

# Tarantula Habitats

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

**GRADE LEVEL:** 2<sup>nd</sup> Grade

**SCIENCE CONCEPT:** This lesson is aimed at helping students understand the different habitats that tarantulas live in and how they survive in them. By the end of this lesson, the students should be able to discuss and explain different types of habitats tarantulas live in and how they adapt to them in order to survive. By showing their knowledge of what they have learned, in groups of 4 they will make and present a drawing on butcher paper of a tarantulas habitat of their choosing. They will also complete their “Tarantula KWL” worksheet and the “Tarantula Word Bank” worksheet.

### **CALIFORNIA SCIENCE CONTENT STANDARDS:**

2. Plants and animals have predictable cycles. As a basis for understanding this concept:

- c) Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment.

**LEARNING OBJECTIVES:** Students will understand and be able to describe the different types of habitats tarantulas live in and how they adapt to them. The students will complete in groups of four their own drawings of a tarantulas habitat of their choosing.

### **EVALUATION IDEAS:**

1. Formative: Teacher and students asking questions, peer assessment and observation of tarantula habitats.
  
2. Summative: Completion and an oral description of the groups tarantula habitats (what habitat they picked, how the tarantula would look and adapt to that habitat). Completion of the “KWL” chart and the “Tarantula Word Bank” worksheet.

### **CONCEPTUAL BACKGROUND:**

There are about 900 different species of tarantulas. Tarantulas come in many different colors allowing them to adjust easily to the environment that they live in. The different species of tarantula are spread all over the world, in tropical, subtropical, and arid regions. They can be found in Africa and Madagascar,

southern Asia, parts of the Middle East, the Indo-Pacific region, southern Europe, Australia, parts of the Caribbean, northern New Zealand, some of the Micronesian Islands, all of Central and South America, and the United States north to central California and east to the Mississippi River. In the southwestern United States, tarantulas habitat is diverse and they can be found living in mountain foothills, desert basins and forested slopes. Another of fascinating facts about Tarantulas is that many live in burrows in the ground, which are lined with silk. However, they may also live in burrows or crevices located on cliff faces, under tree bark, among rocks, or between tree roots. Tarantulas mainly eat insects using ambush as their primary method of prey capture. Tarantulas hunt primarily in trees but others hunt on or near the ground.

### **Vocabulary:**

Adapt: to make suitable to requirements or conditions. To adjust oneself to different conditions, environment, etc.

Environment: the air, water, minerals, organisms, and all other external factors surrounding and affecting a given organism at any time.

Habitat: the natural environment of an organism; place that is natural for the life and growth of an organism: a tropical habitat.

**LESSON IMPLEMENTATION PLAN:** This lesson is designed to have students work in groups of four.

**ENGAGE** – I will start off the lesson by explaining to my students what a “Tarantula KWL” chart is. I will then tell them that we are going to fill out a “KWL” chart for tarantulas. I will ask them to fill out the first two columns of their worksheets, what they know about tarantulas and what they want to know about them. I will then read a story to the class called “An Interview with Harry the Tarantula” by, Leah Ann Tyson. After we have read the story, I will ask the students to think individually about the adaptations and behaviors Harry showed in the book. After a minute of thinking individually, the students will then share as many adaptations as they can with their group. We will come back together as a class and list as many facts as we can come up with about Harry on the board. I will discuss with the class about how tarantulas live in different habitats all over the world and how they have to adapt to those habitats.

**EXPLORE** – Print out pictures of different tarantulas in different habitats. Give each group a different picture. Have the students explore each picture. Rotate each group to different tables so that every student gets to see and observe every picture. Have them write down different types of habitats they see and what they notice

about the tarantulas. What do they look like? Do they blend in the habitat they're in? What type of home do they live in? Get back together and discuss what they observed as a class. Explain to the students that they are going to make their own tarantula habitat. They will be getting a piece of butcher paper to draw any type of habitat they pick with their group. The students will have about 20-30 minutes to complete their drawings of their tarantulas habitats. I will circulate around the room, asking questions to gauge understanding and to guide inquiry.

**EXPLAIN** – Once the students have had a chance to draw their habitats with their groups, each group will come to the front of the class and explain which habitat they chose, why they chose it, what their tarantula will look like, where it would live, what it would eat, how it would protect themselves, what its predators are and so forth. After each group has shared their drawings, we will come back as a class and discuss how they differ and are similar from one another. We will go over all the different habitats once again and the different adaptations that tarantulas have to go through until the class as a whole is comfortable about the different habitats and adaptations.

**ELABORATE** – I will elaborate the same concepts in a different context. I will relate the tarantulas to humans. I will explain and talk about how people adapt to different types of weather and environments. It will give the students a better idea of how tarantulas do the same thing as humans. I will also have my students complete their “Tarantula KWL” charts. They will write down what they have learned and what the most interesting fact they learned was. We will get together as a class and share what we all have learned. We will also go over and answer any questions that the students still had from their “Tarantula KWL” charts that were not answered.

**EVALUATE** –

1. Formative: Teacher and students asking questions, peer assessment and observation of tarantula habitats.
2. Summative: Oral description of tarantula habitats (what habitat they picked, how the tarantula would look and adapt to that habitat). Completion of the “KWL” chart and the “Tarantula Word Bank” worksheet.

**DIFFERENTIATION PLANS:**

Behavioral for Student A- Make sure to treat the student as an individual and provide the student with encouragement and positive feedback. Make sure to monitor the students behavior while the students are working in groups observing the pictures of tarantulas habitats and working on their habitat drawings. Use time-out sessions or breaks, to cool off disruptive behavior. If student can't work well with a group setting, have the student observe pictures with the group but have him/her draw their own habitat picture.

Cognitive for Student B (ADHD)- Make sure to provide your students who have ADHD extra time to complete their tarantula habitats and tarantula worksheets. Let your students use the pictures as they draw their habitats as a guide so they know what to add in their drawings. Providing the students with taped textbooks or note takers during class could be helpful. If further help is needed for understanding of the topic then provide the student with after class tutoring or volunteer support during class.

Cognitive for Student C (Special Needs)- Repeating oral instructions and providing the students with highlighted vocabulary words and definitions will help your special needs students greatly. Try to provide the students with immediate feedback on the students habitat drawings. Let the students use the pictures as they draw their habitats as a guide of what to draw so that they don't become overwhelmed with what to do. Also make the instructions of the activities concise and short so that the students don't get too overwhelmed and they have a better understanding of what is expected.

Affective for Student D (Emotional)- Make sure to provide a positive and encouraging classroom environment for your students who have emotional disabilities. Try to avoid confrontations and power struggles with the student. Make sure to provide time for relaxation between the lessons. Using visually stimulating materials such as the tarantula habitat photos for assignments will help the student concentrate on the work.

Language Demands for Students E, F, G (ELL)- Providing the ELL students with notes of the lessons and vocabulary ahead of class will help the students follow along with your lesson easier. Make sure to highlight all the key words and concepts on the notes. Repeat instructions slowly and clearly. Have the students pair up with another student of equal level so that they can both help each other with their learning. At the end of the lesson have the students speak in their native language as they describe their tarantula models or write in their native language to fill out their "Tarantula KWL" charts.

**LIST OF MATERIALS (PER GROUP):**

1. Colored pencils, markers, crayons
2. Pictures of tarantula habitats to observe
3. Butcher paper