Environmental Impact Studies

Pairs of students will do an environmental impact study for local development near the school or another area.

Grade Level: 10 - 12th
Subject: Environmental, Science
Length of Time: 3-4 Class Periods

Common Core Alignment
CCSS.ELA-Literacy.11.RST.3 -
CCSS.ELA-Literacy.11.RST.8 -
CCSS.ELA-Literacy.11.RST.4 -
CCSS.ELA-Literacy.11.RST.9 -
- (See note; not applicable as a separate requirement)

Objectives & Outcomes
The students will be able to analyze the effects of development of land on the environment in a given location. The students will be able to complete an environmental impact study using research from the Internet and other sources.

Materials Needed
Access to the Internet or other resources such as local zoning phone numbers, etc.; cell phones (if permitted) or methods to contact zoning offices or other officials, email, letter writing; environmental impact checklists

Prepare ahead of time: Environmental impact checklists for each student (many can be found on the Internet)

Procedure

Opening to Lesson
- After students have sat down, in a serious tone of voice, make the following announcement: “The school district/principal has decided to construct a toilet in the corner of the room to prevent time being wasted walking to the restrooms during the
school day."

- As the students begin to discuss the plan, ask them to tell you the problems with the idea.

**Body of Lesson**

**Modeling**

- List their responses on the board or other display area
- Ask students for some solutions to the problem: What is a better alternative? If it had to be built, what would be the most effective design? Other similar questions.
- Remind students that they just did an environmental impact study related to adding a toilet to the classroom

**Guided Practice**

- Distribute the environmental impact study checklists to each student
- Go over the checklist and answer any questions students may have about it
- Pair students
- Inform students they will be responsible for doing an environmental impact study related to constructing a restaurant on (property/street to be determined prior to start of class)
- If possible, a short visit to the site could take place or have the restaurant built in walking distance of the school
- Following the site visit, or use of Google Earth to “visit” the site, the students will begin research and address the items on the checklist
- If permitted, students may call local zoning officials, others for answers to questions not found on the Internet (Phone call responses may be shared with entire class to prevent repeat calls to same official.)
- Encourage students to seek alternatives to problems or issues that may arise during the research and study
- Remind students to use the checklist and to carefully cover every point, not skipping over parts. Some of the items may be skipped, but returned to later.
- A final report will be completed for evaluation

**Independent Practice**

- Have students write a short essay about the experience, what they learned and why it is important to do environmental impact studies prior to building a home or business.

**Closing**

Allow students to share some of their homework responses. Ask students what impact the study may have had on future career choices, if any.

**Assessment & Evaluation**

Rubrics to determine if impact checklist was followed or use the checklist as the rubric to determine the students have addressed each item in their final reports.
Modification & Differentiation

Students do the research individually or in larger groups. Use a different area of town for each pair of students. If students cannot visit the local area, complete only the parts of the checklist which are feasible to address in the report. Assign some of the work for homework.

Related Lesson Plans

Ocean Pollution

Students will research ocean pollution and compare/contrast current data, hypotheses and other information and check for accuracy.

Eco-Friendly Homes

The student will work in groups of three or four to design an eco-friendly home.

Water, Water, Everywhere

The students will identify products that need water to be manufactured, and the amount needed for each product.

Six Degrees of Science Separation

Using a list of terms from all fields of science, the students will connect them in six or less steps to a non-science term, explaining scientific relationships during the process.