

Discovering Shapes: Exploring Geometric Figures

Matemáticas | Geometría | Aprendizaje Invertido

Descripción

This lesson plan is designed to engage primary school students, ages 6 to 11, in the fascinating world of geometric shapes. Students will explore different types of geometric figures such as circles, squares, triangles, and rectangles through interactive activities that connect these shapes to their everyday surroundings. The purpose is for students to identify, describe, and classify shapes, enhancing their spatial awareness and critical thinking skills. Understanding geometric figures is essential because these shapes form the basis of many objects and designs they encounter daily, from playgrounds to art and architecture. By learning about shapes, students develop foundational math skills that will support future learning in geometry and problem-solving. The lesson follows the Flipped Classroom approach: students review videos and short readings at home to prepare, and in class, they actively apply their knowledge through hands-on tasks, making learning meaningful and enjoyable.

Objetivos de Aprendizaje

- Identify and name basic geometric shapes including circle, square, rectangle, and triangle.
- Describe the characteristics of each geometric figure using simple vocabulary.
- Compare and classify shapes based on their properties such as number of sides and corners.
- Create simple drawings or models using geometric shapes to represent real-life objects.
- Reflect on how geometric figures appear in everyday environments.

Recursos Necesarios

- Printed shape cards (at least 20 cards showing circles, squares, rectangles, triangles)
- Whiteboard and markers
- Projector or screen for showing videos
- Tablet or computer with internet access (for teacher use)
- Geometric shape worksheets (one per student)
- Colored pencils or crayons
- Real objects from the classroom or pictures showing geometric shapes in real life (e.g., clock, book, window)
- Video links provided in advance for home study (simple animated videos about geometric shapes in English)

Requisitos Previos

- Basic vocabulary in English related to colors and numbers (to support shape descriptions)

- Ability to follow simple instructions in English
- Experience with identifying and naming objects in their environment
- Prior exposure to simple counting and recognizing basic shapes informally

Actividades

Fase de Inicio

Tiempo estimado:

10 minutes

Propósito de la sesión:

Docente: "Today, we will explore different shapes all around us and learn how to name and describe them in English. This will help you see the world in a new way!"

Activación de conocimientos previos:

- **Docente:** Shows a colorful image with various shapes (circle, square, triangle, rectangle) and asks, "Can you point to the circle? What about the square?"
- **Estudiantes:** Raise hands and point to shapes as prompted.

Motivación y enganche:

Docente: Shares a fun fact: "Did you know that traffic signs use different shapes to tell us what to do? Circles, triangles, and rectangles help keep us safe every day!"

Contextualización:

Docente: Asks, "Can you think of anything in our classroom or your home that looks like a circle or a triangle?" Students briefly share answers aloud.

Fase de Desarrollo

Tiempo estimado:

40 minutes

Presentación del contenido:

Docente: "Before class, you watched a video about shapes. Now, let's use what you learned to play and create!"

Actividad 1: Shape Sorting Game

- **Objetivo:** Identify and classify basic geometric shapes.
- **Instrucciones:**

- **Docente:** "I will give you cards with different shapes. Work with a partner to sort them into groups: all circles together, all squares together, and so on."
- **Estudiantes:** Work in pairs to sort shape cards on their desks.
- **Organización:** Pairs
- **Producto:** Sorted groups of shape cards
- **Tiempo:** 15 minutes
- **Rol del docente:** Observe pairs, ask questions like "How do you know this is a triangle?" or "What makes a square different from a rectangle?"

Actividad 2: Shape Properties Discussion

- **Objetivo:** Describe characteristics of shapes using simple vocabulary.
- **Instrucciones:**
 - **Docente:** Draws a triangle, square, rectangle, and circle on the board, labeling sides and corners.
 - **Docente:** Asks the whole class, "How many sides does a triangle have? How many corners?"
 - **Estudiantes:** Raise hands and answer, repeating vocabulary aloud.
- **Organización:** Whole class discussion
- **Producto:** Verbal descriptions from students
- **Tiempo:** 10 minutes
- **Rol del docente:** Encourage correct use of vocabulary and gently correct pronunciation or errors.

Actividad 3: Create a Shape Picture

- **Objetivo:** Create drawings using geometric shapes to represent real-life objects.
- **Instrucciones:**
 - **Docente:** "Using your worksheet and colored pencils, draw a house or any object using circles, triangles, squares, and rectangles."
 - **Estudiantes:** Draw independently, labeling shapes in English if possible.
- **Organización:** Individual
- **Producto:** Completed shape drawing with labels
- **Tiempo:** 15 minutes
- **Rol del docente:** Walk around, ask questions like "What shape did you use for the door?" Provide support as needed.

Diferenciación:

- **Estudiantes que terminan antes:** Challenge them to find additional shapes in classroom objects or create a shape collage using cutouts.

- **Estudiantes que necesitan más apoyo:** Work with the teacher or assistant using physical shape models to feel and name shapes, and provide one-on-one vocabulary practice.

Transiciones:

Docente: "Great job with your drawings! Now, let's share what we made and talk about the shapes we used."

Fase de Cierre

Tiempo estimado:

10 minutes

Síntesis:

Docente: Leads a group activity called "Shape Ticket": each student says one shape they learned and one place they see it in real life. The teacher writes these on the board forming a word web.

Reflexión metacognitiva:

- "Which shape was easiest to recognize today?"
- "Can you tell me one new word you learned about shapes?"
- "How can you find shapes next time you are at home or outside?"

Retroalimentación:

Docente: Provides positive and specific feedback verbally to each student, highlighting correct shape identification and encouraging vocabulary use.

Transferencia:

Docente: "Tomorrow, we will use shapes to make patterns and learn how they can be part of bigger designs. You can also look for shapes on your way home or in your house!"

Tarea o reto:

Docente: Asks students to take a photo or draw one object at home that has at least two different shapes and bring it to class to share.

Evaluación

Tipo de evaluación: Formativa, aplicada durante la fase de desarrollo y cierre para monitorear el aprendizaje y dar retroalimentación inmediata.

Criterios de evaluación:

- Identify and correctly name at least three basic geometric shapes (linked to Objective 1).
- Use simple vocabulary to describe shape properties such as number of sides and corners (linked to Objective 2).

- Sort and classify shapes accurately in the group activity (linked to Objective 3).
- Create a drawing using at least two different geometric shapes (linked to Objective 4).
- Express understanding of shapes in everyday objects during reflection (linked to Objective 5).

Instrumentos sugeridos: Observation checklist during activities, shape sorting product, drawings, and verbal responses during reflection.

Evidencias de aprendizaje:

- Sorted shape cards showing correct classification.
- Participation and correct answers in shape characteristics discussion.
- Completed shape drawing worksheet labeled in English.
- Verbal reflections during closure activity demonstrating understanding.