Mr. Skinner’s Hansen Forest Program

1. General Goals
   1.1. Make the Hansen Woods area more usable for students
   1.2. Implement an environmental restoration project
   1.3. Insure proper stormwater functioning of the stormwater treatment system

2. Learning goals
   2.1. Build teamwork
   2.2. Improve communications skills
   2.3. Improve ability to think through complex problems
   2.4. Increase community awareness/involvement
   2.5. Build natural sciences knowledge and skills
   2.6. Increase understanding of stormwater runoff

3. Fieldwork Objectives
   3.1. Create safe access to trails from lower playfield – stairs?
   3.2. Prune brush along trails
   3.3. Build a bridge over wet spot on upper trail
   3.4. Repair observation deck
   3.5. Install interpretive signs
   3.6. Install a ropes course
   3.7. Connect trail system to adjacent new development
   3.8. Inventory flora and fauna
   3.9. Characterize existing human impacts
   3.10. Design and implement a restoration project for a site near the pond
   3.11. Design and implement a monitoring plan for the restoration project
   3.12. Review the stormwater treatment design
   3.13. Inspect the stormwater treatment facilities
   3.14. Monitor the stormwater treatment functions

4. Year One Fieldwork Program
   4.1. Start trail improvements
   4.2. Plan ropes course
   4.3. Characterize flora and fauna
   4.4. Plan restoration project
   4.5. Inspect stormwater system

5. Year One Tasks
   5.1. Inspect trail system (1 field afternoon)
   5.2. List needed trail improvements (1 classroom session)
   5.3. Install temporary post and rope railing and cut stairs into slope at gate: design, get tools and supplies, install (2 class sessions, homework, 1 field afternoon)
5.4. Plan year one trail improvements (brush trails, install steps, repair observation deck):
   5.4.1. Decide what needs to be done (1 class session)
   5.4.2. Create tools and supplies lists (part of a field afternoon and 1 class session or homework?)
   5.4.3. Line up trail project equipment and supplies (homework)
   5.4.4. Schedule trail project work days (classroom)
   5.4.5. Do trail work (3-4 field afternoons)
5.5. Discuss trail connections to development (classroom)
5.6. Contact developer/homeowner association (homework)
5.7. Create presentation on Hansen Woods for developer/homeowner association (class & homework)
5.8. Meet with developer/homeowner association (evening?)
5.9. Choose ropes course location (part of a field afternoon)
5.10. Research ropes course facilities (homework)
5.11. Design ropes course (field afternoon, 2-3 class sessions and homework)
5.12. Study native flora (classroom, field trip to nursery, 2 field afternoons)
5.13. Study native fauna (classroom, field afternoon(s) and ??)
5.14. Study human environmental impacts (classroom, field trip and or field afternoon)
5.15. Conduct flora and fauna observations of Hansen Woods (field afternoons)
5.16. Conduct human impact observations of Hansen Woods (field afternoons)
5.17. Research environmental restoration projects (class, homework & field trip)
5.18. Plan restoration project:
   5.18.1. Choose restoration site (field afternoon)
   5.18.2. Decide what needs to be done (field & class)
   5.18.3. Develop a weed control plan (homework & class)
   5.18.4. Develop a planting plan (homework & class)
   5.18.5. Design monitoring plan (homework & class)
   5.18.6. Draft a list of equipment and supplies (homework & class)
   5.18.7. Line up supplies (homework)
5.19. Conduct baseline monitoring (2 field afternoons)
5.20. Research stormwater treatment (classroom and field trip)
5.21. Research Hansen stormwater system
   5.21.1. Contact school district and installer (homework)
   5.21.2. Review stormwater system plans (classroom)
   5.21.3. Meet on-site with stormwater system designer/installer (field afternoon)
   5.21.4. Inspect stormwater system in the field (field afternoon)
   5.21.5. Observe stormwater functioning during storm events (field afternoon)
   5.21.6. Evaluate and report on stormwater system functioning (classroom)

6. Year Two Fieldwork Program
6.1. Finish trail improvements
6.2. Install ropes course
6.3. Implement and monitor restoration project
6.4. Stormwater system repairs

7. Tasks
7.1. Inspect trail system (1 field afternoon)
7.2. Review trail improvements plan from previous year (1 classroom session)
7.3. Plan year two trail improvements (build bridge, improve surfacing, install interpretive signs):
   7.3.1. Decide what needs to be done (1 class session)
   7.3.2. Create tools and supplies lists (part of a field afternoon and 1 class session or homework?)
   7.3.3. Line up trail project equipment and supplies (homework)
   7.3.4. Schedule trail project work days (classroom)
   7.3.5. Do trail work (3-4 field afternoons)
7.4. Install ropes course designed in Year One
   7.4.1. Decide what needs to be done (1 class session)
   7.4.2. Line up ropes course equipment and supplies (homework)
   7.4.3. Schedule ropes course work days (classroom)
   7.4.4. Build ropes course (3-4 field afternoons)
7.5. Plan interpretive signs
   7.5.1. Research interpretive signage (class & homework & guest speaker?)
   7.5.2. Choose features to sign (field afternoon)
   7.5.3. Design signs and draft language (classroom sessions & homework)
   7.5.4. Create tools and supplies lists (class session or homework?)
   7.5.5. Line up sign equipment and supplies (homework)
   7.5.6. Schedule sign work days (classroom)
   7.5.7. Install interpretive signs (2 field afternoons)
7.6. Study native flora (classroom and nursery)
7.7. Study native fauna (classroom and ?)
7.8. Study human environmental impacts (classroom and field trips)
7.9. Conduct flora and fauna observations of Hansen Woods
7.10. Conduct human impact observations of Hansen Woods
7.11. Research environmental restoration projects (class & field trip)
7.12. Implement restoration plan
   7.12.1. Line up restoration project equipment (homework)
   7.12.2. Schedule restoration project work days (classroom)
   7.12.3. Install restoration project (2-3 field afternoons)
   7.12.4. Conduct follow-up monitoring (2 field afternoons)
7.13. Repair/maintain stormwater facilities
   7.13.1. Inspect stormwater system in the field (1 field afternoon)
   7.13.2. Review Year One report on stormwater system (class)
   7.13.3. Decide on needed repairs and maintenance (class)
   7.13.4. Line up stormwater repair equipment (homework)
   7.13.5. Schedule stormwater repair work days (classroom)
7.13.6. Repair stormwater system (2-3 field afternoons?)

8. Future Years
   8.1. Trail maintenance
   8.2. Restoration project monitoring
   8.3. Additional restoration work
Suggested Year One schedule

September
In the woods
  • Initial walkthrough
  • Trail improvements inventory
  • Plant walk #1
Classroom
  • Discuss initial impressions
  • List of trail improvements
  • Discuss trail connections with development
  • Plan temporary steps near gate (or parents do this)
  • Native plants intro
Homework
  • Line up temporary steps supplies & equipment

October
In the woods
  • Install temporary steps (or parents do this)
  • Plant walk #2
  • Inspect stormwater facilities
Classroom
  • Plan trail improvements
  • Schedule trail brushing day
  • Stormwater treatment?
  • Parks dept. maintenance person?
Field trips
  • Stormwater treatment facility
Homework
  • Tools and supplies for trail brushing
  • Contact homeowner association

November
In the woods
  • Finalize trail plan details
  • Wildlife observations
  • Trail brushing days
Classroom
  • Wildlife biologist?
• Stormwater planner?

Homework
• Contact stormwater system installer

December
In the woods
• Stormwater observations (flow measurement?)
Classroom
• Plan permanent steps
• Schedule steps field work for January
• Flow measurement math?
Homework
• Line up steps tools and supplies

January
In the woods
• Winter twig ID
• Choose ropes location
• Install steps
Classroom
• Ropes courses intro
• Plan deck repairs
• Schedule deck repairs
• Line up deck tools and supplies
Homework
• Ropes course research

February
In the woods
• Repair deck
• Conduct human impact assessment
Classroom
• Work on ropes course plans
Field trips
• Rope course?

March
In the woods
• Wildlife observations
• Restoration site recon
Classroom
- Intro to environmental restoration
- Start planning restoration project

Field trips
- Restoration project site

Homework
- Research weed control

April
In the woods
- Plant ID review
- Baseline monitoring of restoration site vegetation

Classroom
- Vegetation monitoring
- Finalize restoration plan

Field trips
- Nursery

Homework
- Research native plant revegetation

May
In the woods
- Wildlife observations

Classroom
- Summarize monitoring results
- Calculate vegetation percent cover

Homework
- Line up restoration project supplies for next fall