2014-2015 Annual School Forest Survey Results

Response Rate:

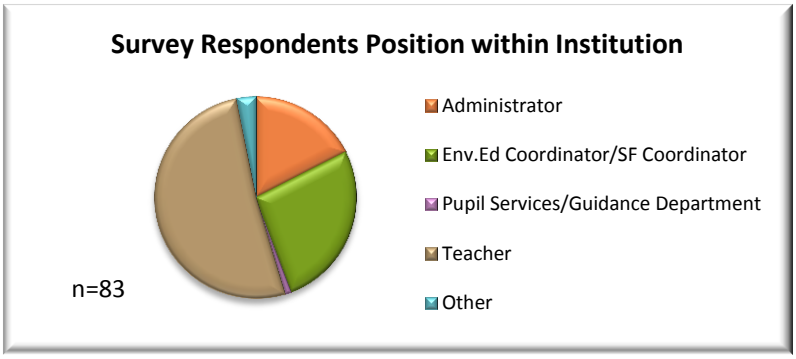
Eighty-one individual schools or districts provided responses to the survey out of 231 individual schools or districts that received the survey. Eighty-one (81) district responses were received from 77 public school districts, 3 private schools, and 1 higher education institution. This is a 35% response rate. The survey was sent to 225 public schools, 5 private schools, and 1 higher education institution with registered school forests. Overall, it was distributed to over 357 contacts within the school forest database.

Interestingly only 49% of the districts that participated in the survey this year also did so last year. That means that 51% of the school districts that responded were different than last year's participants and 41 of the districts that did complete the survey last year did not fill it out this year. As a result, this survey serves as a "snapshot" of school forest activity in Wisconsin, not as a comprehensive report. Ironically, even as the district participation changes each year, the survey completion rate and responses seem to stay fairly consistent. That consistency can be seen in a few of the charts that show comparative data. However, due to the fact that not all school forests submit data and that not all of the same school forests submit data every year, we can observe general trends throughout certain questions that were asked in the survey, but do not assume that these are precise and final numbers. It is merely a representation of Wisconsin's School Forest Program over the past year.

The schools/districts who responded include: Arrowhead, Athens, Boscobel, Bruce, Colby, Cornell, D. C. Everest, De Soto, Edgar, Elcho, Flambeau, Franklin, Gale-Ettrick-Trempealeau, Gillett, Goodman-Armstrong Creek, Green Lake, Greendale, Hartland Lakeside, Highland, Iola-Scandinavia, Ithaca, Janesville, Kickapoo, Kiel, La Crosse – Summit, Lac du Flambeau, Lake Country, Madison Metropolitan, Manitowoc, Marathon City, Marion, Marshfield, Mauston, Merrill, Middleton Cross Plains, Minocqua J1, Montello, Nekoosa, Newman Catholic Schools, Niagara, Northern Ozaukee, Northwood, Oakfield, Oregon, Pardeeville, Phillips, Pittsville, Port Edwards, Prentice, Princeton, Pulaski, Reedsburg, Rhinelander, Rib Lake, Rice Lake, Rio, Rosholt, Royall, Sauk Prairie, Wabeno Area, Sevastopol, Solon Springs, Southern Door, Sparta, Spencer, St. Paul Lutheran School, Stanley-Boyd, Stevens Point, Stoughton, Tigerton, Tomorrow River School, Trinity Lutheran School, UW-Richland, Webster, Westfield, Weston, White Lake, Whitnall, Wild Rose, Winneconne, and Woodruff J1.

Survey Respondents:

Administrator = 17
Principal: 9 **Superintendent:** 8
Curriculum Director: 1
EE/SF Coordinator = 26
Building & Grounds Coordinator = 1
Community Volunteer = 0
Foundation Director = 1
Consultant = 1
Pupil Services/Guidance Dept. = 1
Teacher = 50



Grade levels taught:

Early Childhood: 1
Elementary: 13
Middle School/Jr High: 30
High School: 32
Post-Secondary: 0

Subjects/classes taught:

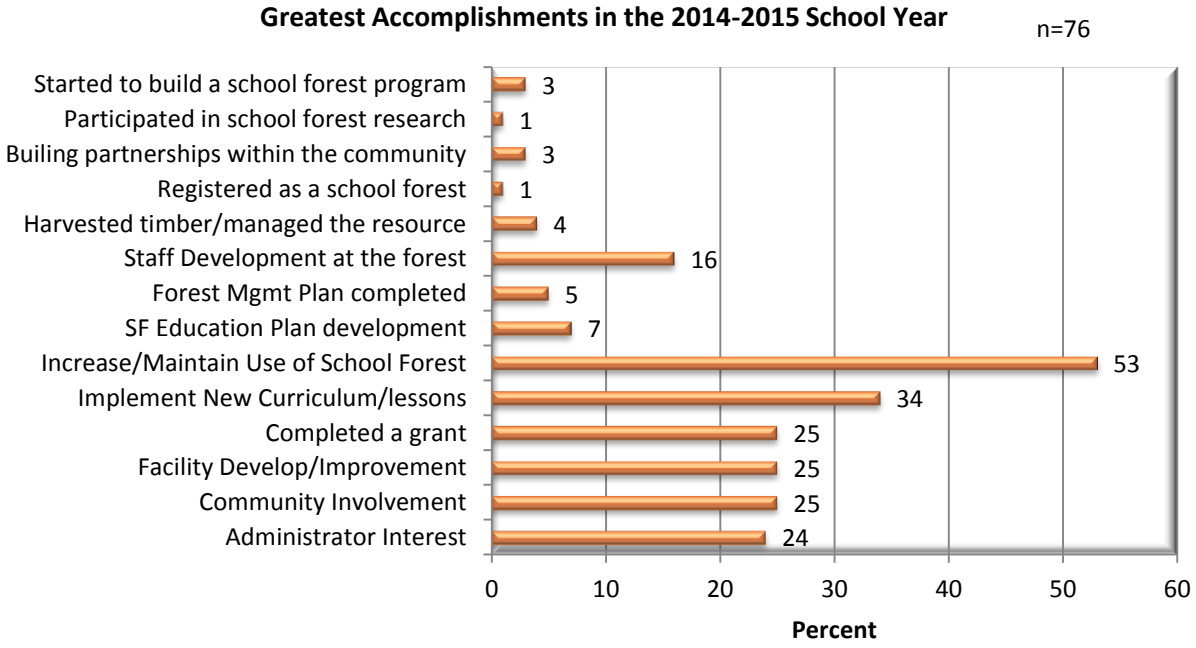
All subjects (elem. teachers): 7
Art: 0
Agriculture Education: 17
English: 2
Math: 1
Physical Education: 2
Science: 27
Social Studies: 2
Special Education: 0
Technology Education: 1
Other: 1 (Environmental Education)

School Forest Success:

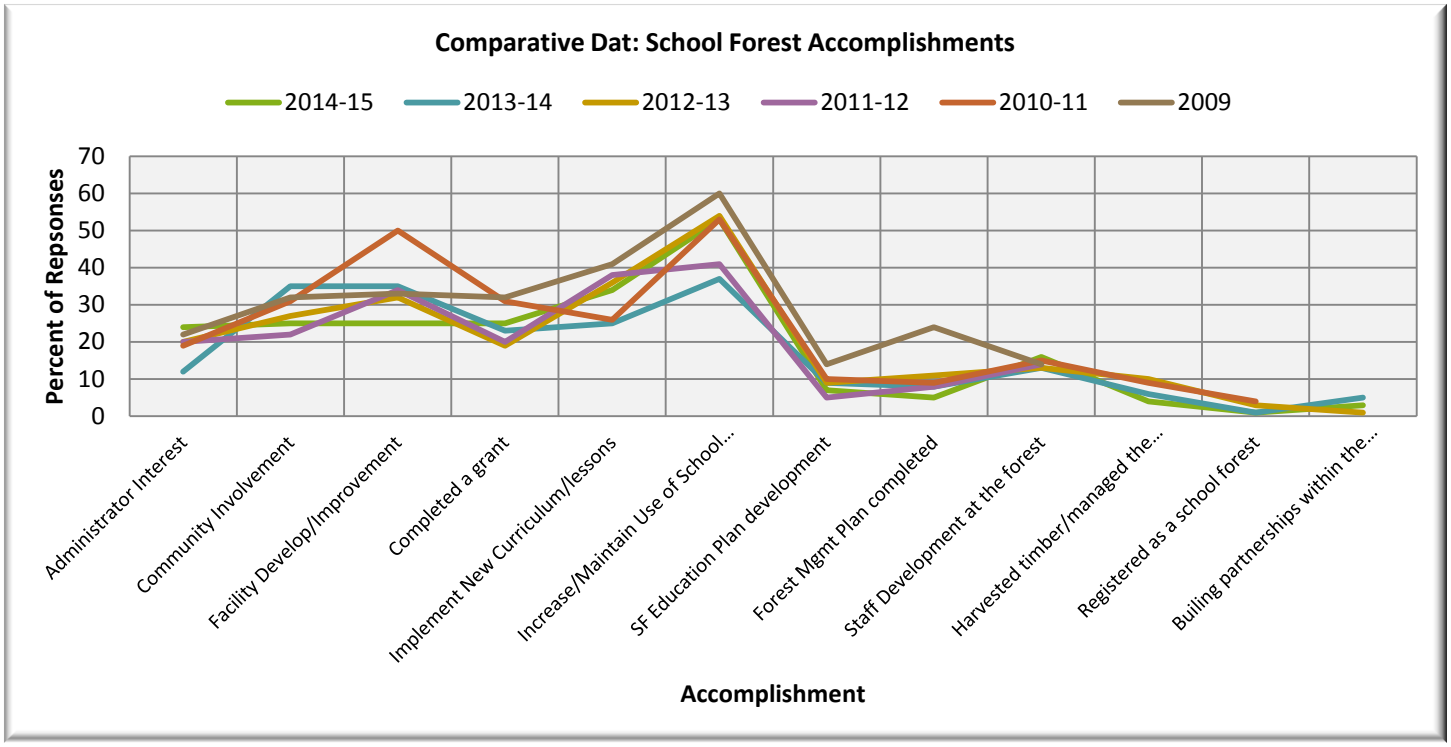
Greatest School Forest Accomplishments

Responses indicating the **district's greatest school forest accomplishments** in the 2014-2015 school year:

- Administrator interest-24%, Community involvement-25%, Facility development/improvement-25%, Completed a grant-25%, Implement new curriculum-34%, Increased use of the school forest-53%, School Forest education plan development-7%, Forest management plan completed-5%, Staff development opportunities-16%, harvested timber – 4%, started to build a school forest program and built community partnership -3% each, and a few others seen below.

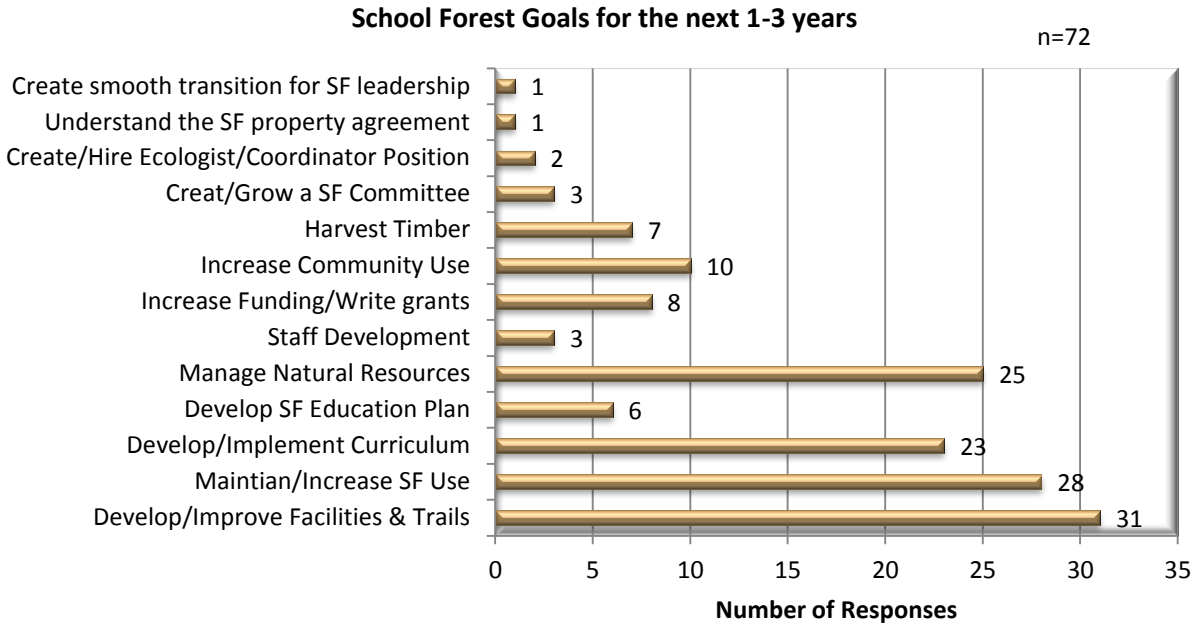


The **comparative data** shows which school forest accomplishments were identified over the past 6 years. Certain trends have begun to emerge with the challenge of increasing or maintaining the use of the school forest as to top accomplishment recognized by school forest programs across the state. Other top accomplishments include implementing new curriculum or lessons at the forest and improving or developing facilities at the school forest.



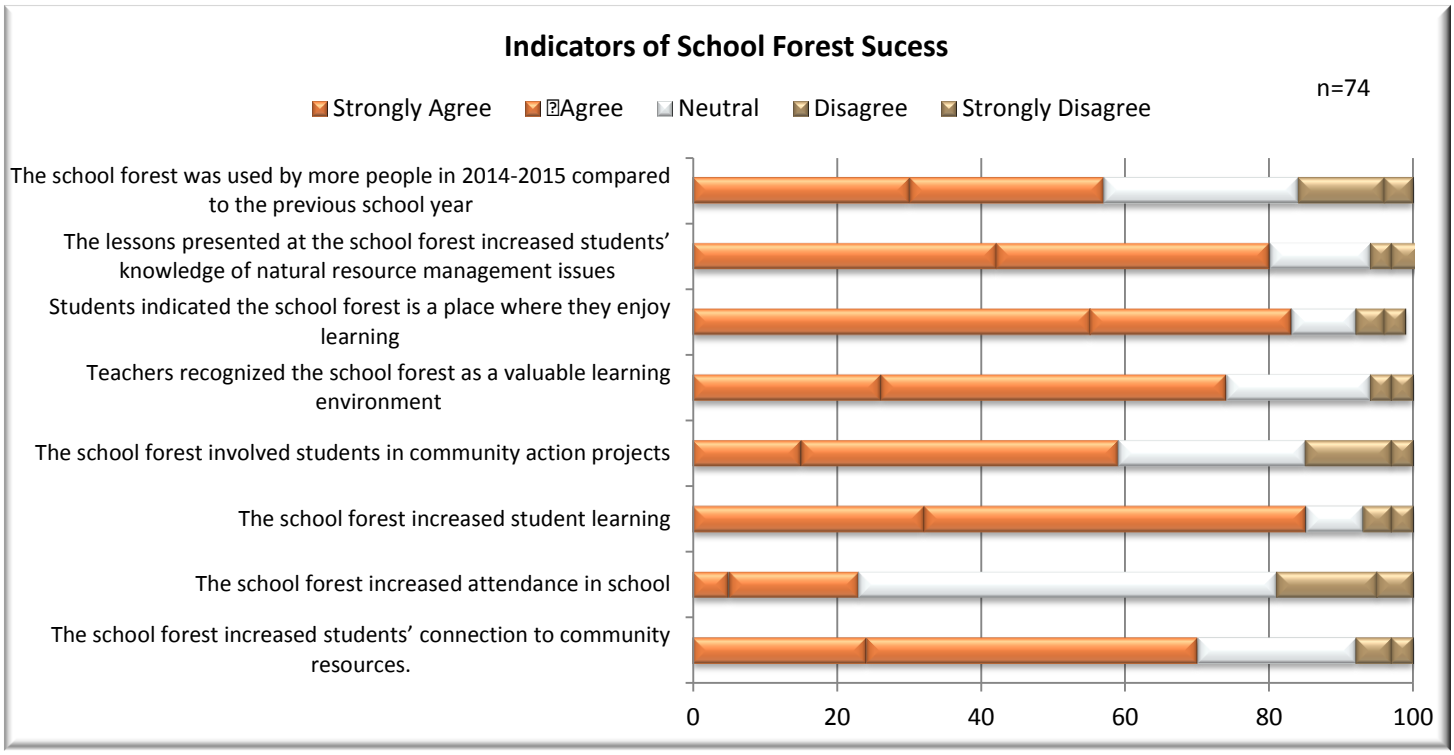
Goals for the next 1-3 years

The main school forest goals cited by the schools for the next three years are to develop or improve the facilities and trails, to maintain or increase the use of the school forest, to develop or implement curriculum at the school forest, and manage the forest's natural resources. The chart below shows the total number of school forest goals listed in each category by the seventy-two (72) schools which responded.



Indicators of school forest success for 2014-2015

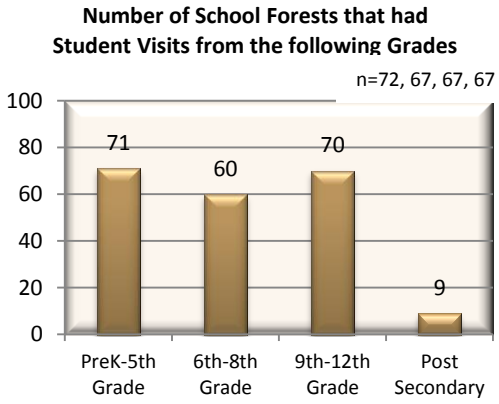
Seventy-four (74) schools responded. Results are listed as percentages.



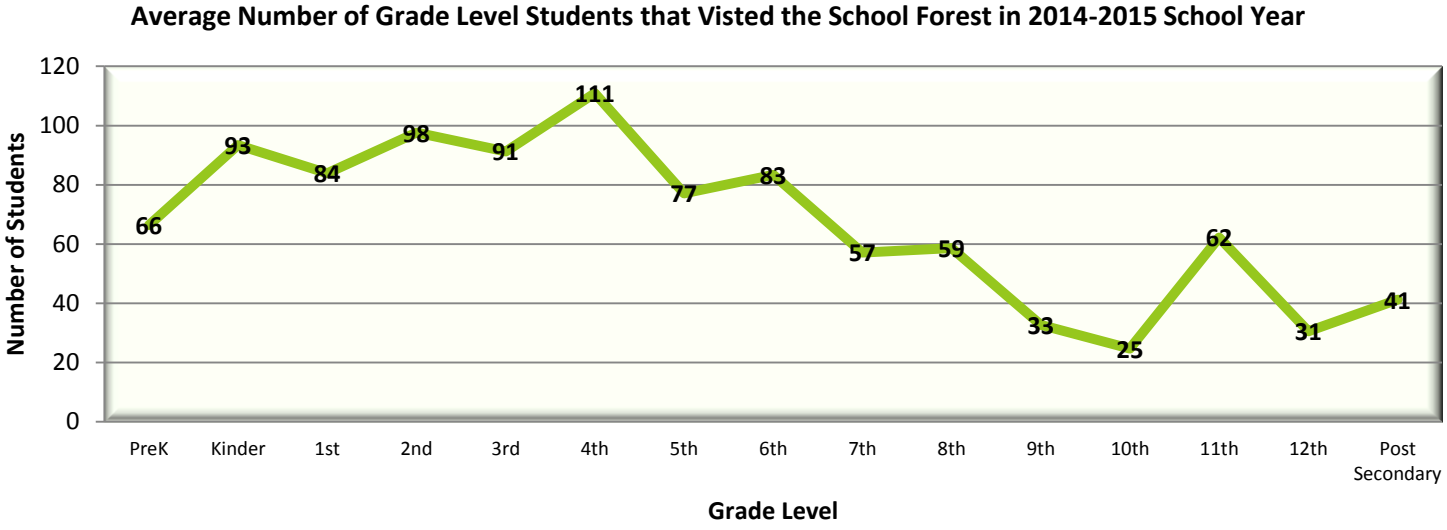
School Forest Utilization during the 2014-2015 School Year:

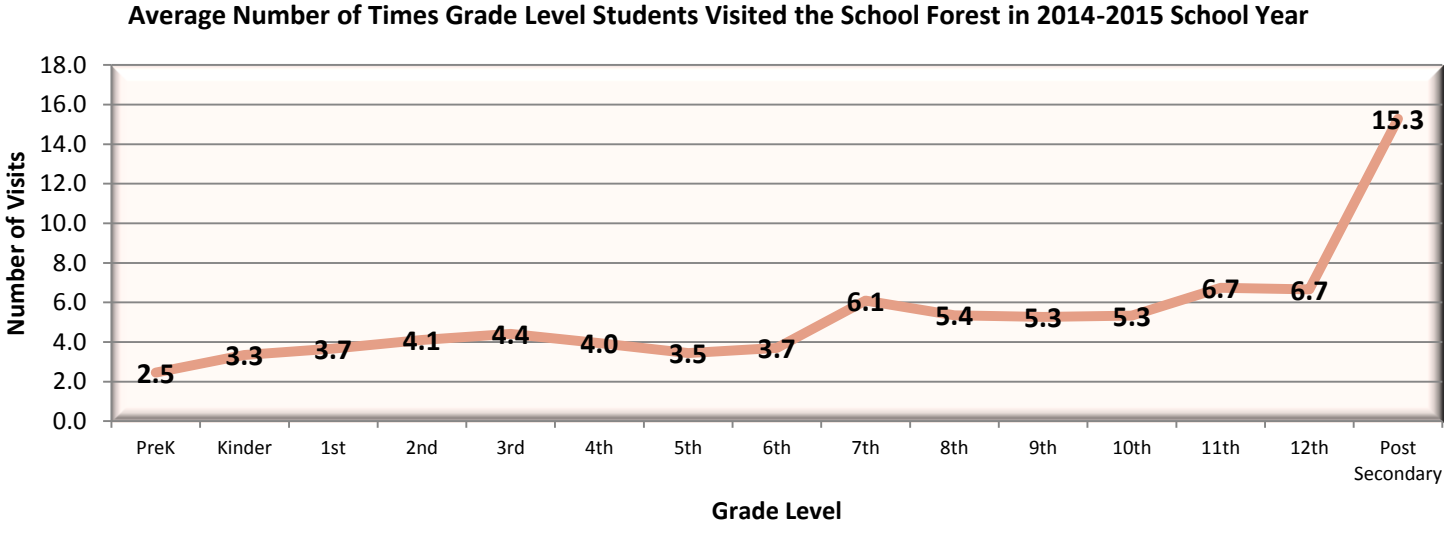
Student Visits

The following data has been calculated based off of the number of school districts that responded for each grade level. More comprehensive data is available upon request.



- **School Forest Use**. Respondents indicated that 71% of the forests had visits from PreK-5th grade students, 60% had visits from 6th-8th grade students, 70% had students in 9th-12th grade that visited, and 9% had post-secondary students.
- **Number of Students.** A **total of 33,618 students** visited their school forests during the last school year. The average number of students from each grade level that visited their school forest can be seen in the chart below.
  * The number of students per grade level reported is as follows: 2060 Pre-Kindergarten, 3549 Kindergarten, 3106 1st grade, 3416 - 2nd grade, 3469 - 3rd grade, 4437 - 4th grade, 3084 - 5th grade, 2500 - 6th grade, 1658 - 7th grade, 1994 - 8th grade, 1081- 9th grade, 816 - 10th grade, 1120 - 11th grade, 1039 - 12th grade, and 289 Post Secondary students.
- **Number of Trips.** Respondents reported a **total of 2,317 field trips** to school forests in Wisconsin. The **average number of times** (trips) each grade level visited the school forest can be seen in the chart below.





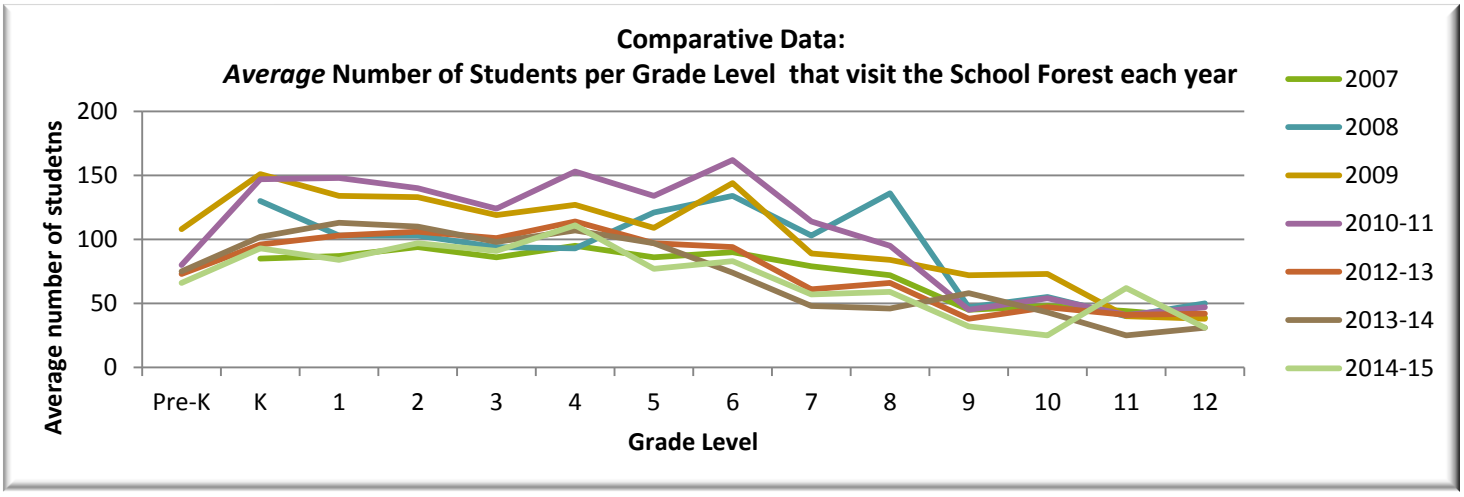
What are students learning at the school forest?

Evidence of Student Learning as a Result of School Forest Experiences

The following examples were recorded by respondents as both formal and informal evidence of student learning that has taken place as a result of student field trips at the school forest.

- Students are familiar with creating a forest management plan. They name professionals who work in the forest industry.
- As I talk with elementary school children as well as their parents and teachers, I hear many comments about what the students are bringing back from the Hartje Center as new knowledge. They constantly share with anyone who will listen, all of the fun things they do and learn.
- Students listed forestry work in their PLP (personal learning plan) and listed skills that they improved.
- Students did timber cruise, identified trees, identified wildlife habitat.
- First grade spent a day incorporating writing, science, reading, and math skills. Their follow-up projects and those completed at the forest gave them real life experiences they couldn't get from a book.
- In my ecology classes students have participated in water quality testing and plant identification activities. Anecdotal records for 4K and 5K indicate that students are using examples in nature to form letters, numbers. They are becoming better observers by listening to bird song, and noting detail with micro-viewers. They are recognizing nature as a place that is peaceful and relaxing. Fifth grade research projects indicate that students are transferring knowledge gained at the forest to science fair projects and field guides they create.
- Students learned to use dichotomous keys and were assessed on their ability to identify trees from memory.
- At the end of the school year I had my middle school students write about the most significant learnings throughout the year many of them wrote about the school forest experience.
- The students created boats to float down the river that flows through the school forest and they were able to figure out the velocity by using distance and the time.
- Students have completed data sheets/experiments/documentation of activities in the school forest and have done journaling throughout the year.
- Students' vocabulary and general knowledge base has increased and they enjoy sharing what they know with others. More interest in snowshoeing in the winter and taking pictures of wildlife throughout the year.
- Students have a better understanding of biotic and abiotic relationships- students actually know moss is a plant now! Habitat survey- students evaluate the School Forest Habitat using claims, evidence, reasoning model. Phy-ed project- Designing a low ropes course (cost, design, safety) Music- Wildlife sound production Functional art- made furniture from school forest products
- Learning how to make maple syrup, ID trees in summer and winter, grow shiitake mushrooms, and timber cruising
- Students are able to explain the problems with invasive species and how to remove them.
- Students demonstrated outdoor survival skills while out in the forest.
- Forestry tool demonstrations. Chainsaw safety practice. Thinning trees. Planting trees. Being and working in the woods

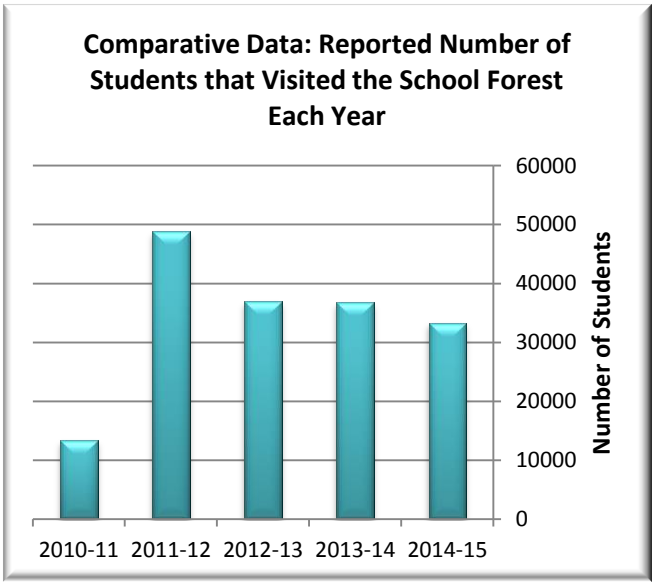
Comparative data shows a trend in the decrease in the number of students that visit the forest as they increase in age. There has been a consistent drop in the middle school and even more so in the high school years. Middle and high school class schedules limit the amount of time a teacher is able to spend with each student and many teachers are not able to make it to the forest and back during the bell schedule with their class. Another difference is high school students are visiting the school forest with a specific course and not necessarily as an entire grade-level as is common in the elementary grades.



Sustainability through School Forests

The school forest was **used to help students understand the forest's economic, social, or environmental importance in the community** in 72% of the schools that responded. The following examples are a shortened list that indicate how the school forest was used to help students understand the economic, social, or environmental impact it has in the local community. Some of the most common answers included how students learned about planting trees on the school forest, harvesting timber from the land, using the forest as a community resource, and managing invasive species.

- They *(students)* learn that trees are a renewable resource. The timber harvest helps the school forest economically so they can come and learn here. They come with family, friends, and extended family. They all learn together in the outdoors. They learn that when people care about a specific piece of land they are more likely to transfer those values to other places or environmental issues.
- Alternative Ed classes organized and performed a timber sale for the district.
- (Students) Planted trees (12 responses), participated in a timber harvest/logging at the forest (8 responses), participated in invasive species removal (12 responses), and districts hosted community events at the school forest (10 responses)
- Working with our local county *(DNR)* forester our students learned to manage a forest for different situations whether it's a private landowner or a county looking to maximize profits.
- Learned from the county *(DNR)* forester and consulting forester how to manage the forest
- LEAF activities inspired reforestation and repurposing
- Students got to see demonstrations, thinning out of trees, chainsaw safety, replanting
- Fundraisers and community events take place on the trails through the forest.
- Logging and forest management created wood products used for tech ed projects
- Our forest recently underwent a selective harvest with help from the DNR. The economics of the timber harvested and its potential uses was discussed. Some of the wood harvested was kept to make a wooden fireplace mantle with an on-site milling machine.
- Organized community wide learning event. Exotic species removal. Planted trees. Discussed different forest management techniques. Observed wildlife in their prime environment and discussed the economics of them to the community
- Planting native woodland plants. 4-H placed blue bird houses on site. Cub scouts removed buckthorn in an outdoor seating area GO Club removed Dame's rocket and leafy spurge. Students learned about how burls from black cherry trees can be made into bowls/artwork. Students learned about tapping sugar maple trees and syrup production
- Public awareness of our property for our annual Haunted Walk.
- Students in grades 3-5 created and placed approximately 40 informational signs in the school forest identifying plant and animal species as well as land forms. Arbor Day tree planting activity included participation from 700 K-5 students
- Our district volunteers completed a survey with the anabat detector. Students learned about the results and what the means for our community and state. Grandparents' Day - Families were invited to see what our forest and pond has to offer toward the education of our students. The metals class volunteered to make a secure door for placement above the cave entrance. High School students assisted with building bird houses and flying squirrel boxes. High School students are assisting with researching/collecting data about flying squirrels. Students have been donating natural resources to our nature center, so others have the opportunity to learn. We're in the primary stages of planning to build benches for the walking trail. (HS)Maple Syrup production - students watched the process and learned how this product could be harvested for sales.
- Students know we received $17,000 in lumber harvesting.
- We have hosted several community events throughout the year including a Learn to Ski Day and an open house. Doing a project on carbon sequestration; focusing on land stewardship of the forest

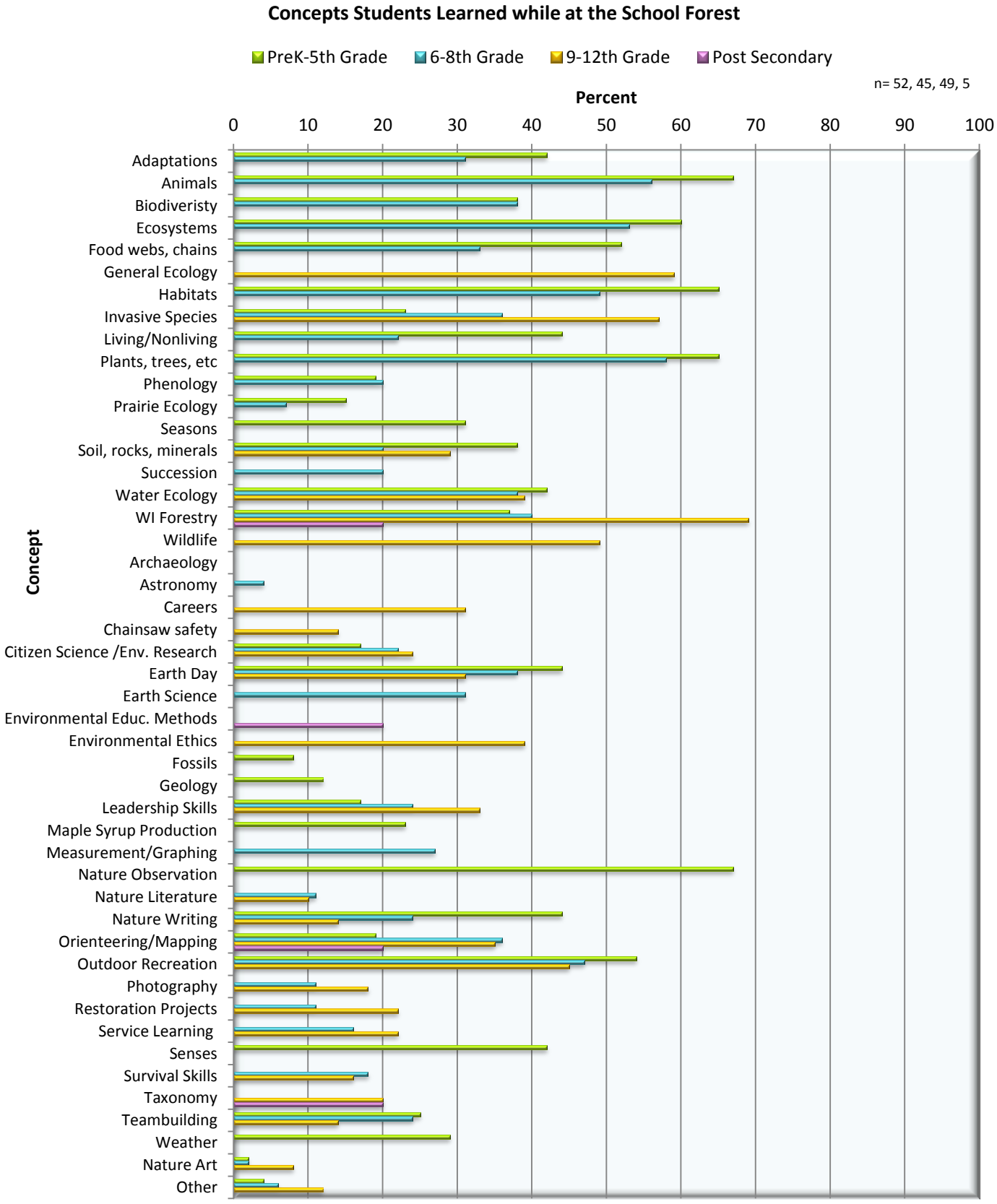


Products created from school forests…

17% of the school forests had students involved in making value added forest products from the school forest that are sold or donated to the community. They indicated those products included firewood, maple syrup, benches, lumber, signs, sit spots, an outhouse, music garden, furniture, and bird houses.

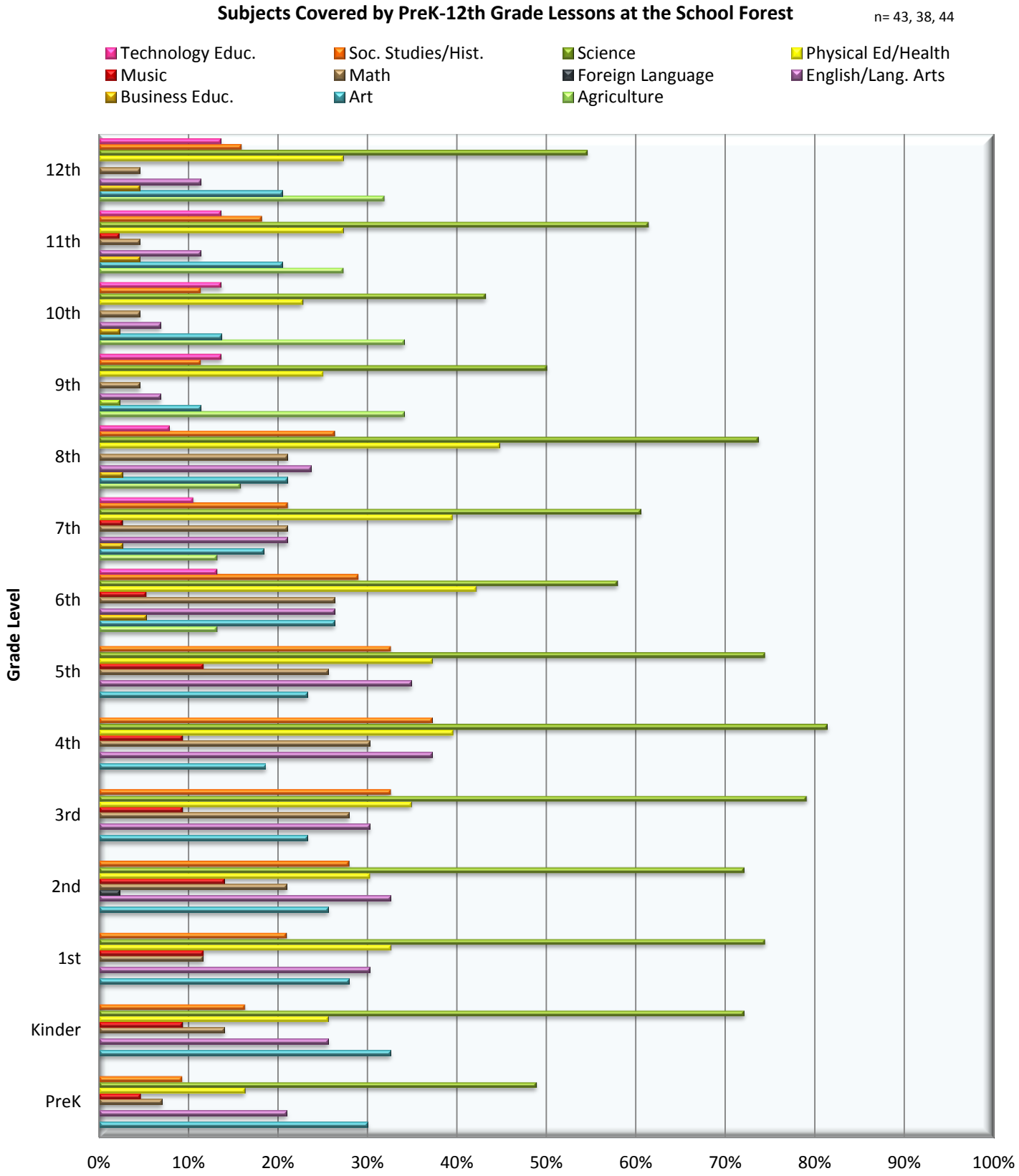
Concepts Students Learned about while at the School Forest

Respondents were asked to identify which **ecology and non-ecology concepts** students were learning about while visiting the forest. The following chart displays the concepts learned by early elementary, middle, high school and post-secondary students at the school forest. While it is clear that a great diversity of concepts are taught, Wisconsin forestry and orienteering/mapping were the only concepts being taught across all grade levels to Prekindergarten through post-secondary students. Soil, rocks, and minerals, water ecology, citizen science/environmental research, Earth Day, leadership skills, nature writing, outdoor recreation, and team building were concepts taught to students from Prekindergarten through 12th grade.



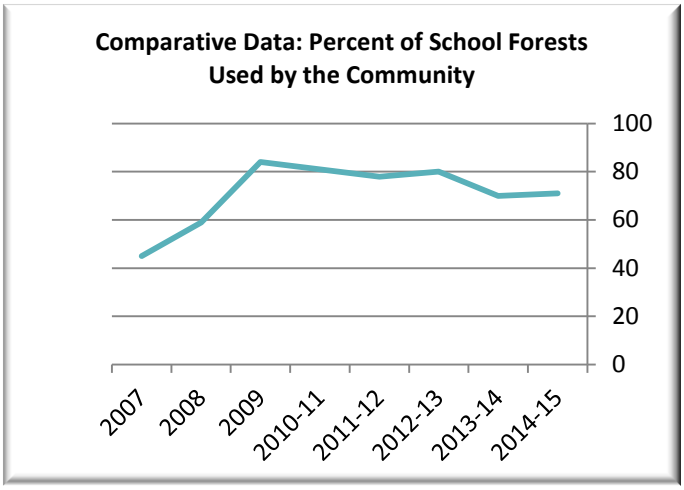
Subjects Covered by Lessons at the School Forest

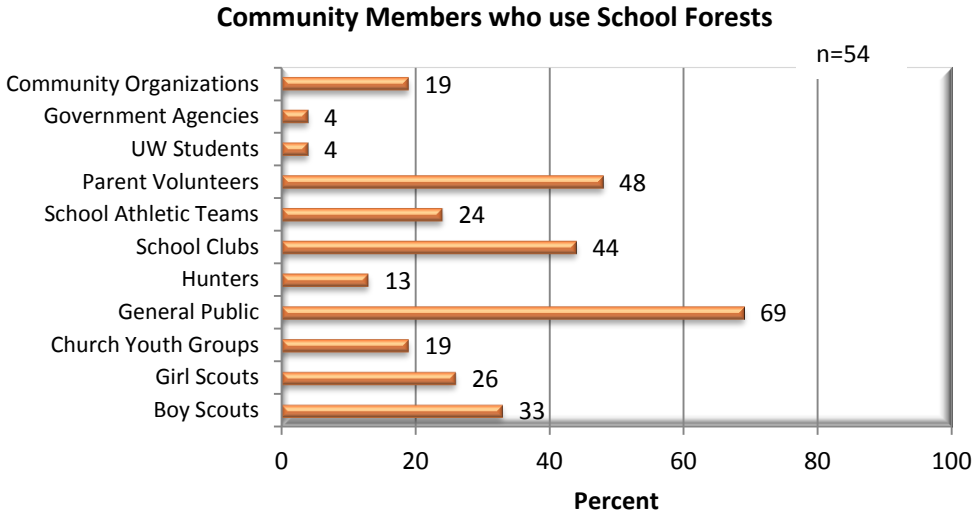
Respondents were asked to identify which subjects were covered in lessons students were learning about while at the forest. Respondents could choose from the options found on the charts below. The following charts compare and contrast the subjects covered throughout each grade level. Science is the most commonly covered subject at the school forest for all grade levels. All subject areas were covered by at least one grade level! This validates that school forests are not only a place to learn about the forest resource itself, but it also serves as an outdoor classroom where students can learn about other subjects and concepts along with science and forestry.

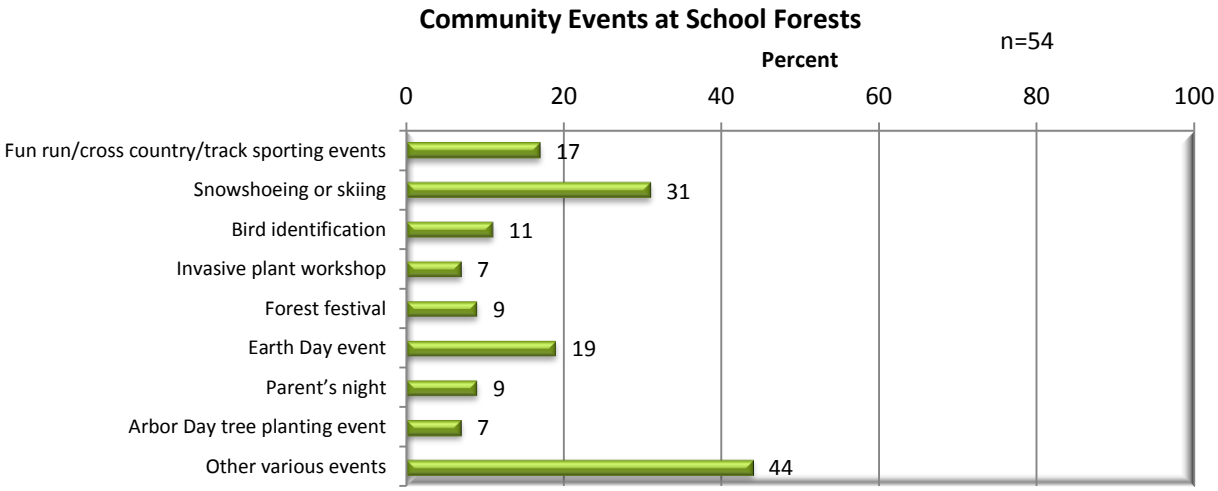


Community Use of the School Forest

- **Community members** used 71% of the school forests in the school districts that responded.
- **Collectively,** the respondents indicated 8,799 community members utilized the 48 school forests that responded.
- The number of community members that used the school forests **ranged** from 2 to 2,000 people.
- **Utilization of the school forest** was highest from the general public, including recreationalists but not hunters. The districts indicated boy scouts, girl scouts, church youth groups, hunters, school clubs, local organizations, parent volunteers, UW students, government agencies, and school athletic teams also used the school forest.
- Community members or local **community organizations were involved in helping manage** the forest's natural resources in 46% of the school forests that responded.
- **Community events** were hosted or provided by 44% of the school forests that responded. The type of community events listed include fun run/cross country/track sporting events, snowshoeing or skiing, bird identification, invasive plant workshop, forest festival, Earth Day event, Parent's night, Arbor Day tree planting event, law enforcement trainings, field days, Neighbor night event, Disc Golfing, Nature Explore Family Saturdays, fishing contest, school board open house, animal track and scat identification, Men's Night Out event, Haunted Walk class fundraiser, woodland clean-up, citizen science, trail development and maintenance, Grandparent's Day event, snowmobiling, open houses, Green Apple Day of Service, and forest management practice demonstrations.

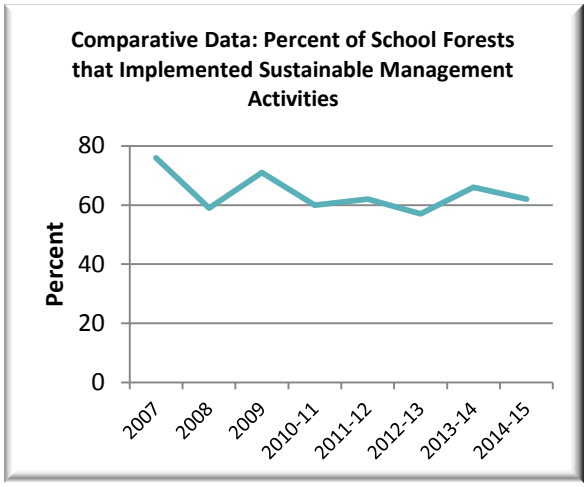




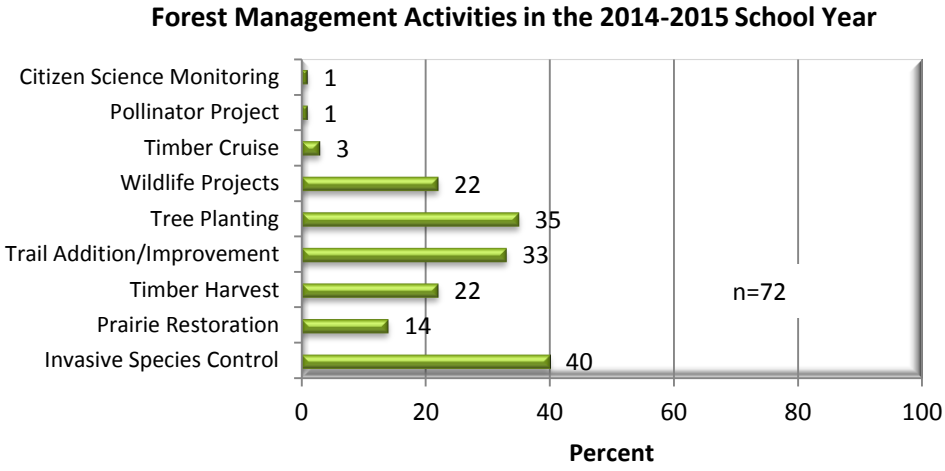


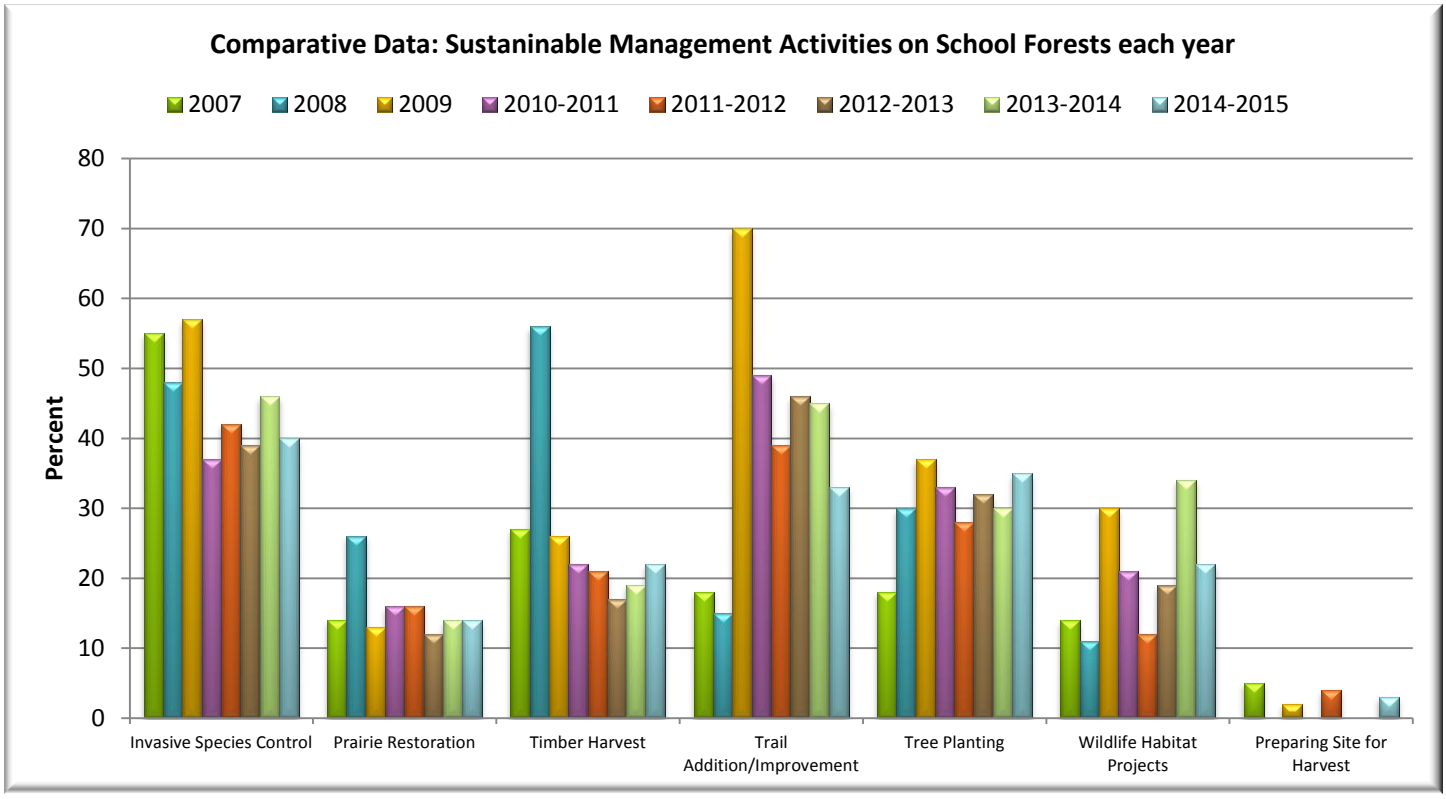
School Forest Management

- **Sustainable forest management activities, lessons, events, or programs** have taken place at 62% of the districts that responded.
- Seventy-two people responded to the **type of sustainable forest management** that occurred on their school forest. Invasive species control and trail additions or improvements were the most common management activities sited. Other management included prairie restoration, timber harvest, tree planting, citizen science monitoring, a timber cruise, and wildlife habitat projects.
- 76% of the respondents indicated the **next management activity** would take place within the next year, 7% indicated 1-5 years, and 4% indicated more than 5 years. 13% of the respondents indicated a management activity, but did not list a date for it to be completed.



Comparative data shows that the most common management activities implemented at school forests are invasive species control and trail additions or improvements. Timber harvests are still a critical part of sustainable management at school forests and occur at approximately 20% of the responding forests each year.

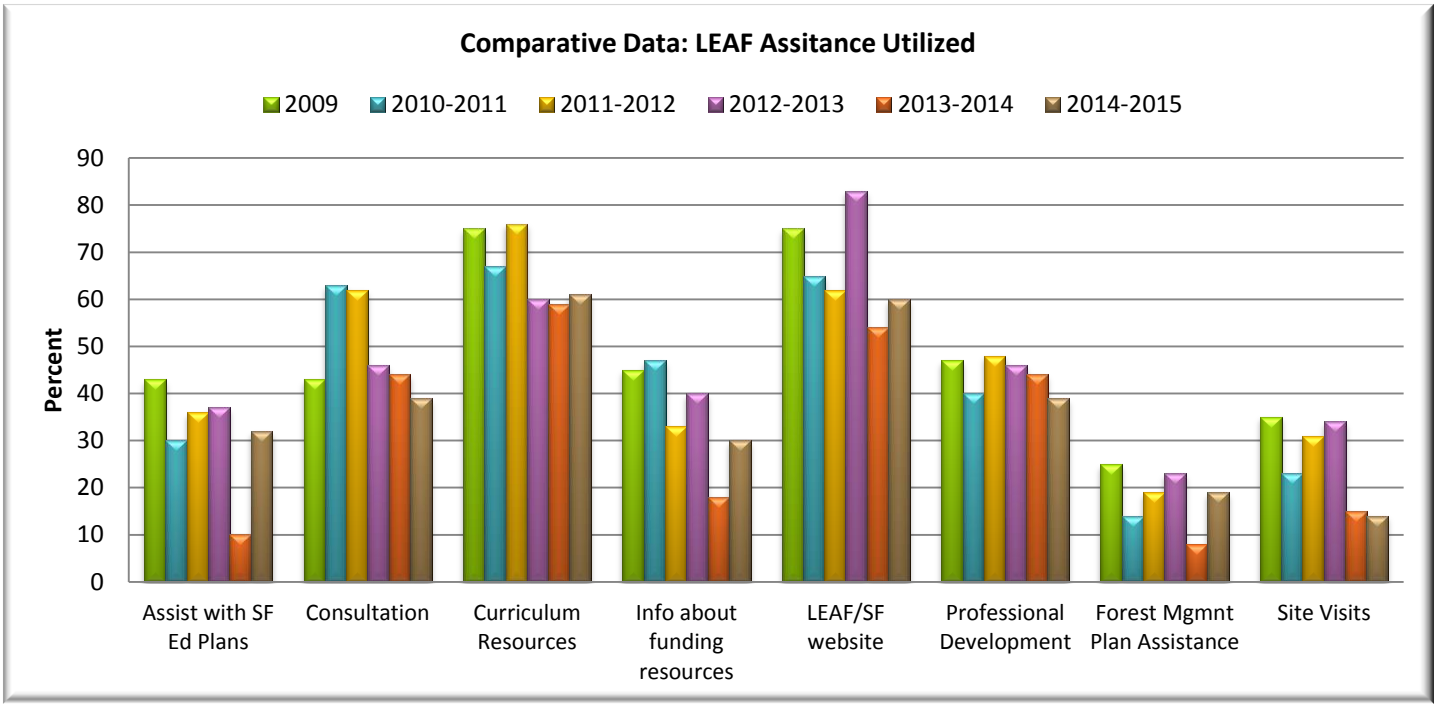


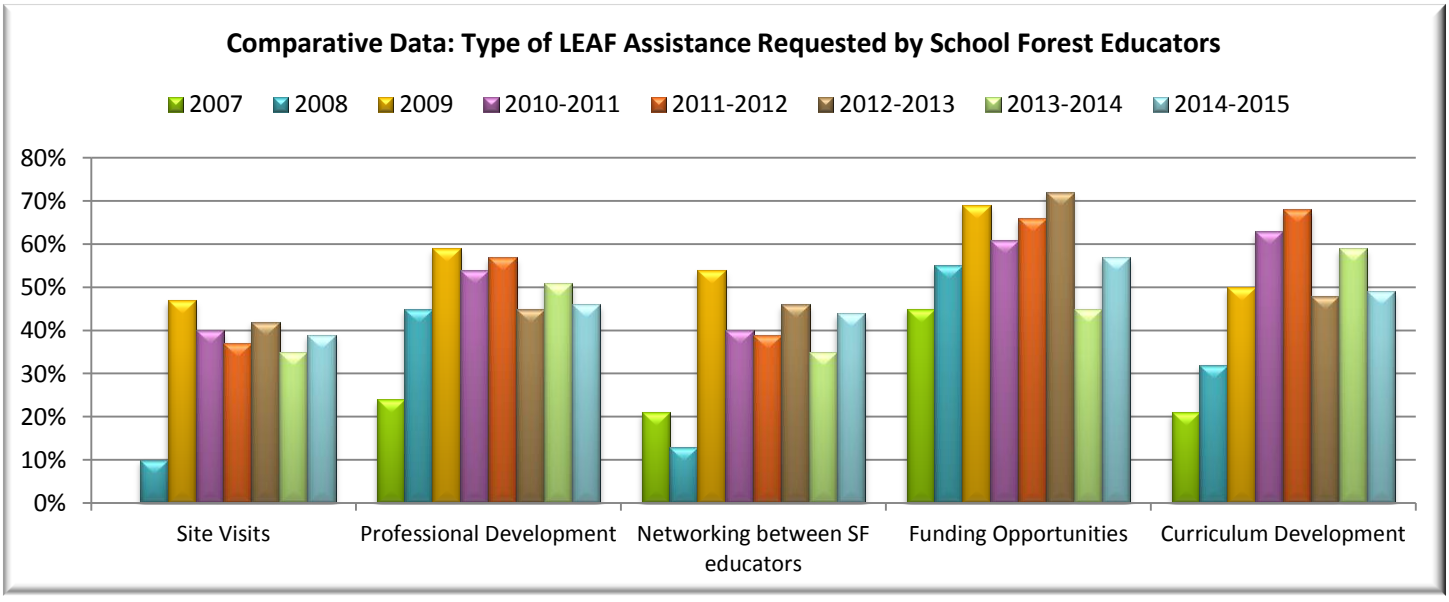


LEAF and School Forest Assistance

- The LEAF School Forest Program was **indicated as helpful** or has provided assistance to 75% of the school districts that responded to the 2014-2015 school forest survey.
- LEAF was most commonly **stated to have helped** with curriculum resources (61%), information via the LEAF/School Forest website (60%), professional development (39%), through providing consultation services (39%), assisting with school forest education plans (32%), providing information about funding resources (30%), assisting with forest management plans (19%), and visiting school forest sites (14%).
- One survey response stated *"We couldn't have gotten this far without LEAF"*
- School districts identified **further assistance** is needed through consultation with the School Forest Education Specialist (40%), to develop curriculum resources(49%), find funding opportunities for school forests (57%), provide professional development opportunities for staff (46%), networking between school forest educators (44%), visit school forest sites (39%), help secure administrative support in local forests (3%) and help develop forest management plans.

Comparative data in the charts below indicate that school forest educators rely heavily on LEAF's services and that there is still a great need for the services LEAF provides.





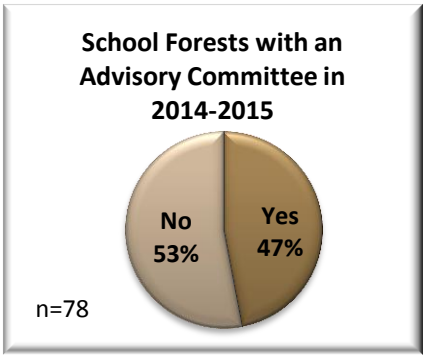
School Forest Personnel:

School Forest Committees:

- Found in 47% of the responding districts while 53% of the respondents did not have a committee

Does the district have an official **School Forest Coordinator** or person in charge of school forest programming?

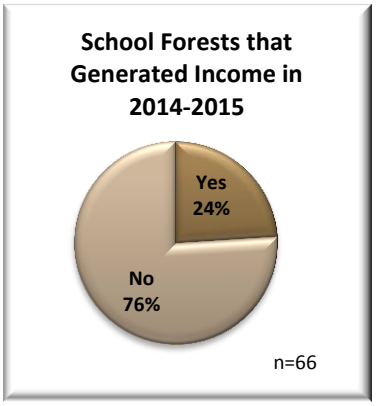
- 47% do have a school forest coordinator while 53% do not
- Position is a full-time paid position in 6% of the school forests that responded, part-time positions in 18%, and volunteer position in 30% of the school forests.

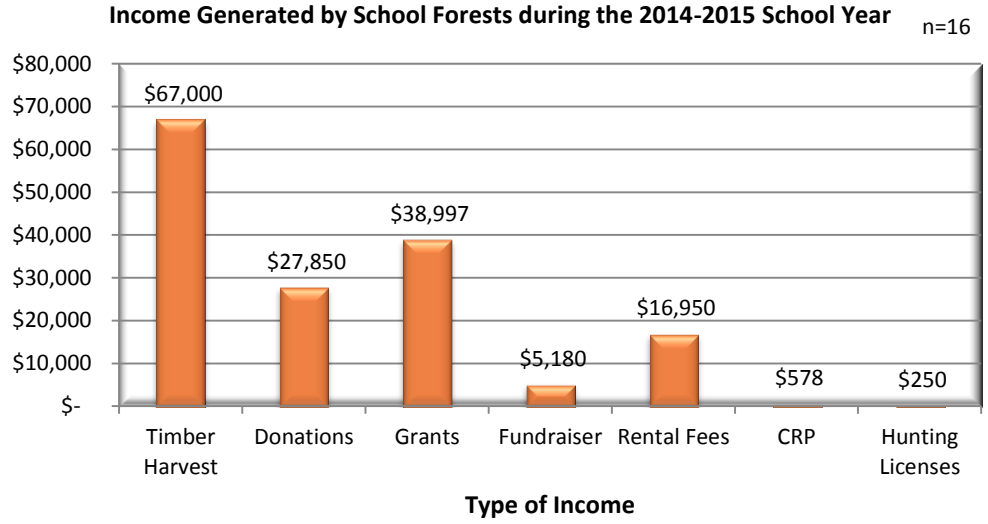


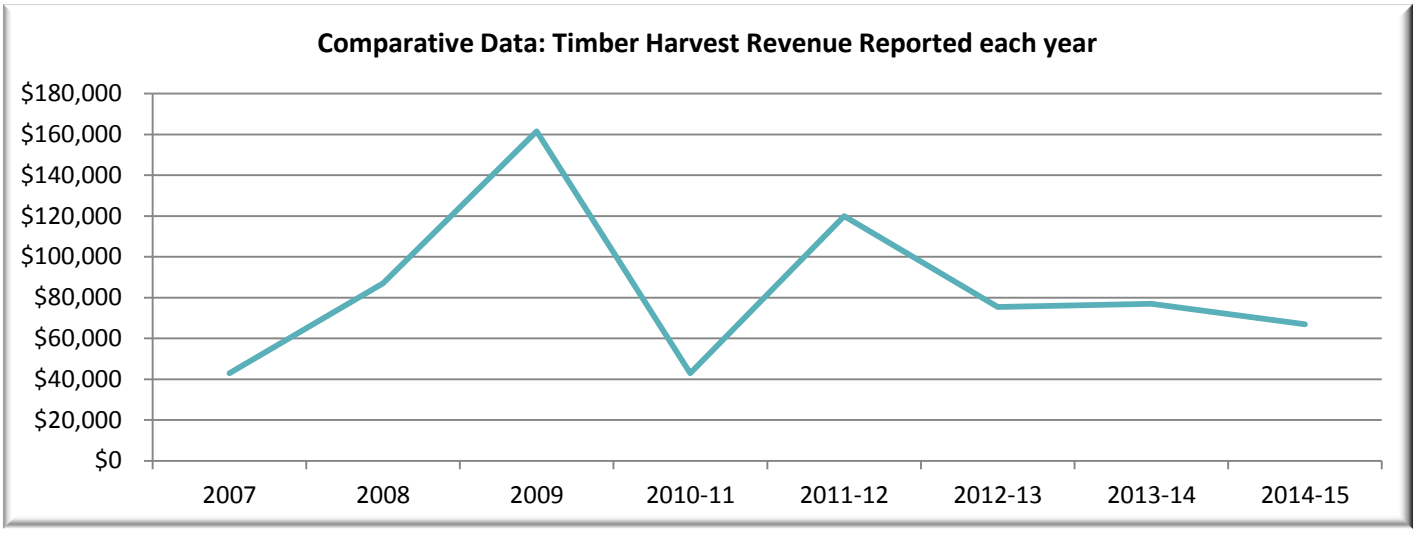
School Forest Budgets

2014-2015 School Forest Income

Twenty-four percent (24%) of the school districts in the survey reported their school forest had generated income in the 2014-2015 school year. A combined total of **$156,805 was generated from school forest land**. Income from the school forest was generated from the following categories: timber sales occurred at 25% of the forests and generated a total of $67,000; eighteen percent (18%) of school districts rented out their facilities and generated a total of $16,950; twelve percent (12%) of the school districts generated money for their school forests through fundraisers and raised a total of $5,180, forty four percent (44%) of the districts generated $27,850 through donations, 44% of the districts reported gaining $38,997 through grants, 6% of the districts received payment from a CRP program and generated a total of $578, and 6% of the districts generated a total of $250 from hunting licenses.



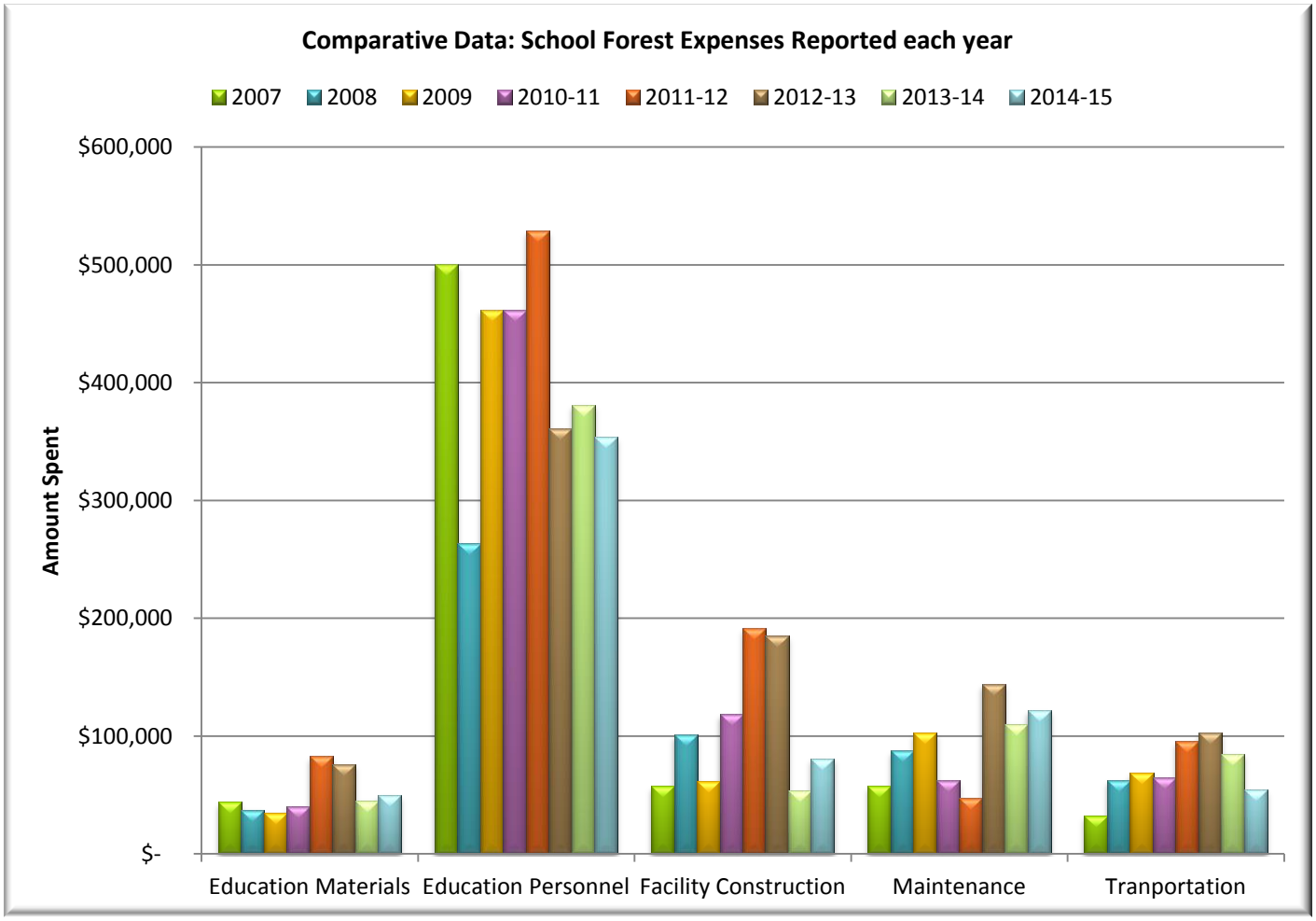




2014-2015 School Forest Expenditures

The following school forest expenditures were reported on the survey:

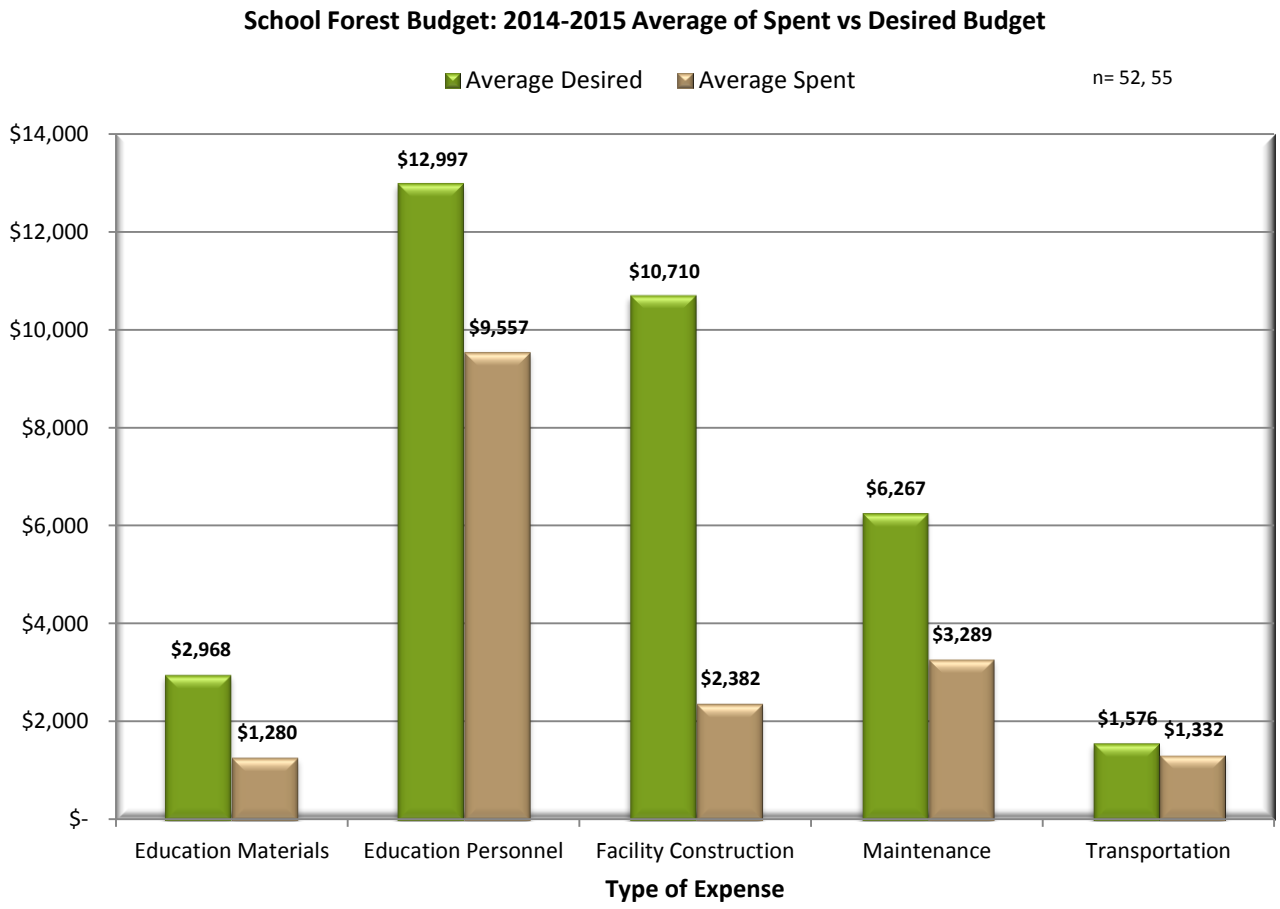
- School districts spent a total of $49,908 on **education materials** for their school forest programs. This calculates to an average of $1,280 per school district who responded. School districts indicated a range of $0 to $20,000 was spent on education materials for the school forest. 41% of the school districts reported that no money ($0) is spent on school forest education materials.
- School districts spent a total of $353,625 on **education personnel** for their school forest programs. This calculates to an average of $9,557 per school district who responded. School districts indicated a range of $0 to $105,000 was spent on education personnel for the school forest. 50% of the school districts reported that no money ($0) is spent on school forest education personnel.
- School districts spent a total of $81,000 on **facility construction** for their school forest programs. This calculates to an average of $2,382 per school district who responded. School districts indicated a range of $0 to $50,000 was spent on facility construction at the school forest. 56% of the school districts reported that no money ($0) is spent on school forest facility construction.
- School districts spent a total of $121,700 on **maintenance** for their school forest programs. This calculates to an average of $3,289 per school district who responded. School districts indicated a range of $0 to $50,000 was spent on maintenance at the school forest. 32% of the school districts reported that no money ($0) is spent on school forest maintenance.
- School districts spent a total of $54,630 on **transportation** for their school forest programs. This calculates to an average of $1,332 per school district who responded. School districts indicated a range of $0 to $30,000 was spent on transportation to and from the school forest. 50% of the school districts reported that no money ($0) is spent on school forest transportation.



Desired Annual School Forest Budgets

The following information is what school districts indicated would be their desired annual budget for school forest programming:

- School districts would like a range of $0 to $50,000 to spend on **education materials** for their school forest programs. The grand total desired for school forest education materials from all of the districts that responded is $133,550. This calculates to an average of $2,968 per school district that responded.
- School districts would like a range of $0 to $152,000 to spend on **education personnel** for their school forest programs. The grand total desired for school forest education personnel from all of the districts that responded is $597,850. This calculates to an average of $12,997 per school district that responded.
- School districts would like a range of $0 to $100,000 to spend on **facility construction** for their school forest programs. The grand total desired for school forest facility construction from all of the districts that responded is $428,400. This calculates to an average of $10,710 per school district that responded.
- School districts would like a range of $0 to $100,000 to spend on **maintenance** for their school forest programs. The grand total desired for school forest maintenance from all of the districts that responded is $263,200. This calculates to an average of $6,267 per school district that responded.
- School districts would like a range of $0 to $10,000 to spend on **transportation** to and from their school forest programs. The grand total desired for school forest transportation from all of the districts that responded is $61,450. This calculates to an average of $1,576 per school district that responded.



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