

## CUSTOM CAMOUFLAGE

### An Elementary Science Lesson Plan Designed For Group Inquiry Based On The 5E Inquiry Model

**GRADE LEVEL:** This lesson is designed for a 4<sup>th</sup> grade classroom. 4<sup>th</sup> graders should be cognitively able to understand the idea of camouflage. Additionally, 4<sup>th</sup> graders should be able to explore this concept without explicit teacher instruction.

**SCIENCE CONCEPT:** The purpose of this lesson is to help students better understand the idea of camouflage by exploring teacher created centers, in which each center offers a unique viewpoint of the topic.

#### **RELATIONSHIP TO CALIFORNIA CONTENT STANDARDS:**

3. Living organisms depend on one another and on their environment for survival. As a basis for understanding this concept:

b. *Students know* that in any particular environment, some kinds of plants and animals survive well, some survive less well, and some cannot survive at all.

**LEARNING OBJECTIVE:** Students will explore the concept of camouflage through two center activities and share their experiences.

#### **EVALUATION IDEAS:**

1. Formative: Teacher will check-in with each of the centers to assist students as necessary and ask guiding questions throughout the course of the lesson.
2. Summative: Students will explore two of the four centers provided by the teacher and share their experiences at those stations.

**CONCEPTUAL BACKGROUND:** This activity involves students exploring camouflage through two teacher created centers. Each of these centers offers a unique activity that addresses camouflage in a different way. While it will not be explicitly discussed in this lesson, camouflage can be described to 4<sup>th</sup> graders as the way an animal blends into its environment (Tan, 2011, p. 24). For an open inquiry lessons, a great way for students to explore this idea is to have students create and work with animal adaptations. As previously stated, each center has students either exploring pictures, clothing, masks, or puppets in order to gain their own understanding of how camouflage works. While the teacher cannot directly state the definition of camouflage, the teacher should assist students in generating their own answers based on their explorations.

#### **LESSON IMPLEMENTATION PLAN:**

ENGAGE – “OK scientists, we know from the food chain that lizards have predators. However, lizards are sneaky and have ways to avoid being caught. Today, you are going to explore this by working with the centers scattered throughout the classroom.”

EXPLORE – Teacher should have 4 centers pre-prepared for students to explore. One center will have pictures with animals hidden in the background (For example: A chameleon hidden amongst a rain forest). The second center will have pre-made masks with crayons for students to use as they see fit. The third center will have robes, scarfs and other clothing materials for students to try on. The fourth center will have animal puppets and props for students to explore.

“Alright scientists, you have 20 minutes to explore at least 2 of the centers. I will let you know when 10 minutes have passed so you will have time to visit another center. Let’s get started!” Students will explore their selected centers over the course of 20 minutes. Teacher will check-in on centers as necessary without instructing students what to do. If the teacher notices a student struggling or stuck at a center for a long time, ask guiding questions to help them think through that center.

EXPLAIN – “Okay scientists, your time is up! Now I would like for each of you to share which 2 centers you explored and what you did at those stations.”

Students will share out what they explored at their stations and the teacher will reinforce and/or clarify their responses for the class. The teacher should ask guiding, open-ended questions if students are struggling to describe exactly what they learned through the center activities. Teacher should be looking for students to have explored their own idea of camouflage through the center activities.

ELABORATE – “Scientists, you all had excellent observations! After hearing about all the stations, is there one you would have rather gone to? Why or why not?” Students will call on volunteers for responses.

EVALUATE –

Formative: During the course of the activity as a whole, the teacher will check-in with each of the centers to assist students as necessary and provide guiding questions to students when working with their centers and oral presentation.

Summative: The teacher will check for students to have gained their own understanding of camouflage through 2 of the 4 center activities provided in an oral presentation.

**DIFFERENTIATION PLANS:**

#### Behavioral for Student A:

- Check-in with this student frequently during the centers activities to ensure they are on task and not jumping around to each center.
- Allow student to be physical in this activity (i.e. do not correct behavior if they are walking around in a robe provided by a center activity or are using a puppet).

#### Cognitive for Student B:

- Privately give this student the option of spending more time on 2 center activities or spending all of the time on 1 chosen center.
- As the classroom will become noisy during these center activities, set-up at least 1 center activity in a quiet area (i.e. outside or on the other side of the classroom from the other centers).

#### Cognitive for Student C:

- Have students visit 3 centers within the allotted time period and explain which center helped them understand the topic best and why.
- Give the additional challenge of thinking of other possible center activities that have the same theme as the current centers.

#### Affective for Student D:

- Discuss privately with student ahead of time what will be done in class and what he will be required to do.
- Come up with strategies with the student on what to do if there are multiple students at the station they are at (i.e. “If you need something someone else is using, say ‘Can you please pass \_\_\_\_\_’”).
- If the student begins to get overwhelmed at a center, allow them to switch to a different center without penalty.

#### Language for Student Demands E, F, & G: (ELLs)

- Provide sentence frames in to help students with their observations (i.e. I went to [center name] and did [the activity] there).
- Have a visual direction guide with each center activity on what is provided and how to properly use it.
- Model an example of how a student could use a center without showing students explicitly what to do (i.e. try on a robe in a variety of ways or ways to use a puppet).

#### LIST OF MATERIALS:

- Pictures including animals hidden in the environment
- Construction paper and elastic band for animal masks
- Crayons
- Assorted clothing materials (i.e. robes, hats, scarfs, etc.)
- Brown paper bags (for animal puppet center)

- Environmental props (for animal puppet center)

#### DIRECTIONS FOR ACTIVITY:

1. Students will have 20 minutes to explore two of the five centers scattered around the classroom.
2. When completely finished at the first center, the student should move onto another center.
3. Once 20 minutes have passed, student will share with the class what they experienced while working with their centers.

#### SUGGESTED READING:

Behler, J. L. (1999). *National audubon society: First field guide reptiles*. New York, NY: Scholastic Inc.

While this text has a wealth of information on reptiles in general, Behler also discusses specific features of lizards for each section introduced (i.e. Anatomy, Diet, Reproduction, etc.). For the Defense section, Behler goes into specific details of what adaptations lizards have that help them survival in the wild, including a discussion of “Camouflage clothing” with accompanying pictures. This text would be useful in a classroom when focusing on a certain aspect of lizard life as it provides brief introductory facts and colorful pictures to help students get a general idea of the new topic.