

Aktivität 3.8. Farben und Formen der Natur

Cultural Background

Der Inhalt unserer Unterrichtsstunden, wenn wir uns mit der Natur und Umwelt beschäftigen, ist vielfältig. Wollen wir Farben lernen, können wir einen Spaziergang an einem Herbsttag unter den Bäumen in ihrer vollen Farbenpracht machen. Junge und alte Menschen in den deutschsprachigen Ländern gehen sehr gern zu jeder Jahreszeit und bei jedem Wetter spazieren.

In Waldsee

Waldsee is located on a lake (See) in the woods (Wald). Participants walk through the woods from their living quarters to the *Gasthof*, from the *Waldsee BioHaus* to the *Bahnhof*, or from the *Zwergensumpf* (dwarves' swamp) to our ropes course, named after *das Matterhorn*. Small language groups and nature activity groups take informative walks on the many nature trails to experience their natural environment. At *Waldsee* academic year programs, school classes experience the changing colors auf deutsch through a variety of hands-on activities. In *Waldsee*, we are connected to nature because we live in its midst.

In the Classroom

This activity combines geometry with environmental studies to take students and teachers outdoors to discover what lies beyond the classroom walls. The images and objects that are collected after just one class period outside can be used to integrate language learning with math and environmental skills in the classroom for the rest of the school year.

This theme is designed for use with students who either have little to no background in geometry with basic academic terminology of two- and three-dimensional shapes in German, and to explore their appearance and usage in our natural habitat and surroundings, emphasizing their presence in local and native plant life.

Objectives

- **Communication**

- Students will be able to describe colors, shapes and textures in German from life outside the classroom.
- Students will practice use of adjectives, endings, comparatives, superlatives.
- Students will use their German to analyze shapes and structures from a physical/geometric standpoint.
- Students will create and present a summary of their results, in 5+ sentences, both verbally and in writing.

- **Connections**

- Students will be able to make connections to their natural surroundings through the German language.

- Students will collect images showing various colors, shapes and textures from the natural and man-made environment surrounding the school building and use these images later in the classroom.
 - Students will be able to relate seasons/weather to plant appearance/size/color/etc.
 - Students will connect two dimensional shapes with real-life three-dimensional representations.
 - Students will create their own models or representations of local plants exclusively using two or three dimensional geometric shapes, adding color as necessary to depict specific traits.
- **Cultures**
 - Students will connect their investigation to local ecology and further their understanding of local plant life.
 - Students will research similar shapes in native plants of other areas, especially those in German-speaking areas of great contrast to their local area (mountains, river valleys, arid areas, increased humidity, etc.)

Language Functions in Focus

- Describing objects
- Asking for information
- Presenting information
- Comparing and contrasting

Materials

- Paper, writing utensils, colored pencils/markers
- Compass, straight edge
- Camera
- Notepads and pencils

Preparation

Students require introduction to two-dimensional shapes, colors, and basic adjectives describing shapes and forms, in German.

Those uncomfortable with sketching/drawing could be given photos to trace as an accommodation.

Generating Interest

Collage photos, made up of smaller photos, could be used to elicit general observations, descriptions of colors and use of one image to create another. Students could be given a set of paper shapes, and be instructed to create specific items, increasing in complexity and/or difficulty as time progresses (initially, things such as grass, a leaf, a flower, a tree, etc.).

Presentation and Practice

Step 1

Students begin by learning the terms for basic two-dimensional shapes (such as circle, oval, square, rectangle, triangle, etc.) and then sketch each shape, along with an illustrated title (in German) of that shape, one per page.

Then the class embarks on a nature walk beyond the school grounds. You and your students may choose to take pictures of things you see outdoors that have particularly vibrant colors or shapes.

Students should also sketch multiple examples of plants of any type that they find, including color, that demonstrate examples of those shapes. For example, a student would label one paper “das Oval” and include a geometric sketch. Then, they might divide their page into four quadrants, one for each of the areas visited on site. In each area, they would sketch a minimum of one, but likelier (hopefully) two to three examples of plants that have an oval in some capacity. An acorn (especially if viewed from above) could be drawn in their wooded section, petals in grassy areas, heads on a cattail in the marshy area, and lily pads near the lake shore. For each drawing, students would need to include the plant name (if known), and three to five adjectives, not including the relevant shape. For the acorn, they could include such terms as *braun, klein, rund, mit einem “Hut”*. They would complete these labeled sketches and diagrams for each shape given, finding examples in each of the various village site areas.

Students could explore local landscaping, natural plants/features of their areas, local parks, or research native plants and species, if weather and/or logistics prevent working outside and/or off school grounds. Students could take the work further and complete a sketch note/diagram page for each season of the year, or for two distinct seasons. For example, the acorn would not be found on the tree in late winter, so would not be included in that diagram. However, the leaf buds may fit the given shape earlier in the growing season, and then change to a different shape type by mid to late fall, demonstrating life cycles and growth over a period of time, and change in both appearance, shape, and color depending upon time of year, temperature, amount of sunlight, etc. These changes could be used to spur conversations about comparisons, life cycle, growth, death, hibernation, etc.

Be sure also to collect objects in nature such as bark, stones, pine cones, moss, leaves, flowers or mushrooms (Be sure that you don't disturb any ecosystems in the process -- for instance, never peel bark off a living tree!). Bring these items into the classroom and use them as inspiration during the school year.

As you collect words and expressions along your walk, discuss what you see with your students:

Die Blätter sind grün.

Der Baum hat grüne Blätter.

Die grünen Blätter sind spitz.

Diese Blätter waren grün, aber jetzt sind sie rot und gelb.

Die ehemals grünen Blätter sind jetzt rot und gelb.

Die gelben Blätter hängen noch am Ast.

Diese Landschaft ist hügelig.

Die Landschaft ist flach.

Diese hügelige Landschaft ist nicht flach und nicht bergig.

Along your walk, the following terms might come up:

Wortschatz

<i>die Ecke</i>	<i>symmetrisch</i>	<i>dick</i>
<i>das Dreieck</i>	<i>lang</i>	<i>dünn</i>
<i>das Viereck</i>	<i>kurz</i>	<i>viereckig</i>
<i>das Rechteck</i>	<i>rund</i>	<i>hügelig</i>
<i>das Quadrat</i>	<i>spitzig</i>	<i>bergig</i>
<i>der Kreis</i>	<i>breit</i>	<i>farbenfreudig</i>
<i>das Oval</i>	<i>schlank</i>	<i>scharf</i>
<i>der Winkel</i>	<i>schmal</i>	<i>weich</i>
<i>zackig</i>	<i>glatt</i>	<i>spitz</i>
<i>voll</i>	<i>steil</i>	<i>stumpf</i>
<i>klein</i>	<i>flach</i>	<i>seicht</i>
<i>Weit</i>	<i>offen</i>	<i>geschlossen</i>
<i>gross</i>	<i>bunt</i>	<i>farbig</i>

Step 2

When you return to the classroom, you can print your pictures and hang them in the classroom with the corresponding color names or shapes written below them. In this way, not only do you hold the memory of the walk with your students, but you also have lasting images and references that will stay with you in the classroom.

Whether on the walk or back in the classroom, return to the colors and shapes you and your learners have discovered. Can the students answer *Ja und Nein Fragen* using the new descriptors? Can they describe what they see? This is an ongoing process of repetition and review.