Dragonfly Pond

Study Units
Iowa’s Waters; The World in a Pond; People, Land, and Water

Supplemental Information
There are “Dragonfly Ponds” all over Iowa. The most problematic pollutant in Iowa waters is silt (fine soil). Most silt is in our waters because of land use practices in the watersheds (land draining to a body of water). See People, Land, and Water resources page for information about impacts of land use on water bodies.

Teaching Suggestions
Have students complete the activity as written. Older students can arrange the additional land uses on the Supplemental Sheet of Land Uses around Dragonfly Pond or create your own sheet of land uses based on those in your area. You might want students to do the Student Worksheet together in preparation for the activity or as individuals after the activity to reinforce the concepts. Older students: Elaborate on the impacts of land uses, especially homes and stores. Discuss the “ripple effect” of providing electricity, water, roads, and sewage disposal to these areas.

Extend the activity by doing the activity, “Watershed” and /or by including use of the EnviroScape model to demonstrate how activities in the watershed impact a pond or lake.

Evaluation
See the Student Worksheet and the Aquatic WILD Guide.

Student Materials
- Supplemental Sheet of Land Uses
- Student Worksheet

Answers for student worksheet: These may vary; the key is for students to be able to justify their answers based on ecological concepts.

Teacher Aids
None

Additional Materials
Demonstration Models including EnviroScapes may be available in Iowa near you. Check the My County Parks website for your nearest county conservation board naturalist to see if they have materials to borrow!
1. There are “pros” and “cons” associated with all types of land uses. Put a P in the blank to the left of the effect of the land use if it is a “pro” (beneficial) and a C in the blank if it is a “con” (harmful).

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farming</td>
<td>_____ Soil erosion</td>
</tr>
<tr>
<td></td>
<td>_____ Draining of wetlands</td>
</tr>
<tr>
<td></td>
<td>_____ Produces food</td>
</tr>
<tr>
<td></td>
<td>_____ Provides jobs</td>
</tr>
<tr>
<td></td>
<td>_____ Run-off of fertilizers and pesticides</td>
</tr>
<tr>
<td>Homes</td>
<td>_____ Shelter for people</td>
</tr>
<tr>
<td></td>
<td>_____ Loss of animal homes</td>
</tr>
<tr>
<td></td>
<td>_____ Provide jobs</td>
</tr>
<tr>
<td></td>
<td>_____ Use water</td>
</tr>
<tr>
<td></td>
<td>_____ Produce sewage</td>
</tr>
<tr>
<td>Factories</td>
<td>_____ Provide jobs</td>
</tr>
<tr>
<td></td>
<td>_____ Air / water pollution</td>
</tr>
<tr>
<td></td>
<td>_____ Use much water</td>
</tr>
<tr>
<td></td>
<td>_____ Loss of animal homes</td>
</tr>
<tr>
<td></td>
<td>_____ Provide products people need</td>
</tr>
</tbody>
</table>
2. List three other land uses. What are the pros and cons of each of these?

A. Land Use 1: ____________________________
   ______________________________________________________________________
   ______________________________________________________________________

B. Land Use 2: ____________________________
   ______________________________________________________________________
   ______________________________________________________________________

C. Land Use 3: ____________________________
   ______________________________________________________________________

3. What are some actions that could be taken to decrease negative effects of the following land uses on our waters?

A. Factory: ____________________________
   ______________________________________________________________________
   ______________________________________________________________________

B. Corn field: ____________________________
   ______________________________________________________________________
   ______________________________________________________________________

C. Houses: ____________________________
   ______________________________________________________________________
   ______________________________________________________________________

D. Gravel pit: ____________________________
   ______________________________________________________________________