



# Tortoise Treasures: Creating Enriching Playthings

<b>Adapted from</b>	<a href="https://petsintheclassroom.org/wp-content/uploads/2017/08/Loni-Butlin-PreK-2nd-Grade-tortoise.pdf">https://petsintheclassroom.org/wp-content/uploads/2017/08/Loni-Butlin-PreK-2nd-Grade-tortoise.pdf</a>
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<b>Pet:</b> Russian tortoise, but easily adapted to other pets.	<b>Class:</b> Pk -2, but easily adapted for older students
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<b>Brief Overview:</b> Students identify the likes and dislikes of their classroom Russian tortoise through observations. They then work in small groups to create obstacles, games and enrichment objects to enrich the tortoise's life. <b>Easily adapted to other grade and pets</b>	<b>Lesson Breakdown</b> <b>Lesson 1:</b> Observations <b>Lesson 2:</b> Brainstorming and Designing <b>Lesson 3:</b> Test <b>Lesson 4:</b> Refine/ Retest <b>Lesson 5:</b> Determining the best enrichment object
<b>Essential Question</b> How can we design and create safe and engaging enrichment objects for our Russian tortoise, using a variety of materials and considering its unique needs and preferences	

<b>Subjects</b> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Science</li><li><input checked="" type="checkbox"/> ELA</li><li><input checked="" type="checkbox"/> Math</li><li><input checked="" type="checkbox"/> STEM</li><li><input type="checkbox"/> Art</li><li><input type="checkbox"/> Other</li></ul>	<b>Stem Connections</b> <b>Science:</b> Needs of a Russian Tortoises (life science), design and conduct an experiment (SEPs) <b>Technology:</b> 3D modeling software (older students; optional) <b>Engineering:</b> building, testing and refining an enrichment object <b>Math:</b> measuring, counting, data collection
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## **Performance Expectations/ Standards**

### **NGSS**

**K-LS1-D:** Development and Growth of Organisms: Observe and describe the physical characteristics of Russian tortoises, including their shell, legs, and head.

**K-ETS1-A:** Engineering Design: Design and build simple structures to enhance the play and well-being of Russian tortoises.

**2-LS1-1.** Use observations to describe patterns of similarities and differences among plants, animals, and microorganisms.

**2-PS3-1.** Make observations to determine the effect of different forces on an object.  
**ELA.K.SL.1** Participate in conversations and discussions with peers and adults about familiar topics and events.

### **CCSS**

**ELA.K.SL.5** Demonstrate understanding of spoken word, syllables, and sounds (phonemes).

**ELA.K.RL.7** With prompting and support, describe characters, settings, and events in stories and poems.

**ELA.K.L.1.A** Print many upper- and lowercase letters.

**ELA.K.L.1.B** Use frequently occurring nouns and verbs.

**MATH.K.MD.A.1** Describe and compare relative sizes of objects, using terms such as bigger, smaller, or the same size.

**MATH.K.MD.A.2** Measure objects using non-standard units.

**MATH.K.G.1** Describe two-dimensional shapes, using informal names such as triangle, square, circle, rectangle, and heart

### **I CAN statements**

- observe and describe the physical characteristics of Russian tortoises, including their shell, legs, and head.
- identify the need for enrichment objects in a tortoise's environment.
- brainstorm ideas for safe and engaging enrichment objects that would appeal to a Russian tortoise.
- use a variety of materials to create simple structures, such as hiding places, climbing structures, and foraging enrichment objects.

- observations about the properties of different materials that could be used to make enrichment objects.
- measure the size and shape of different materials to determine which ones would be most appropriate for the tortoise.
- test my creations with a real tortoise to observe their effectiveness.
- design an experiment to test how different enrichment objects affect the behavior of a tortoise.
- collect data on the tortoise's behavior and use it to draw conclusions about the effects of the enrichment objects.

### Materials

- [Tortoise Treasures: Creating Enriching Playthings - Student Worksheet](#)
- Pictures or videos of Russian tortoises
- Variety of safe, non-toxic materials for enrichment object making, such as cardboard boxes, paper tubes, plastic containers, and natural materials like twigs, leaves, and rocks
- Glue, scissors, crayons, and markers
- A real Russian tortoise (if available) or a stuffed animal

### Teacher Background

#### Introduction

Russian tortoises, also known as Horsfield's tortoises, are native to the steppes and semi-deserts of Central and Western Asia. They are among the smallest and most popular pet tortoises due to their manageable size, calm temperament, and relatively low-maintenance care requirements.

#### Physical Characteristics

Russian tortoises are characterized by their distinctive domed shell, which is typically light brown or yellowish in color with dark marbling or blotching. Their bodies are compact and sturdy, with four short, thick legs that support their weight and facilitate movement on land. Their heads are small and triangular, with prominent eyes, a beak-like mouth, and a short tail.

#### Habitat and Diet

In their natural habitat, Russian tortoises inhabit a variety of environments, including open grasslands, steppe landscapes, and semi-arid regions. They are primarily herbivores, consuming a variety of grasses, weeds, and wildflowers. They also obtain moisture from succulent plants and occasionally supplement their diet with insects and small invertebrates.

#### Behavior

Russian tortoises are generally docile and peaceful creatures. They spend most of their

days foraging for food and basking in the sun to regulate their body temperature. They are also known for their burrowing behavior, creating underground shelters to escape harsh weather conditions and predators.

### Care and Enrichment

As pets, Russian tortoises require a spacious enclosure that mimics their natural habitat. This should include a basking area with a heat source, a substrate that allows for digging, and a variety of hiding places. A proper diet consisting of fresh grasses, vegetables, and supplements should be provided.

Enrichment is essential for Russian tortoises to maintain their physical and mental well-being. This can be achieved by providing a variety of enrichment objects, such as climbing structures, foraging boxes, and puzzle feeders. Additionally, regular interaction and handling can help socialize the tortoise and strengthen the bond with its owner.

### Lifespan

Russian tortoises are known for their longevity, with a lifespan of up to 50 years in captivity. With proper care and attention, these hardy reptiles can become cherished companions for decades.

### Conclusion

Russian tortoises offer a unique and rewarding pet-owning experience. Their gentle nature, manageable size, and relatively low-maintenance care requirements make them suitable for a variety of households. By providing a suitable habitat, a balanced diet, and appropriate enrichment, owners can ensure their Russian tortoises live long, healthy, and fulfilling lives.

## Lesson 1: Observations

Time	Materials	Activity
10 mins		<p>Introduction: Tell students, "Today we are going to talk about a big, but important word when it comes to taking care of our pet tortoise. This word is ENRICHMENT. Enrichments are ways keepers help their animals have more fun and make their days interesting."</p> <p>Have students share ways that they use enrichment objects with their own pets or objects they have seen at the zoo that keep the animals engaged.</p>
15 mins	T chart (blackboard, whiteboard,	Engage the students in a class conversation to come up with a list of things we know are true about what the tortoise likes and doesn't like. Draw a T-chart on the board

	SMARTboard)	<p>or easel with the titles LIKES and DOES NOT LIKE. These observations will help guide the student's creations (each tortoise has their own preferences). Some ideas students might give include he likes walking on the carpet and eating red foods, or he doesn't like loud noises or to be cold.</p> <p>After you have recorded their observations about what the tortoise does and does not like, ask, "how can we use these to help enrich his life?" Guide student's answers to make the connection that the enrichment ideas and materials should associate directly with your tortoise's likes.</p>
10 mins	<a href="#">Tortoise Treasures: Creating Enriching Playthings - Student Worksheet</a>	Give students about 10 minutes to draw pictures of the ways they already keep their tortoise happy.
10 mins		Introduce the challenge to the students and show them the materials they will be using.

Lesson 2: Brainstorming and Designing		
Time	Materials	Activity
20 mins	<a href="#">Tortoise Treasures: Creating Enriching Playthings - Student Worksheet</a>	Split students into small groups and have them start brainstorming ways to use the materials. They should draw pictures of their enrichment objects and get teacher approval before actually creating. Students should include a short description of how the tortoise will enjoy their enrichment object. (Older students may use 3D modeling software to create their designs)
25 mins	Cardboard, scissors, duct tape, tubes, etc.	Time to build an enrichment object! Encourage the participation of all of the group members.

### Lesson 3: Test

Time	Materials	Activity
45 - 90 mins	<a href="#">Tortoise Treasures: Creating Enriching Playthings - Student Worksheet</a> Enrichment objects	<p>Use an observation chart to record the tortoise's interactions with the enrichment objects. Record the tortoise's behavior, such as how much time it spends with each object, how often it interacts with it and how it seems to enjoy it.</p> <p>It is important to note that the tortoise may become fatigued depending on how many objects it is asked to test. It would be best to schedule the tests on different days to decrease fatigue.</p>

### Lesson 4: Refine/ Retest

Time	Materials	Activity
45-90 mins	<a href="#">Tortoise Treasures: Creating Enriching Playthings - Student Worksheet</a> Enrichment objects Cardboard, scissors, duct tape, tubes, etc.	Now that students have had experience planning, building and observation enrichment activities, have them return to the drawings from the beginning of the lesson. Have the class add new ideas and allow students to refine and retest their enrichment objects and retest.

### Lesson 5: Determining the best enrichment object

Time	Materials	Activity
45 mins	<a href="#">Tortoise Treasures:</a>	Gather students back together and ask: What did we notice about our enrichment enrichment objects? What

	<a href="#">Creating Enriching Playthings - Student Worksheet</a>	activities did our tortoise like best? Why do we think this? How are the behaviors we observed different from what we would observe in his cage?
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### Differentiation

#### For students who need additional support:

provide them with pre-made enrichment objects and record the data as a class.

#### For students who need additional challenges:

have them design and create more complex enrichment objects that include hiding food, adding ramps, and adding a second story to the tortoise's habitat.

### Assessment

Review with the students the I CAN statements. Have them self assess on their worksheets.

### Extension

Encourage students to research different species of tortoises and compare their enrichment needs.

Invite a local reptile expert to visit the class and share their knowledge and expertise about tortoises and enrichment or take students on a field trip to a local zoo or animal shelter to see how tortoises are enriched in captivity.

Have students create a presentation or poster about their enrichment object and its benefits.