

Lesson 25

Build Out Dilemma

How are towns planned regarding development?
How is build - out determined?
What is being done to protect open space areas?

GOAL To calculate development of a hypothetical town

OBJECTIVES Students will:

- ✓ calculate the amount of development
- ✓ determine open space

MATERIALS calculator, paper, pencils

CORE CURRICULUM CONTENT STANDARDS

- Math 1(1,2), 2(2,3)
- Science 1(1,2,5,6), 6(4), 7(5,6,7), 8(2-4,6), 14(1)
- Social Studies 3(5), 6(3-5), 8(3), 9(5), 11(1,4), 12(3,5), 13(2,4)
- Arts 1(1-3), 6(3)

VOCABULARY build-out, development, open space

PROCEDURES

1. Begin by telling students they were asked by a town to develop a “build-out” plan. This is a plan to determine how much of the town can be developed. The following information is provided to the students regarding the town. Have them determine a final percentage. The information may be written on the board for students.
2. The town is rural in character, less than 10,000 in population. During the last five years, the town has seen a large increase in population. The growth is the result of the town’s location. It is situated close to a pristine river, major urban areas and the schools have consistently shown high standards.
3. Break students up into groups. Begin by providing them with total acres of land. The town is spread out over 26,000 acres. Land that can not be developed includes 4,000 acres of open space land and 2,000 acres of wetlands (*Those figures are subtracted from the 26,000*). One fourth of the total land has already been developed with houses and commercial buildings. (*subtract $\frac{1}{4}$ or 6,500 acres*). Have students subtract 10% of subtracted figure ($26,000 - 4,000 - 2,000 - 6,500 = 13,500 - 1,350 = 12,150$). Divide 12,150 by total amount (26,000) to calculate percentage (46.7%). This is the percentage amount left for development.

Farmington River Watershed Education Curriculum: High School

4. After groups complete their calculations, have them answer the following questions:
 - a. What does the term, "build-out" mean?
 - b. How will building-out the town affect town services such as schools, fire, water, sewage disposal, waste collection, etc.?
 - c. What can be done to protect the river during and after construction?
 - d. The open space land is undeveloped but not yet protected. It will need to be purchased or donated to be protected through a conservation easement (also known as a conservation restriction) which will retire the development rights on the property. How will this be managed by the conservation commission?
 - e. Many of the houses will be constructed close to woodlands. The trees will be cut down for the development. The unprotected soil may result in runoff sediment into the river. What can the town planner do to protect the river?
5. Have groups discuss their answers.
6. If you were to look at the river bank from a side view, how would the town appear now and in the future? Illustrate how you think it will look.

EXTENSIONS

1. Have a town manager, planner or assistant town planner address these issues with the class.
2. How are rivers protected when towns are developed?
3. What measures are being taken to protect the Farmington River Watershed?

GLOSSARY

build-out - a glimpse at the possible future of a community when all land is developed to the maximum extent allowed under law

development - the act of making some area of land or water more profitable or productive or useful; such as a housing development

open space - land that remains in its natural space or is used for farming or forestry; a body of water or watercourse that remains in its natural state