 haben. Säure verstärken, wenn ihr pH schwächer werden, während Base verstärken, wenn ihr pH stärker werden.
Acids have pH values under 7 whereas bases have pH values over 7. Acids get stronger as their pH decreases, whereas bases get stronger as their pH increases.

Record these rules alongside the others already in prominent view.

**Practice 1:**
1. Separate students into pairs or small groups. Give each set of students four to five samples of household liquids labeled by name, red and blue litmus paper, and a worksheet to record their results.

2. Before students begin to conduct the experiment, have them fill in the first blanks on Part I of the worksheet. Once its blanks are full, this section of the worksheet will provide them with the rules they need to keep in mind during the experiment:

   - Wenn die Lösung eine Säure ist, wandelt das Lackmuspapier von blau nach rot.
   - Wenn die Lösung eine Base ist, wandelt das Lackmuspapier von rot nach blau.
   - Wenn blaues Lackmuspapier kommt in Berührung mit einer Base, wird die Farbe nicht geändert.
   - Wenn rotes Lackmuspapier kommt in Berührung mit einer Säure, wird die Farbe nicht geändert.

   - If a solution is an acid, then it turns blue litmus paper red.
   - If a solution is a base, then it turns red litmus paper blue.
   - If blue litmus paper touches a base, then it does not change color.
   - If red litmus paper touches an acid, then it does not change color.

3. Point out to students that there are multiple ways of formulating rules. Today they are using two different language structures to express the same rules: the conjunction “während” and “wenn” statements.

4. As they dip the litmus paper into the samples, have students record their findings on the Chart I of their worksheet. After they gather all of the findings, have groups report their results in front of the class. Remind the students that the rules on the board and on their worksheet will help them **Find/Apply Patterns** whether each liquid is an acid or a base.

5. After the appropriate groups report on each specific sample, invite students to vote as a class to decide whether the sample is an acid or a base. Students will record class responses under the column labeled **Find/Apply Patterns** on Chart I of their worksheet.

**Presentation 2:**
1. Collect all of the samples labeled by name from the groups, replacing them with others labeled only by letter. Distribute one eyedropper to each group.
2. Emphasize to students that unlike weak acids and bases found at home, strong ones are dangerous and can hurt people:

Während wird schwache Säure und Base anfassen können, schaden starke Säure und Base unserer Haut, unseren Augen und dem Rest unseres Körpers. Die wichtigste Regel der unbekannten Flüssigkeiten ist, die Flüssigkeit nicht anzufassen oder zuschmecken.

Whereas we can touch weak acids or bases, strong acids and bases are harmful to our skin, our eyes, and the rest of our bodies. The most important rule about unknown liquids is not to touch or taste them. It is safer and more reliable to Find/Apply Patterns from pH tests to determine what they are.

3. Give each group a sample of cabbage juice and explain that it is a natural pH indicator: Während Lackmuspapier kann nur von blau nach rot oder von rot nach blau wandeln, wird Kohlsaft entweder blau oder rot gewandelt. Wenn ihr den Kohlsaft mit einer Säure kombiniert, wird die Lösung rot. Wenn ihr den Kohlsaft mit einer Base kombiniert, wird die Lösung blau. Starke Säure und Base stellen stärkere Farbänderungen als Schwächerer her.

Whereas litmus paper can only change from blue to red or red to blue, cabbage juice can turn either green or red. If you put cabbage juice into an acid, then the solution turns red. If you put cabbage juice into a base, then it turns green. Strong acids and bases produce stronger color changes than weak ones do.

Practice 2:
1. Have students add cabbage juice one dropper at a time to the unidentified acids and bases. They should record on their worksheet the number of drops they added before seeing a change in color. They will also record whether the solution turned red or green.

2. Based on this data, students will decide within their groups whether each solution is a weak acid, a strong acid, a weak base or a strong base. They will record their conclusion under the column labeled Find/Apply Patterns on Part II of their worksheet.

3. Students may also try to combine this information with background knowledge about the way their solutions look and smell in order to Find/Apply Patterns which household liquid it is. (In this case, demonstrate wafting.) Have them write out the rules they used to Find/Apply Patterns.

Both the sample of lemon juice and the sample of grapefruit juice are acidic and smell like citrus. But lemon juice is yellow whereas grapefruit juice is pink. If one of our samples is yellow, acidic and smells like citrus, then the sample is lemon juice.

Evaluation:
Have the pairs write a paragraph to summarize their findings in the experiment. Then have them evaluate their use of the learning strategy Find/Apply Patterns. For example, they might answer a couple of the following questions: How did you use Find/Apply Patterns in this experiment? How was Find/Apply Patterns important? Would you have been able to conduct the experiment without the learning strategy? Why or why not? How helpful was it to you? Would you use Find/Apply Patterns again? If so, when?

Expansion:
1. Add cabbage juice indicator to a sample of distilled water. Ask students why it is not changing color. Dip both red and blue litmus paper into the sample. Elicit students to Find/Apply Patterns that distilled water is neither an acid nor a base. Define and discuss the term “neutral” with students. Help them to Find/Apply Patterns to understand that a neutral’s pH value is neither above nor below 7. A neutral’s pH value must therefore be exactly 7. This discussion can introduce a math lesson about the concepts “greater than,” “less than” and “equal to” that involves Find/Apply Patterns.

2. Tell students that people also have acids and bases in their bodies. Allow them each to put one piece of litmus paper in their mouths for five seconds to determine whether their saliva is acidic or basic. Have the students compile their results as a class, according to gender. Ask them to Find/Apply Patterns to come to a limited conclusion about gender and the acidity of a person’s saliva.

3. Discuss with students ways that they can use the learning strategy Find/Apply Patterns to help them learn German. For example, all nouns ending in -ung, -keit, -heit, and -schaft are feminine, e.g. die Berührung, die Flüssigkeit, die Lösung, die Gesellschaft, die Mehrheit. All nouns ending in –lein or –chen are neutral, e.g. das Buchlein, das Madchen. All verbs of motion take sein as their auxiliary (helping) verb, e.g. laufen, gehen, springen, rennen, einschlafen, sich abbiegen, kommen, sterben, wachsen, umziehen, etc.

4. Have students brainstorm other content areas where Find/Apply Patterns could be helpful to them. Ask them to explain how they plan to use Find/Apply Patterns to accomplish tasks in language arts or social studies.

This lesson was written by Alisa Belanger. Translated by Shana Semler.

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The Elementary Immersion Learning Strategies Resource Guide
pH: Don't Forget the Cabbage
Experiment Worksheet

Name ________________________________  Date_____________________

Part I

• If a solution is ________, then it turns blue litmus paper red.
• If a solution is ________, then it ________ red litmus paper blue.
• If ________ litmus paper touches a base, then it does not change color.
• If red litmus paper touches an acid, then it ___________ change color.

Chart I

Instructions: In the left-hand column of this chart, write the names of the liquids you test. Then circle Change or Same to record the findings of your litmus tests. Finally, work with your class to Find/Apply Patterns to decide whether each liquid is an acid or a base. Enter this information in the Deduction column.

Litmus Paper pH Tests

<table>
<thead>
<tr>
<th>Household Liquid</th>
<th>Red Litmus Paper</th>
<th>Blue Litmus Paper</th>
<th>Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soda pop</td>
<td>Change</td>
<td>Same</td>
<td>Change</td>
</tr>
<tr>
<td>Lemon juice</td>
<td>Change</td>
<td>Same</td>
<td>Change</td>
</tr>
<tr>
<td></td>
<td>Change</td>
<td>Same</td>
<td>Change</td>
</tr>
<tr>
<td></td>
<td>Change</td>
<td>Same</td>
<td>Change</td>
</tr>
</tbody>
</table>

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**Chart II**

Instructions: Next to the appropriate letter, record the number of droppers of cabbage juice you add to the unidentified liquid before it changes color. Then circle the appropriate color in the next column and *Find/Apply Patterns* with your group whether the liquid is a strong or weak acid or base. In the row underneath, use *Find/Apply Patterns* to find the identity of the liquid. Write the rules you applied, using the language structures *whereas* or *If... then*

### Cabbage Juice pH Tests

<table>
<thead>
<tr>
<th>Liquid</th>
<th>Number of Droppers of Cabbage Juice</th>
<th>Resulting Color of Solution</th>
<th>Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td>Red</td>
<td>Weak Acid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Green</td>
<td>Strong Acid</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Weak Base</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Strong Base</td>
</tr>
</tbody>
</table>

Name of Liquid: 

Rules:

| B      |                                     | Red                        | Weak Acid          |
|        |                                     | Green                      | Strong Acid        |
|        |                                     |                            | Weak Base          |
|        |                                     |                            | Strong Base        |

Name of Liquid: 

Rules:

| C      |                                     | Red                        | Weak Acid          |
|        |                                     | Green                      | Strong Acid        |
|        |                                     |                            | Weak Base          |
|        |                                     |                            | Strong Base        |

Name of Liquid: 

Rules:
Summary

What I learned from this experiment:

How I used the learning strategy *Find/Apply Patterns*:
Comic Strips

Level: Fourth Grade       Content Area: Technology

Content Objective: Students will use technology to make a comic strip or political cartoon that presents a story or a leader from Native American history and culture.

Language: French

Language Objective: Students will be able to create a short dialogue between two characters that tells a humorous anecdote or a story.

New Strategy: Organize / Plan (Organiser / Plannifier)

Strategy Rationale: Organize / Plan helps us coordinate how we accomplish multiple parts of one task.

Strategy Objectives: Students will use Organize / Plan to figure out how they will illustrate their dialogues and adapt them to fit a comic strip layout.

Materials: sample comic strips and political cartoons, computers, word processing software, graphics software, Internet access.

Vocabulary:

<table>
<thead>
<tr>
<th>French</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>un indigène</td>
<td>Native American</td>
</tr>
<tr>
<td>un dialogue</td>
<td>dialogue</td>
</tr>
<tr>
<td>des guillemets</td>
<td>quotation marks</td>
</tr>
<tr>
<td>une band dessiné</td>
<td>comic strip</td>
</tr>
<tr>
<td>un dessin politique</td>
<td>political cartoon</td>
</tr>
<tr>
<td>une bulle du band dessiné</td>
<td>comic strip bubble</td>
</tr>
<tr>
<td>une légende</td>
<td>caption</td>
</tr>
<tr>
<td>un personnage</td>
<td>character</td>
</tr>
<tr>
<td>une illustration</td>
<td>illustration</td>
</tr>
<tr>
<td>copier</td>
<td>copy</td>
</tr>
<tr>
<td>coller</td>
<td>paste</td>
</tr>
<tr>
<td>une disposition</td>
<td>layout</td>
</tr>
<tr>
<td>des caractères</td>
<td>font</td>
</tr>
</tbody>
</table>

Language Structure: Dialogue between two characters

Procedures

Preparation: 1. To do this lesson, students should already be familiar with Native American history and culture. You may introduce them to important Native American stories and leaders through oral literature, books, crafts, cooking, fieldtrips, or other resources and activities. You can focus on Native Americans of one geographic region or ask
groups of students to learn about a variety of tribes. Students will also need to have basic word processing and computer drawing skills.

2. Activate students’ background knowledge about Native American stories and leaders. Ask students to name their favorites, i.e. *How Coyote Stole Fire, Why Mole Lives Underground*, Sacajewea, Red Cloud, or Chief Joseph. Discuss stereotypes about Native Americans and how the students’ examples differ from the stereotypes.

3. Show the students a comic strip or political cartoon that includes Native Americans. Ask them to talk about the way the cartoonist uses stereotypes. Discuss whether the comic strip or political cartoon is funny and why. Point out that not all comic strips and political cartoons are funny.

4. Ask students to think about how the cartoonist designed the comic strip or political cartoon. Talk about what might have inspired it and what point the cartoonist makes.

   Ask students: *Quelles images a-t-il utilisées? Quels mots a-t-il utilisés? Pensez-vous que le dessinateur a fait cette bande dessinée en une seule fois? Ou pensez-vous qu’il a dessiné des croquis d’abord? Aurait-il pu écrire les mots d’abord?*

   *What images did he use? What words did he use? Do you think the cartoonist made this comic strip all at once? Or do you think he drew sketches of it first? Could he have written the words first?*

5. Introduce the strategy.

   Tell students: *Faire une bande dessinée ou un dessin politique exige beaucoup d’étapes. Les dessinateurs réfléchissent longtemps, ils choisissent un sujet, créent un dialogue, dessinent les croquis, et révisent plusieurs fois avant d’obtenir le produit fini. Ils ont besoin de faire un plan pour s’organiser. L’emploi de la stratégie Organiser / Planifier, comme ici, nous aide à diviser une tâche compliquée en parties, à les mettre en ordre, et à les faire une par une pour faciliter la tâche.*

   *Making a comic strip or political cartoon takes many steps. Cartoonists think very hard, choose a topic, create a dialogue, draw sketches, and revise several times before they create the finished product. They need to organize their work and make a plan for it. They use Organize / Plan. It is a learning strategy that helps us break a complicated task into parts, put them in order, and do them one at a time to make the task easier.*

**Presentation 1:**

1. Have students divide themselves into pairs. Tell them that they are going to use Organize / Plan to make their own comic strips inspired by their favorite Native American stories and leaders. Explain to students that the leaders or the animals and people in the stories will become the characters in their comic strips.
2. Give partners time to discuss how they will combine their favorites into one comic strip. For instance, one student’s favorite leader may play a role in the other student’s favorite story, the students’ favorite leaders may meet, or the students may combine their favorite stories. Have students brainstorm a couple of things their characters might say to each other.

3. Ask students how they usually know that a character is talking in a story. Elicit “quotation marks” as a response. Explain to students that there are no quotation marks in comic strips or political cartoons. Show them different size and shape examples of comic strip bubbles, emphasizing how they fit as part of the illustrations.


*Would you be ready yet to put your dialogue into comic strip bubbles? No. Why not? We haven’t written the dialogue or made our illustrations yet. Ah… I see. You are using Organize / Plan.* *So now that you’ve chosen your topics, the next step is for you to write the dialogue.*

**Practice 1:**

1. Have students go to a computer with their partners. (If there are not enough computers for each pair of students, the class can gather around one computer while you demonstrate, then take turns.) Ask them to open a word processing program.

2. Tell them that instead of typing quotation marks, they will use the characters’ names and a colon at the beginning of a line to indicate who is speaking. Ask one pair of students to illustrate this technique with an example they brainstormed of something their characters might say to each other.

3. Allow students the rest of the class period to work together writing ten to fifteen lines of dialogue. Each student should type the half of the dialogue that belongs to her story or favorite character.

4. If students would like to review their stories or look for more information on their leaders, have them use the Internet to research. For this purpose, you may bookmark helpful web sites on their computers beforehand. Keep sample comic strips and political cartoons available to reference.

5. Remind students that each line of dialogue needs to be short enough to fit into comic strip bubbles, and the entire dialogue needs to fit in one comic strip. Also remind them to be careful of stereotypes and to use good judgment in choosing the content.
6. Have students save their dialogues and print two copies at the end of class, one for each partner.

**Presentation 2:**

1. The next day, have students take out their copies of the dialogue and hold them up. Ask students: *De quelles autres choses avez-vous besoin pour faire une band dessiné avec vos dialogues? Les illustrations.* *(What else do you need to make a comic strip from your dialogues? Illustrations.)* Have students bring the paper copies of their dialogues to the computers where they worked the day before. Have them open the saved computer version. Ask them to minimize it and open the graphics program.

2. Draw a simple picture of an authentic Native American object or your favorite Native American leader to demonstrate and review graphics program’s functions. Create a comic strip bubble and text box. Copy one line from the open word processing document and paste it into the text box.

3. Ask students: *À quel point le texte apparie-t-il mon illustration?* *(How well does the text match my illustration?)* Discuss why they do not match well. Tell students that they will need to divide their dialogue into three or four parts, then make an illustration to correspond to each part. Ask students the name of the learning strategy they will use to help them: *Organize / Plan.*

4. Put a box around your illustration and show students how to add a caption at the bottom, i.e. *Nos vies sont entre les mains du Grand Esprit* *(Tecumseh, 1813)* or *Les Iroquois étaient un peuple d'agriculteurs.*

**Practice 2:**

Have students draw lines on the paper copies of their dialogues to indicate the divisions. Then give them time to work together to draw their illustrations with comic strip bubbles. Ask them to draw a box around each illustration and to put the illustrations in the layout of a comic strip. Have them copy and paste their dialogues from the word processing program into the text boxes.² This process may take a couple class periods.

**Evaluation:**

1. Have students print and publish their comic strips in a class book, or post them on the Internet. Give students time to read each other’s comic strips and discuss their different styles as a class. Ask them to talk about the structural choices they made in dividing and illustrating the dialogue.

2. Write a randomly ordered list of the steps that students took to make their comic strips on the board and ask them to record these steps in sequence. Have them make a “How to” entry in their learning logs or journals about making comic strips and using *Organize / Plan.* Ask them to explain the purpose of the learning strategy, how it helped them, and one other way they can use it.

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² Advanced student technology users may also copy pictures from the Internet to use in their illustrations.
Expansion:
1. Have students working in small groups use Organize / Plan to build models different types of Native American homes or villages.

2. Have students use Organize / Plan together as a class to design a sign-up chart for the computers. Have them brainstorm the information it should include and agree on its layout by drawing and revising it on the board.

This lesson was written and translated by Alisa Belanger.
Reading and Summarizing a Story

Level: Fourth Grade  
Content Area: Language Arts

Content Objective: Students will identify the main ideas in a story and write a short summary.

Language: Spanish

Language Objective: Read a text for the gist, avoid focusing on specific words; understand vocabulary from context.

New Strategy: Organize/Plan  
Review Strategy: Make Predictions

Strategy Rationale: Use the strategy Organize/Plan to develop personal objectives and identify the aims of the activity.

Strategy Objective: Students will use Organize/Plan to set specific, personal objectives for reading a text.

Materials: Story (poem, article or essay) with an interesting title.

Vocabulary: Based on the text.

Procedures
Preparation:
1. Ask students what type of goals they have in their personal lives. For example:
   
   Hoy voy a leer otro capítulo en el libro de Harry Potter.  
   Este año, me voy a meter un gol en un partido de futbol.  
   Voy a ser más lindo y dulce con mi hermano chiquito.
   
   Today I am going to read another chapter in my Harry Potter book.  
   This year, I am going to get a goal in soccer.  
   I am going to be nicer to my baby brother.

   Write their ideas on the board.

   Tell students that you Organize/Plan for yourself every morning when you wake up. For example:  
   Hoy voy a aprender diez palabras nuevas en el japonés.  No voy a comer tantos dulces.  
   (Today I am going to learn 10 new words in Japanese. I am going to stop eating too many sweets.) Explain that setting long- and short-term goals helps us organize what we want to learn and do.

2. Have students work in pairs or small groups, and talk about their personal goals. Tell them to think of some big goals for their future:
Quiero ser artista.
Quiero jugar el básquetbol en los olímpicos.
Quiero ayudar a la gente.
I want to be an artist.
I want to play basketball in the Olympics.
I want to help people.

And some little goals for their lives now:

Quiero jugar más deportes y mirar menos televisión.
Quiero escribir un poema en el español.
Quiero aprender más de los americanos nativos, los indígenas.
I want to play more sports and watch less television.
I want to write a poem in Spanish.
I want to learn about more about Native Americans.

3. Ask students what little goals they could set for reading a story. Put their ideas on the board and elicit any points you think they may have missed.

Presentation:
1. Put the title of your story on the board. Have students work in pairs or small groups and talk about what they think the story is going to be about (where and when it might take place, what type of characters there will be, what will happen). Remind them that they are using Make Predictions. Ask them to recall when they have used this strategy before. Write their ideas on the board.

2. Introduce the term Organize/Plan.

Organize/Plan is a strategy that is useful when you are preparing for a task. Organize/Plan means making a plan about what you want to do during a day or a lesson. You can have a class goal or a personal goal.

3. Tell students that they are going to practice setting goals before doing an activity.

Organize/Plan will help you understand an activity better and it will help you decide what you want to learn from that activity.

4. Introduce the story that they will read. Explain that you want students to read the story so they can understand the main ideas. Tell them that if they do not understand a word, they should try to understand it from the context, i.e. they should use the other words in the sentence to help them.

Practice 1:
1. Have students write down some goals for this activity. For example:

Quiero ver si mis predicciones fueron ciertos.
Quiero entender los temas centrales del cuento.
Si no entiendo una palabra, intentaré comprender el significado de la palabra porque del contexto del párrafo y de las palabras que la rodean. No uso un diccionario.

I want to see if my predictions were right.  
I want to understand the main ideas of the story.  
If I don’t understand a word, I am going to try to figure out what it means from the other words around it and not use a dictionary.

2. Let students share their personal goals in small groups and then as a class. Write down some of their goals. Emphasize that these are personal goals, and can be unique to each student.

Practice 2:  
1. Have the students read the story and check if any of their predictions were right. Remind students that right or wrong, making predictions helps them focus in on the reading and aids their comprehension.

2. Ask the students to reread or review the story, and with a partner or in a small group, identify the main ideas of the story. As a class, go over the difference between the main ideas and specific information.

3. Have students tell the story using the main ideas. Explain that this is a summary of the story. Students can use a T-list or other graphic organizer for this task.

Evaluation:  
1. Have the students write a brief summary of the story individually.

2. Ask students if they reached the goals they set at the beginning, (i.e. did they do and learn what they said they wanted to?).

3. Have a class discussion about Organize/Plan. Elicit a general definition for the strategy and have students provide some personal and class examples. Have them provide some family or community goals to re-evaluate.

Expansion:  
1. Ask students to think of some goals for future activities in language arts. Give examples of activities you have planned in the near future and have the students brainstorm goals.

2. Ask students how they can Organize/Plan for other school subjects or life situations. Students could design goals worksheets for themselves and use them for various activities to help get into the habit. They could also make some posters for the classroom with class goals for the year.

This lesson was created by Abigail Bartoshesky, National Capital Language Resource Center Research Associate. Translated by Vanessa A. Karwan.
Circumferences

Content Area: Math

Level: Fourth Grade

Content Objective: Students will be able to calculate the circumference of circles.

Language Objective: Students will be able to use target vocabulary about geometry to describe calculating the circumference of circles.

Strategy: Induction (きのうほう) (帰納法)

Strategy Rationale: Induction (きのうほう) (帰納法) helps us learn and remember information by creating rules and formulas to describe patterns we observe.

Strategy Objective: Students will use Induction (きのうほう) (帰納法) to estimate the value of π based on the relationship between circular objects’ circumference and diameter.

Materials: circular objects, measuring tools, piece of string or yarn, worksheet

Vocabulary:
circumference えんしゅう (円周)
diameter ちょっけい (直径)
radius はんけい (半径)
cord (chord) げん (弦)
sphere きゅう (球)
perimeter しゅうい (のながさ) (周囲 (の長さ))

Procedures
Preparation:
1. Draw a big circle on the board. Ask the students to name some circular objects around them or to put on their desks circular objects they brought from home. Elicit coins as examples of circles.

2. Elicit and introduce the names of the parts of a circle (center, radius, diameter, chord, etc) and distinguish a circle from a sphere. Have students identify these parts of several different types of circles using the examples they came up with in step one.

3. Ask students to brainstorm the definition of a circle, including the names of the parts you identified in step two, and put your class definition on the board.

4. Show students a number of objects (some circular, some not) and ask them to identify which ones are circles. Using two lists, “Yes” and “No,” classify the shapes on the board. Make sure students use the traits identified in your definition while choosing which list to put the shapes on.
5. Explain that students used Induction (きのうほう) (帰納法) to make the definition of a circle, to identify examples of circles and to group them together. Tell them: Induction means making a rule (or formula) to describe a pattern. (きのうほうとは、あるじょうをつめいするためのほうぞく（またはこうしき）をみちびき出すことです。) (帰納法とは、ある事象を説明するための法則（または公式）を導き出すことです。)

Presentation:
1. Explain that you are going to focus on the circumference for today's lesson. Tell students: The circumference is the perimeter of a circle. (えんしゅうとは、えんのしゅういのことです。) (円周とは、円の周囲のことです。)

2. Measure the circumference and diameter of a circular object. Wrap a piece of string or yarn around the object to match its circumference. Cut the string or yarn, then lay it flat to measure its exact length with a ruler. Use another piece of string or yarn to find the object's diameter.

3. Have students divide the circumference by the diameter using their estimation skills. Ask if students expect to find a similar relationship in other circular objects.

Practice:
1. Have each student make a table containing the information for the activity. Divide the class into groups of four or five. Have them complete the table together to find out about the uniform relationship between the diameter and circumference of different objects.

2. Have the groups report on what they have discovered. Ask if the results are similar for each experiment (that is, about 3 times the diameter equals the circumference). Have them state the relationship and call it a rule.

3. Ask the students how they discovered the concept. Have them discuss their use of the learning strategy Induction as a class, then individually fill out a questionnaire that asks them to assess how well it worked for them in this lesson.

4. Introduce the math sign "π (pi)." (C ≈ 3D or C = πD). Knowing that about 3 times the diameter is the circumference, introduce the word "pi," which mathematicians created to show the circumference of circles. Then tell them that we can use the same concept (pi) to find the area of circles: R × Rπ = πR².

Evaluation:
1. In their math journals, have them write what they have learned: parts of circles, definition of circles, relationship between diameter and circumference.
2. Have them work in pairs to complete a true/false worksheet on what *Induction (きのうほう) (帰納法)* involves. Check it as a class to make sure the concept is clear.

**Expansion:**

1. Create a similar lesson in which students use *Induction (きのうほう) (帰納法)* to determine the formula for the area of a circle or the perimeter of some other shapes.

2. In a lesson with a language focus, divide the class into small groups and have them analyze a list of sentences that illustrate a *language (ことば or げんご) (言葉 or 言語)* function or structure. Have them use *Induction (きのうほう) (帰納法)* to come up with a rule and then explain what they discovered to the class.
Physical Geography of China

Level: Fifth Grade

Content Area: Social Studies

Content Objective: Students will learn about the physical features distinct to China, be able to identify them on a map, and write about them.

Language Objective: Students will develop their expository writing skills by composing a short paragraph from notes.

Review Strategies: 利用资源，写下笔记，记摘要

Strategy Objectives: Students will use external classroom resources to learn about China’s geographic features, take notes on them, and summarize them into an expository paragraph on a specific geographical feature.

Materials: various geography books about China, transparency of a physical map of China, transparency of the labeled “China and its Neighbors” worksheet, transparency of the “Physical Geography of China” worksheet, the “Physical Geography of China” worksheet answer key, overhead projector, colored overhead projector markers, colored pencils, and a globe or classroom world map.

Vocabulary:
border
landscape
plateau
flood
delta
desert
erosion
loss
to border on
to flow
to share a border with
to erode

Language Structures:
Paragraph development

Procedures
Preparation:
In order for students to effectively participate in this lesson, they need to already have a preliminary understanding of the basic physical features to be discussed: rivers, plateaus, mountain ranges, deserts, delta, etc. They should be able to locate these features on a map.

Tell students that their next geography lesson is going to be about China and that they are going to learn about China’s physical geography or landscape. 今天我们要看看中国的地理位置、地形和风景。
Begin this geography lesson by asking a student to locate China on the classroom map of the world or class globe.

After China has been identified, ask students what they already know about China. Ask them where it is, if they have heard anything about China in the news, etc. Write their answers on the board. Give the students some basic facts about the country: 中國位於亞洲，是全世界第三大，也是人口最多的國家。中國的南方有很多的小島。海南島是最大的一個。Point to Hainan.

**Presentation:**
Distribute the “China and Its Neighbors” worksheet to the students and place the labeled copy on the overhead projector.

Point to each bordering country as you talk about it. Begin with in the North of China. Tell students: 位於蘇聯之後，中國是亞洲第二大的國家。北邊有蘇聯和蒙古為邊界國家。Using the same technique, list countries that neighbor China to the south, east, and west. This segment of the lesson will help the students to better understand China’s political borders and its relationship to other countries in Asia.

Change the transparency to the unlabeled “Physical Geography of China” transparency and distribute the corresponding worksheet to the students.

Describe the important features of China’s four major rivers and have students write the name of the rivers on their worksheet in blue. Point to each geographical feature as you explain it. (Write both the Chinese and English names on your map but refer only to the Chinese ones during the lesson.) Tell students, for instance: 長江是中國，也是亞洲最長的河。它是全世界第三長，排名在尼羅河和亞馬遜河之後。總共有三千多條支流流進長江。它的上游位於西藏高原，然後慢慢地流進東海。長江的水患常造成無數的死傷和破壞大片的農村。

Now present the mountainous features of China in the same fashion and have the students write the names of the plateaus and mountain ranges in brown. Explain: 丘陵、高原和山脈佔了中國三分之二的面積。地理學家形容中國是一個樓梯間，樓梯的上方位於高山特別多的西部，樓梯的高度慢慢的往西漸低。喜馬拉雅山是全世界最高、面積最大的山脈。中國和尼泊爾共同是最高峰-聖母峰的邊界。喜馬拉雅山是中國西南方自然的邊界，鄰國有尼泊爾、不丹和印度。Show pictures of the plateaus and the Himalayas.

Now present China’s deserts to the students and have them label them in orange. Tell them: 戈壁沙漠是亞洲最大的沙漠，它位於中國和蒙古之間。塔克拉馬干沙漠位居中國和許多西邊的鄰國之間。Show pictures of the Gobi desert.

**Practice:**
Have students break up into groups of four and distribute two geography books per group. Ask the groups to select one of the following geographical regions that they labeled on their map: Gobi Desert, Himalayas, Tibetan Plateau, Huang He or Chang Jiang. Write these on the board.

Tell Students: 現在，讓我們來復習Use Resources 和 Take Notes. 請每一組從黑板上選一個中國的地理特徵，然後利用桌上那本額外的書，寫下筆記。當形容地理特徵時，請務必回答兩個很重要的問題：此特徵為何特別？此特徵對中國的農業和人民有何
影響？

While students are working, write the questions on the board and put a colored physical map of China on the overhead projector to give students a more accurate picture of the country.

After the students complete the previous task, explain: 請每—組派一個學生大聲地唸你們寫得筆記，在這的同時，別的組也必須寫下這些發現，這樣一來，大家就有同樣的資訊。

Evaluation:
For homework, have students write a seven to ten sentence paragraph on one of the geographical features they learned about with 寫下筆記. Tell them to 記摘要 in the paragraphs their notes and the information found on their maps about this feature. Collect the assignment and the students’ notes to check for completeness.
The Physical Geography of China

Answer Key
Traffic Safety: 
Ride Your Bike the Right Way!

Level: Fifth Grade

Content Area: Health

Content Objective: Students will be able to read traffic signs, inspect their bikes, and ride them safely.

Language Objective: Students will use left الشمال, right، and the imperative form of verbs to give each other instructions.

Strategy: Self-Management إدارة الذات

Strategy Rationale: Self-Management إدارة الذات helps us recognize which learning strategies work best for us.

Strategy Objective: Students will use Self-Management إدارة الذات to determine which learning strategies help them read traffic sign symbols, understand the parts of a bike, and learn how to ride one safely.

Materials: poster paper, markers or crayons, chalk, pictures of bicycles, literature on traffic signs, bicycles, and bicycle safety, Parts of a Bicycle Worksheet, Traffic Sign Worksheet, Self-Management إدارة الذات Worksheet, a variety of youth-size bicycle helmets

Option A: a bicycle (one for each student if possible), traffic cones, a parking lot or blocked street

Option B: 3’ x 3’ piece of paper, thin cardboard, construction paper, paint, paintbrushes, scissors, short dowels, modeling clay, pipe cleaners, glue, and a stapler

Vocabulary:
intersection تقاطع

crosswalk مشى منقطع

driveway مخرج المشأ

pedestrian مشاية

construction بناء

must turn left / right يجب الانحراف بعينا / يسارا

no left/ right turn لا يوجد مخرج على الشمال/ اليمين

stay left / right بِاق على الشمال/ اليمين

yield الانحراف

do not enter لا تدخل

slow ابطئ

stopقف

slippery منزق

steep منحدر

safe / safety / safely بِأمانة/الأمانة/الأمن

Language Structure:

left... الشمال right

imperative verbs أفعال الأمر

seat مقعد

tire كفر/عجل

chain سلسلة

handle bar قضيب التحكم

reflectors انعكاسات

pedals بدادات

brake pads الفرط/ لبان الكابح

brake wires السلاك الكابح

spokes شعاع الهجالة
Preparation:
1. Have students brainstorm a list of the learning strategies they know. Record these learning strategies on the board. Ask them to briefly review the definition and use of each. Then have students reflect a moment on which learning strategies usually work best for them.

2. Show students a picture of a bicycle and have them Predict what they will be learning about in this lesson. Elicit a discussion about bike riding and bicycle equipment. Ask them how they learned to ride a bike, whether it was easy or difficult for them, and if they used a learning strategy to help them.

3. Point out that training wheels are designed to make learning to ride a bike easier and safer. Tell students: Learning strategies are the equipment we use to learn. They are like training wheels because they also make learning easier. Today we will use learning strategies to learn to ride a bicycle more safely. طرق التعليم هي الوسيلة التي نستعملها في التعلم إنها مثل العجلات المساعدة في الدراجة تجعل التعلم أسهل لنا. اليوم سوف نستعمل طرق تعلم كيفية قيادة الدراجة بطريقة أكثر أمانًا. Ask students to identify one learning strategy they found especially helpful in learning to ride a bicycle. Allow them to put a star next to that learning strategy on the board.

Presentation 1:
1. Evaluate the results with the class. Say, for example: Our class used a big variety of strategies. يبدو أن كثيرًا منكم استخدمتم هذه الطرق. Talk Yourself Through It. Some of you used simple strategies like the drawing. Manipulate / Act Out. Which other strategies did some of you use?

2. Explain that different learning strategies work better for different students and why it is helpful for students to know which ones work best for them. Tell students that today they will use a new strategy, called Self-Management, إحدى الطرق التي يمكن أن تكون مفيدة. This involves planning how they will learn based on what works best for them.

3. To illustrate the concept of Self-Management, إطار الذات, present students a variety of youth-size bicycle helmets. Have a student try on a helmet that is a bit too loose, then one that is a bit too tight, until the student finds the one that fits best. Tell them: Learning Strategies are like bicycle helmets, because certain ones fit each of us better than others do. We have to try different learning strategies just like we try different bicycle helmets to see which ones fit us best. You have to use the learning strategies that work best for you.

Discuss helmets, how they should fit, and why they are important to wear for safety.

Practice 1:
1. Distribute one copy of the Parts of a Bicycle Worksheet and the Traffic Sign Worksheet to each student. Give the students a couple of minutes to work individually and label on their worksheets just the items that they are sure they already know in Arabic.

2. Ask students why the information on these worksheets is important. Elicit a discussion about
inspecting their bikes and following traffic rules for safety. Tell them that the goal for this lesson is for them to be able to identify the rest of the items shown on the two worksheets.

3. Ask the students how many blanks they have left (there should be many). Point out that it would take them a long time for each student to find out every answer alone. Allow them to decide whether they would like to work alone or form pairs and small groups.

4. Once they decide, assign each student, pair, or small group one traffic sign and one part of the bicycle to research. Ask students to find out in Arabic the name and meaning of the traffic sign, as well as the name and function of the part of a bicycle. Tell students: Use the learning strategy Self-Management to decide a good way to learn this information. Tomorrow, you will need to present it to the class and show or describe how the learning strategy helped you. You’ll be the teachers!

5. Model an example by thinking aloud. Tell students, for instance: I used the strategy Imagine with a Keyword to learn the bicycle symbol for a right-hand turn. I had a hard time remembering whether my arm should be straight or at an angle. But since you raise your arm upwards at a right angle for a right turn, I came up with the phrase “right angle, turn right up” to help me remember. Demonstrate the symbol and write Right Angle, Turn Right Up on the board.

6. Make literature on traffic signs, bicycles, and bicycle safety available to students. This literature may include bike tour brochures, bicycle or driving manuals, books, Internet resources, etc. Also provide students with poster paper and markers or crayons to illustrate their ideas. Give students the rest of the class period to work on their research and decide on their strategies.

Presentation 2:
1. The next day, have students teach their traffic signs and bicycle parts to the class using the learning strategies they chose. If the learning strategy is Manipulate / Act Out, the students can teach the gesture they used to the entire class. For Use Imagery, they can share an illustration of the image that helps them; or, for Use Resources, they can show the class how and where they found the information in the literature.

2. Have students record the names of the traffic signs and parts of a bicycle on their worksheets during the presentations. Mention that this is an example of the learning strategy Take Notes.

3. Use the presentations on traffic signs to introduce a discussion about safe ways to ride on the sidewalk and in the road, to make turns, and to cross driveways or intersections. Point out that the meaning of traffic signs is often expressed in the imperative verb tense: stop, yield to pedestrians, do not enter, etc.
4. Have the class work together to generate a list of Bicycle Road Rules using the imperative form of verbs, such as: Watch out for cars and pedestrians. Stop and walk your bike at all intersections and driveways. Look left and right before crossing.

Mention that you are recording the rules in this verb tense because it is often the one used to give directions.

**Practice 2:**
1. **Option A:** Take students outside to the parking lot or blocked street. In pairs, have them inspect their bicycles to be sure they are safe and ready to ride.

   **Option B:** Have each student create a small model of a bicycle using markers, crayons, thin cardboard, pipe cleaners, scissors, and glue. Remind students to cut out or draw all of the parts of the bicycle they have learned.

2. **Option A:** Place the traffic cones at key points where students will turn left or right. Give each pair of students a piece of chalk and allow them to draw one traffic sign or car on the bike course. If space and supervision permit, make two or three short bike courses so that students have more opportunities for practice.

   **Option B:** Have students reproduce a small version of one traffic sign they presented to the class, cutting the shape out of construction paper and drawing the symbol with markers or crayons. Ask students to glue or staple the traffic signs to short dowels and stick them in modeling clay so that they stand. Paint a bicycle course on the 3’ x 3’ piece of paper. Be sure to include driveways, crosswalks, sidewalks, pedestrians, and cars. Allow it to dry over night. The next day, ask students to work in pairs to find the appropriate points on the bicycle course to place their traffic signs.

3. **Tell students:** Since you are the teachers today, you will take turns giving each other directions. You will need to tell your partner when to go straight and when to turn left or right. Be sure you remind your partner to follow the Bicycle Road Rules we came up with. What are they? Have students review the rules. What kinds of verbs will you use to give directions? Stop, look both ways, go straight, turn left, watch out, etc. What can you do if you are not sure what a traffic sign means? Use the learning strategies.

   بما أنكم الآباء اليوم سوف تتبعوا الأدوار التي تقدمها التعليمات بعضكمсть بعضكم، ثم تخبر عيدهم من تحركه نحو معنى مثاب يذهب إلى الأمام ويكون منحصراً. يبداً أن تذكر زميلك لتشابه أن عينة السهولة على الطريق الخاصة بركوب الدراجة التي وضعتها سهولةً، ما هي أنواع الأفعال التي سوف يستعمل Stop, look both ways, go straight, turn left, watch out, etc. أو لم يكن مناماً من ماذا تعني إشارة المرور؟

4. **Option A:** Have each student put on a bicycle helmet and take a short turn riding through the bike course, following the directions of a partner on the sidelines.

   **Option B:** Have students "ride" through the bicycle course in pairs with the model bicycles they made. Ask students to take turns giving and following directions with their partners. Emphasize that although the model bicycles look like toys, students should always remember that bicycles are not toys—they are vehicles. For extra emphasis on safety, you may also ask students to wear
a helmet while they "ride" through the bicycle course.

**Evaluation:**

1. In class, give each student a fresh copy of the Parts of a Bike Worksheet and the Traffic Signs Worksheet. Ask them to fill in as many blanks as they can, then have them evaluate how well they achieved the goal of learning to read and identify the items. For homework, ask them to use *Self-Management* to determine which strategy will help them remember the information they still need to learn. Make one or two suggestions as guides. The next day, have them share with you their progress and show how they use the strategy.

2. Ask students to fill out the *Self-Management* Worksheet to record which learning strategies they used to learn about bicycle safety and which were most helpful to them.

**Expansion**

1. Have students use *Self-Management* to choose whether they will create a poem, write a paragraph, or draw a picture about why bicycle safety is important to them. Ask them to discuss how they made their choice. Post their projects in the classroom.

2. Give students a list of vocabulary words and ask them to use *Self-Management* to learn them. Have them record in learning logs or journals which learning strategies they use and how well they work for them.
### Self-Management Worksheet

**Directions:** Put a check next to the learning strategies you used to learn about bicycle safety. Circle 1 if you did not find it helpful, and circle 5 if you found it quite helpful.

<table>
<thead>
<tr>
<th>Learning Strategies I used</th>
<th>Did the Learning Strategy Help Me?</th>
<th>How did I use it?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Selective Attention</strong></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td><strong>Take Notes</strong></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td><strong>Use Imagery</strong></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td><strong>Manipulate / Act Out</strong></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td><strong>Cooperate</strong></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td><strong>Inference</strong></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td><strong>Use Resources</strong></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td><strong>Transfer / Cognates</strong></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

Which of these learning strategies do you like to use most? __________________________

How did it help you learn about bicycle safety? __________________________

What other ways do you use it? __________________________

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Elementary Immersion Learning Strategies Resource Guide
Parts of a Bicycle Worksheet