

Pets in the Classroom Lesson Plan 1st Grade

Objective:

Students will observe different turtle structures and create a model off of one of those structures to solve a human problem.

Standards (NGSS - Next Generation Science Standards 2013):

1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

[Clarification Statement: Examples of human problems that can be solved by mimicking plant or animal solutions could include designing clothing or equipment to protect bicyclists by mimicking turtle shells, acorn shells, and animal scales; stabilizing structures by mimicking animal tails and roots on plants; keeping out intruders by mimicking thorns on branches and animal quills; and, detecting intruders by mimicking eyes and ears.]

K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

Hook:

Live turtles or if you do not have access to live turtles, You Tube clips-

Box turtle: <https://www.youtube.com/watch?v=sjhMpVNFu2A>

Water turtle: https://www.youtube.com/watch?v=RH_wZ3xjqpw or various pictures off of which the students can make observations.

Another option might be to contact your local turtle rescue and see if they could bring live animals to your classroom.

Lesson:

DAY 1 (45 min. period)

Have the turtle(s) on display for the students. Have them make written/drawn observations about the structures they see on the turtle: top and bottom shell, camouflage coloring, claws, beaked mouth, eyes, tail, ability to hide in shell (if box turtle), webbed feet (if water turtle).

Share the 2 objectives with them and go over the rubric*.

In teams of 2 have them brainstorm a list of things that could be designed based off of one aspect of the turtle. After 10 minutes have them share their ideas.

Show them the materials. So their creations don't get too big, you might have the design confined to a lunchroom tray. This also makes storing easier if they have several class periods to work on this.

DAY 2-3 (45 min. period)

Finish designing and building the prototype. Have them complete the sheet*.

Share the projects.

Assessment:

The model and the accompanying sheet

Rubric:

	4	3	2	1
Model	The model is age appropriate and is carefully constructed	The model is age appropriate and is fairly carefully constructed	The model is age appropriate but is fairly messy	The model is not age appropriate and has been hastily constructed
Prototype	Students can accurately explain what part of the turtle inspired the prototype	Students can fairly accurately explain what part of the turtle inspired the prototype	Students aren't sure what part of the turtle inspired their design	Students built something that does not relate to any part of the turtle
Problem	Students can explain with confidence what human problem this prototype is solving	Students can explain with some confidence what human problem this prototype is solving	Students aren't sure what problem their design is solving	Students have made a prototype that does not solve a human problem
Cooperation	The group required less than 1 teacher interventions	The group required less than 2 teacher interventions	The group required less than 3 teacher interventions	The group could not cooperate

* Included documents

If live turtles are used, please use appropriate handling techniques and make sure that all individuals thoroughly wash their hands after touching the turtles.

Turtle Project

Names:



What is the problem you are trying to solve?

From what part of the turtle are you copying your prototype?

Sketch and label your design.