

Ideas for using LEGO Education StoryStarter in the STEAM Classroom

PreAssessment

Gather information about what the students already know. Ask an open ended question that has no right or wrong answer. Just a build challenge that will allow you to assess what the students already know.

Build a model of what you think represents the word “Work”

Modeling as representations of informational text

create a booklet of the positions of the Moon, Sun and Earth at the different seasons of the year.

Lab Safety Rules

Creative Writing

Build story as a group where the setting of the story includes the three phases of the water cycle as the main setting, a _____ and a _____.

Build a model of an environmental current event, blizzard, fire, build models to tell the story of your day living through this event and write about it for the local paper.

Build a model of a scientist at work. Who What When Where Why and How. Interview your scientist for the local paper and write the article.

Larger Projects

Design a new structure for the playground. Write a letter to the principal discussing why it is needed, pros/cons.

You have been hired by the Atlanta Zoo to re-design the new ____ exhibit. Research and build a model of your plans. Be sure to include all necessary biotic and abiotic factors that are important to the survival of the animal and keep in mind the needs of the zoo, the visitors, and animal keepers.

Design an assistive device for your grandmother.

Design an assistive device for someone with a disability.

All of the old Junior FIRST LEGO League Challenges

A care manual for our school garden or a “How to” guide for creating a school garden.

Sequencing of events – Modeling plant growth, a trip to the zoo or any process

Weather book Focus on Weather words and build and write short stories focusing on each weather word to make up a book of weather short stories.

Integrated into Books

Walter the Farting Dog – design a new system for awakening the family when Walter needs to warn the family of impending danger.

Because of Winn Dixie - Build a model to be turned into a bronze art piece for WinnDixie that represents what WinnDixie meant to the people who knew him.

- What changes would you make to solve...?
- How would you improve...?
- What would happen if...?
- Can you propose an alternative...?
- How could you change (modify) the plot (plan)...?
- Can you think of an original way for the...?

General Engineering Challenges

Back to Back – build a model. Write the instructions for assembling your model. Sit with your back facing a partner and read your instructions to them. Can they accurately build your model from your instructions?

Select 25 pieces of LEGO from your kit. Build the tallest tower you can that will support the weight of this book. What about the weight of this bottle of water? What about a shoe?

Be sure to check out the 51 Building Challenges on the LEGO Quest Blog:
<http://legoquestkids.blogspot.ca/2012/10/final-challenge-quest-52.html>

FYI: The average maximum force a LEGO brick can stand is 4,240N. That's equivalent to a mass of 432kg (950lbs). If you divide that by the mass of a single brick, which is 1.152g, then you get the grand total of bricks a single piece of LEGO could support: 375,000 ... or a brick tower 3.5km (2.17 miles) high.