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Human Impact

Lesson Segment Focus: Human Impact on the Environment   Lesson 1 of 2

Course & topic addressed: Science, Community Impact, Human Impact   Date: 2/4/19   Grade: 5

Student Outcomes

Specific learning objectives for this lesson.	Students will research to find communities that are using science to protect the environment and save energy resources. Students will research non-renewable energy and renewable energy. Students will create a pro/con graph of different energy sources. Students will work cooperatively in groups to create a plan to help Jonesboro be more environmentally friendly.
Describe the connection to previous lessons. (Prior knowledge of students this builds upon)	The students will need to have a basic understanding of human impact. They also need to have covered the matter cycle and be aware of what fossil fuels are.
Knowledge of students background (personal, cultural, or community assets)	Students will propose a plan created to make Jonesboro more green. This could include ideas such charging stations for electric cars, solar panels on community buildings, a wind farm, pedestrian bridges, or something similar.

State Academic Content Standards

List the state academic content standards with which this lesson is aligned. Include state abbreviation and number & text of the standard.	**5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.**

Academic Language Support

What planned instructional supports might you use to assist students to understand key academic language to express and develop their content learning? What will you do to provide varying supports for students at different levels of academic language development?	The teacher and students can create a Word Wall. This wall can contain helpful definitions for this lesson, pictures related to the word, as well as cognates in Spanish for ELL students.

Key Vocabulary

What vocabulary terms/content specific terminology must be addressed for students to master the lesson?	**Human Impact, Resources, Environment, Renewable, Non-Renewable, Solar Power, Wind Power, Carbon Dioxide, Fossil Fuels**

Materials

Materials needed by teacher for **this lesson**.	The teacher will need an assignment created on Google Classroom, pictures of various energy sources and paper to give to the students, a computer, internet, Inspiration 9, and a smart board to show the video on and write the definitions on.
Materials needed by students for **this lesson**.	The students need their own laptops, Inspiration 9, their student Google Classroom accounts, internet, and pens to write on the energy source pictures with.

Lesson Timeline with Instructional Strategies & Learning Tasks (**This should be VERY DETAILED**)

Amount of Time	Teaching & Learning Activities	Describe what YOU (teacher) will be doing and/or what STUDENTS will be doing during this part of the lesson.
10 minutes	**Introduction**:	The students will be groups in tables of four. The teacher will hand out large papers to each table that has four pictures in the middle. The pictures will be of a flame from a gas stove, an oil pump, a windmill, and a hydroelectric dam. Students will have 3 minutes to write down whatever they know about each picture. They will then be asked to discuss what these things have in common and what differences they can think of. The class will then report out their findings and the teacher will make a chart showing the similarities and differences of the four pictures. The teacher will mention that these things are energy sources that represent both renewable and non-renewable energy. The students should stay in these groups for the remainder of the class.
5 minutes 10 minutes 15 minutes	**Instruction:**	The teacher will ask the students exactly what non -renewable and renewable energy means. The students will help create their own definitions of the words. These definitions don't have to be perfect and will be revisited later to refine or correct any initial misunderstandings. The teacher will show a YouTube video further explaining different types of energy. (https://youtu.be/KEeH4EniM3E) The teacher will then go slightly more in depth on both non-renewable and renewable energy. Students will then be given a chance to refine their definitions. The students will then be asked to take out their laptops and go to their Google Classroom. They will find an Inspiration link waiting for them in their assignments. This link will take them to an Inspiration graph showing four sources of energy. Two sources of energy are renewable and the other two are non-renewable. Each energy source is a hyperlink to a Pro/Con list for that source. Students are to research and find at least two pros and two cons for each source of energy.

Amount of Time	Teaching & Learning Activities	Describe what YOU (teacher) will be doing and/or what STUDENTS will be doing during this part of the lesson.
10 minutes	**Closure:**	Students are to work in their groups to come up with a plan to help Jonesboro be more green with its energy choices. Two students will research communities that are using green energy to be more resourceful, one student will be the note taker, and one student will be the representative/speaker for the group. The students will come up with an idea for green energy choices in Jonesboro and will start a rough draft of their proposal. This will be completed in another lesson and presented to the class.

Accommodations/Modifications

How might I modify instruction for: Remediation? Intervention? IEP/504? LEP/ESL?	The cognate Word Wall will help ESL students. Students needing modification with their IEPs will be given them on a student/student basis. If there are several students needing more time, they can be in a group together with revised/modified assignment instructions and schedule.

Differentiation:

How might you provide a variety of instructional methods/tasks/instructional strategies to ensure all student needs are met?	Students can look up communities who have started using renewable energy online, in books, or interview people who have started a green movement in their community (in person or on Skype).

Assessments: Formative and/or Summative

Describe the tools/procedures that will be used in this lesson to monitor students' learning of the lesson objective/s (include	☐ Formative /☐ Summative	
	☐ Formative /☐ Summative	

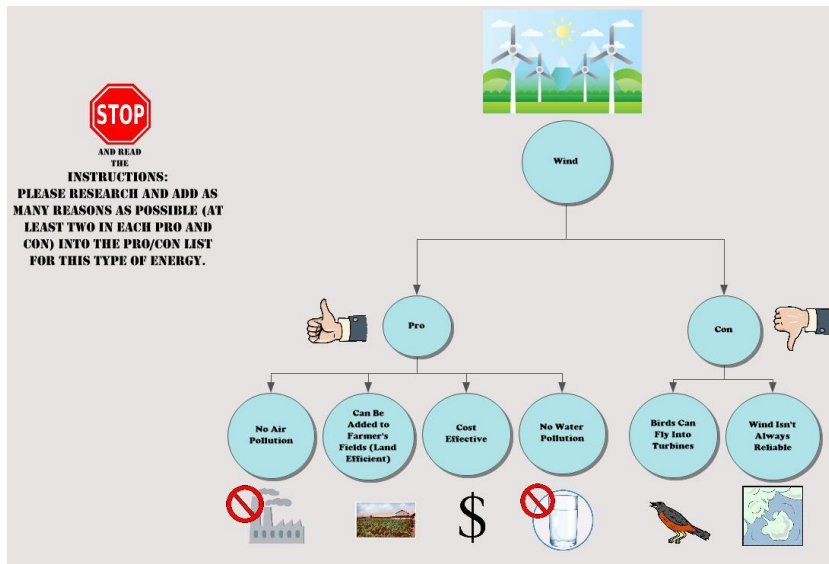| type of assessment & what is assessed).	☐ Formative /☐ Summative	

Research/Theory

Identify theories or research that supports the approach you used.	

Lesson Reflection/Evaluation

What went well? What changes should be made? How will I use assessment data for next steps?	*TO BE FILLED IN AFTER TEACHING*

Include supporting material such as slides, pictures, copy of textbook, and handouts for any activities students will be using as part of your lesson.