



Ashford students have two opportunities to display projects at Science Night. They can either make an invention or a science project. Inventions are judged and winning students advance to the state competition. Science projects are also judged. Every student who participates receives a ribbon.

Ashford School's annual Invention Convention is a fun chance for students to create their own unique inventions. During the convention, students will present their inventions to community and school judges. Later that evening at Science Night, the inventions will be displayed for the public. The winners will go to the Connecticut Invention Convention in May. You can find information about the CT Invention Convention at [ctinventionconvention.org](http://ctinventionconvention.org).

Science Fair projects are more open-ended and offer students the chance to experiment and share their findings. The guidelines for the Invention Convention and Science Fair are attached. You can email [cimhoff@ashfordct.org](mailto:cimhoff@ashfordct.org) for additional support materials. All projects must be brought to school before 8:35am on February 27<sup>th</sup>. If you have any questions, please email, call, or stop by the enrichment room.

We look forward to seeing your project!

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Come and . . .

- Ride a hovercraft
- Use a Bernoulli blower to control a beach ball
- Create watershed models
- Recycle paper
- And lots more!

Ashford School

6-8pm

Friday, February 27<sup>th</sup>

At Science Night you can view science projects and inventions created by students. The winners of the Invention Convention are announced at this time. If you would like to enter a science project or invention, please see the packet of information on the announcement page of our school's website.

Or, you can request one by calling (860) 429-6419 x321.

There will also be hands-on stations where students of all ages can get messy with fun science and engineering projects.



# CONNECTICUT INVENTION CONVENTION

## Guidelines for Inventors

1. An invention must be the product of a single inventor. Pair or group inventions are not allowed.
2. An invention must meet the following definition:

*An invention must have utility; it must solve a real problem. It is something that no one has ever made before. It cannot be purchased in a store or found in a book. An invention may be a non-obvious improvement to an existing object that yields new utility*
3. The cost of the invention should not exceed \$25. Inventors are encouraged to use recycled materials.
4. The invention must be accompanied by a self-standing display board (requiring no more than 24 inches of table space) that includes the following information:
  - The title of the invention
  - A description of the problem the invention solves
  - A description of how the invention works
  - The inventor's name, grade, and school
5. The inventor must submit a log or report that includes the following information:
  - A written statement of the purpose of the invention and the problem it solves
  - A list of materials used
  - A list of steps taken to complete the invention, including a description of any problems encountered and drawings or pictures of attempts that failed
  - A statement of originality, including description of what the inventor did to establish that the invention does not already exist, with parent verification
6. The invention must fit in a space that is two feet by two feet; larger invention should be represented by a working model.

## Sample Problems...

My shoelaces come untied easily...  
My pencil tip breaks easily...My bookmark falls out...The pencil sharpener gets full...Dirt bike chain gets muddy...My crutches hurt...My pillow slips in the car...I want to wear my baseball hat but my ears freeze...My zipper gets stuck...Corn on the cob gets stuck in my mouth...My sandwich gets smashed...My pants get wet collecting shells at the beach...There is no place for my stuffed animals when I make my bed...The nail falls over when I hammer...The car is dirty inside...My water bottle spills...The end of my glasses hurt my head...I have sunglasses on trying to listen to ear phones...A long sleeved shirt is OK in the morning but too hot in the afternoon...My dog has smelly breath...I lose socks in the wash...  
Things fall out of my desk...My writing is messy...My backpack is disorganized...My dog won't eat his pill...My neck is uncomfortable in bed...  
My sister bumps her head on the edge of the table...My mother can't open jars...  
I can't reach the edges to make my bed...My blanket falls off the bed...  
I lose my lunch money...My toothpaste gets messy...I can't fold the towels neatly...I have trouble sweeping the floor...  
I need more privacy in my room...  
My closet is messy...  
I get black marks on my hand when I write...  
I can't reach the upper cabinets...  
My glasses fog up...  
My glasses rub against my nose...  
My cousin misses the tissue when he blows his nose...  
My cat scratches...  
Cold air comes through the window/door...  
It is hard to comb the back of my hair...  
It is messy cleaning the hamster cage...  
My alarm clock doesn't wake me...  
My pencils drop off my desk...

The crickets keep me up at night...  
My puppy rips stuff...  
I have to haul water for the horses and it's heavy...  
We have an ant problem...  
I lose my pencils...  
Finding ticks on my dog is hard...  
My wallet doesn't lock...  
My sister falls down the stairs...  
Global warming...  
The cat box smells...  
My dog chews everything...  
Taking out the trash, it is heavy...  
I lose erasers...  
My dog's feet sink in the snow...  
My back itches...  
Snow gets up my sleeves/socks...  
Windows are hard to clean up high...  
The vacuum is too loud...  
My room gets messy too fast...  
Bugs bug me...  
The crayons break...  
Basketball gets lost...  
People don't take care of nature...  
Scissors are too sharp...  
Hats mess up my hair...  
Plants need watering...  
I lose things in my desk...  
My mom's back hurts when she drives...  
I can't remember my math facts...  
I can't fall asleep...  
My glasses get dirty...  
My dad's mustache tickles me...  
My dog can't hear me call...  
My shoes come loose all the time  
The wind blows my hair  
My lunch box is stinky...  
I lose my baseball bat...  
My dog gets in my way when it's on a leash...  
I slip on the ice...  
My sister can't buckle herself...  
I can't find clothes that match...  
I can't reach the sink...  
Picking up my clothes ...  
The sun is too hot on my head...  
I lose my hair ties...  
My dog shakes when I wash him...  
Scraping the mud off my shoes...



## Science Night

# Guidelines for Projects

### February 27, 2015

Projects may be set up in the cafe on February 27 anytime after school. If it is not possible to bring your project then, you may make special arrangements.

Science projects will not be judged, however all participants will receive a ribbon.

Exhibits should be free standing so they can be displayed on a table.

All titles and names should be clear, large and neat. Charts and pictures should have explanations.

Please do NOT bring in the following for display (if these are necessary for your experiment, take pictures):

- Dangerous chemicals

- Open or concealed flames

- Sharp items such as syringes, knives, needles

- Gases

Please get permission if you plan to bring in any live animals.

Please let us know if you will need any special arrangements (such as electrical outlets) and we will do our best!

Have fun and choose a science topic that interests you!

#### **Tips for Parents:**

Be positive about your child's work.

Allow your child time to explore and think about the project.

Stress "how to" skills rather than the memorization of facts. It is the process that is important.

Inexpensive materials from home make the best projects.

Any questions, see Ms. Imhoff ([cimhoff@ashfordct.org](mailto:cimhoff@ashfordct.org)).





## Science Topics

Physics  
Chemistry  
Light & Sound  
Ecology  
Electricity  
Plant Science  
Animal Science  
Human Body  
Earth Science  
Astronomy

## Sample Science Night

### Questions:

Why birds fly south for the winter?  
Does chewing on one piece of food affect your sense of smell?  
How high does a marble need to drop in order to complete a 6" loop-de-loop?  
Will cola remove tarnish from a penny?  
Why compost with worms?  
Which soft drink has the most carbonation?  
What airplane design flies the farthest?  
How does the airplane's wing design affect its flight?  
What type of sugar grows crystals the fastest, white cane sugar, molasses or maple syrup?  
How long can a flame last in carbon dioxide?  
Did dinosaurs live in CT?  
What shape cardboard holds the most weight?  
What conducts electricity?  
Can chemistry change one color into another color?  
How can we make static electricity?  
What type of water makes the longest lasting bubbles?

What environment is best for growing mold, light or dark? Wet or dry?  
What liquids are heaviest?  
What ingredients make the best putty?  
Will the iron in cereal attract to a magnet?  
Which cereal stays crunchy the longest?  
How can we trick our eyes?  
How does temperature affect making Jello?  
What ingredients are in gum?  
Do eggs float the same in salt water as fresh water?  
What colors are in magic markers?  
Will salt crystals grow faster in hot or cold water?  
Which holds wood better, a nail or a screw?  
What type of birdseed do birds prefer? Squirrels?  
What keeps food colder, plastic wrap or aluminum foil?  
What brand of dish soap makes the longest lasting bubbles?  
Does exercise affect your heart rate?  
How does the slope of a roller coaster affect the speed?  
Is there acid rain in Ashford?  
How does color affect temperature?  
Which environment is best for growing mold - dark or light, wet or dry?  
What floats, what sinks?

## Science Sites

Internet Public Library Science-  
[ipl.org/youth/projectguide/](http://ipl.org/youth/projectguide/)  
Discovery School-  
[discoveryeducation.com/sciencefaircentral](http://discoveryeducation.com/sciencefaircentral)  
Energy Education-  
[energyquest.ca.gov/projects/index.html](http://energyquest.ca.gov/projects/index.html)  
PBS- [pbskids.org/dragonflytv/scifair/](http://pbskids.org/dragonflytv/scifair/)  
National Science Foundation-  
[halcyon.com/sciclub/sciencenewsforkids.org](http://halcyon.com/sciclub/sciencenewsforkids.org)  
[sciencebuddies.org/](http://sciencebuddies.org/)