Lego wind power station lesson plan

How do you use LEGO ® elements in a wind turbine model?
Facilitate brainstorming about using LEGO ® elements in their models. For the wind turbine, this might include using long pieces as fan blades or programming the light matrix to come on when the blades are turned by hand. Students use their hands to spin the blades and can spin them faster or slower to see different outcomes from the matrix light.

How should students handle wind turbines?
Make sure that students handle them with great care! Ensure that students turn the fan off when changing the number of blades during the activity. The task requires students to investigate the performance of the wind turbine at different settings and to read and record the average voltage (V) and the average power (W) generated.

How do engineers transform wind energy into electrical energy?
Students learn how engineers transform wind energy into electrical energy by building their own miniature wind turbinesand measuring the electrical current they produce. They explore how design and position affect the electrical energy production. This engineering curriculum aligns to Next Generation Science Standards (NGSS).

What can I learn about Lego elements?
Learn about LEGO elements like Technic pieces, building mechanisms such as gears, or the Engineering Design Process through Skill Builders. NEW! Activities and Challenges Looking for new content to use with your students? Each month, we will be posting four new extension activities or challenges:

How can children learn about wind power?
To introduce children to the life changing impact of wind power,read the story of William Kamkwamba. William grew up in a small village in Malawi that was devastated by famine and drought. Forced to leave school he used donated books in the village library to teach himself how to build a windmill and create electricity.

What is the Lego community mission?
Our community mission is to support and learn from one another,to innovate across content areas,and to connect with our peers. Below are resources created for educators,coaches,and parents,and we invite all of you to contribute to our community of learning. Explore LEGO Education Unit and Lesson Plans by Product,Grade,and Subject.

1. Prepare. Read through the pupil material in the EV3 Classroom App. Collect information about solar power and how it"s used in space. If you feel that it"s necessary, plan a few lessons to go ...

Place the model about 2 m (? 2 yd) away from the fan. Choose a power setting, and move the model back and forth to find a distance where the wind speed is just enough to lift the weight brick, slowly. KEEP THIS POWER SETTING ...

A wind turbine converts the energy from the wind into electricity. A windmill uses wind energy to turn machines that pump water or make flour. Key vocabulary: renewable energy resource, ...

Get ready with lessons. Explore up to 75 lessons with all of the information you need, from materials lists to building instructions. Everything that you need to give a great lesson.

You can simulate clouds by covering the Solar Station with tissue paper or other light-absorbent materials. Optional Have students simulate different weather and landscape situations to ...

Have each group pick a building card and build one of the models shown in the sidebar (e.g., a picnic area, petrol station, and train). When the children have finished building, ask them to ...

mod round abs of A 1 run for rotations A 0 go shortest path to position A start motor A stop motor A 75 set speed to % A position A speed 10 move for rotations start moving right: 30 10 move ...

Wind Powered STEM Challenge - Learn all about the power of the wind with a Lego Rescue and a bit of inspiring reading! As an added benefit, there is a fantastic link to social issues and the power of education. Curious to ...

1. Prepare. Read through the pupil material in the LEGO ® Education SPIKE (TM) App.; 2. Engage (5 Min.) Use the ideas in the Ignite a Discussion section below to engage your pupils in a discussion relating to this lesson.; Explain the lesson. ...

Bring WeDo 2.0 into your elementary school classroom with hands-on lesson plans, software downloads, teaching resources, building instructions and FAQs. Skip navigation Pre-K & ...

This will help to familiarise your pupils with LEGO ® MINDSTORMS ® Education EV3. To complete this lesson, your pupils will have to have built the eight Space Challenge models, ...

Review this lesson plan and choose what you need from the Teacher Support box.. If necessary, pre-teach these related vocabulary words: action brick, stop (as a noun), destination, most, ...

Brain Game: In the math extension for this lesson, students collect and analyze data, learning fundamental skills for evaluating information and making informed predictions about outcomes. ...

This lesson plan includes the objectives, prerequisites, and exclusions of the lesson teaching students how to describe the advantages and disadvantages of wind turbines and locations ...

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This lesson explores the evolving landscape of wind energy, with a focus on the development of the world"s tallest wooden turbine. A listening task is based around the ...

Explore LEGO Education Unit and Lesson Plans by Product, Grade, and Subject. SPIKE(TM) Essential Lesson Progressions We"ve sequenced SPIKE(TM) Essential Lessons for Grades 1-5, combined with brick activities, app tutorials, and ...

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