

Bijlage HAVO

2008

tijdvak 1

Engels

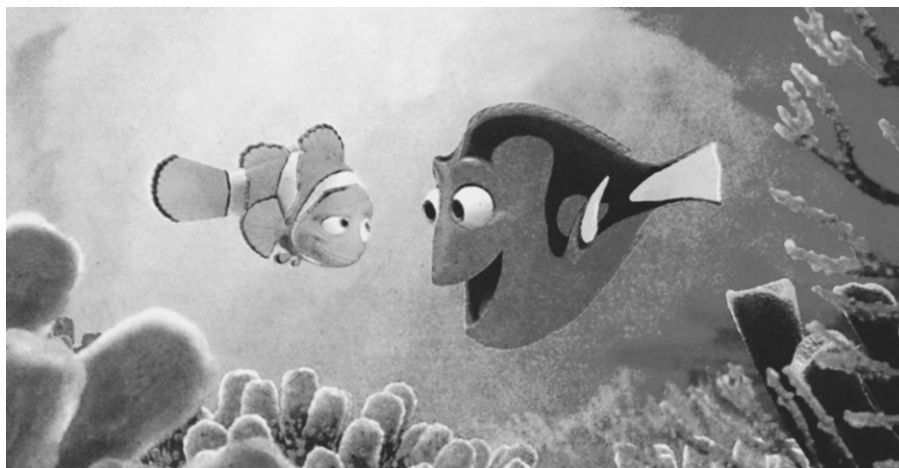
Tekstboekje

Fish oil? Sounds like a snake-oil remedy

The Department for Education and Skills is apparently considering boosting the brainpower of schoolchildren by feeding them capsules of fish oil. Er, fish oil? Yes, it seems that Alan Johnson, the Education Secretary, is convinced that the answer to illiterate and innumerate kids is a daily dose of the omega-3 fatty acids found in our scaly friends.

That's all very well. But if fish are so full of brain-boosting oils, how come so many of them end up battered, beheaded and lightly sprinkled with salt and vinegar?

www.timesonline.co.uk



Bambi-pamby

IT IS GOOD news for us all that the Walt Disney organisation is in trouble. For too long, this enormously rich and powerful business empire, founded by the unlikeable and notoriously right-wing Walt, has exercised a malign influence over almost every child in the world.

Shareholders who have engineered the sacking of the Disney chairman, Michael Eisner, are not in the least bit concerned about such issues. All they are worried about is their dividends. All the more reason why we should 2 the boardroom strife and the possibility of yet further clashes.

We British have particular cause to rejoice, having seen our famous

children's classics put into the Disney sausage machine to be made palatable for the American audience. Kipling's Mowgli was turned into a cuddly little kid, Pooh Bear into a folksy old bumbler like Mr Magoo. Any quirks or signs of eccentricity were 3. The Disney feature film is the cultural equivalent of a McDonald's hamburger – reduced to the same old recipe with dollops of sugary sentimentality and just as unpalatable.

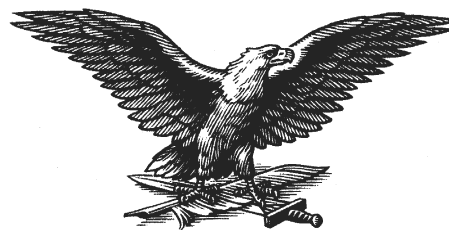
4 anything that helps to hasten the end of the Disney monopoly ought to be welcomed by all who are even a little bit concerned about the welfare of the world's children.

The Observer

EDITORIAL

The Web and the law

HOLLYWOOD STUDIOS filed lawsuits last week accusing 286 people of sharing movies online without permission. The point of the latest claims, as with the hundreds that preceded them, was twofold: to punish those who violate a copyright, and to educate the public at large about the legal boundaries of downloading.



Los Angeles Times

(1) As an educational tool, this type of lawsuit leaves something to be desired. Only a fraction of the people sharing songs and movies online illegally are sued, weakening the preventive effect. At the same time, because so many claims have been filed (more than 13,000 by the movie and music industries over the last two years), they no longer attract much attention. Another problem is that studios and labels do not know the identity of a defendant when they start pressing a claim; the lawsuit eventually lands on the person whose Internet account was linked to pirated files. As a result, defendants have included a 12-year-old girl, several grandparents and at least one dead person.

(2) The resulting publicity hasn't brought in much sympathy for the labels or their cause. And critics of the lawsuits are right to argue that such actions aren't a long-term solution to the wide-spread piracy that the Internet enables.

(3) 6, there are a couple of important principles that the lawsuits advance. First, they show that the right way to protect copyrights is to focus on people who are violating them, not on the public at large. By contrast, some of the major record companies are also trying to combat piracy by switching to CD technology that resists copying even for

legal purposes. This approach forces restrictions on *all* CD buyers in the name of stopping abuses by an unknown fraction of music fans.

(4) Second, the lawsuits make it clear that paying \$40 a month for high-speed Internet access does not entitle users to free copies of everything they might want. Unfortunately, that point is still lost on many people, especially young people. Numerous defendants have been parents who either ignored or tolerated what their kids were doing on file-sharing networks, only to find themselves paying a fine for the hundreds of illegally downloaded songs stored on a family computer. The labels typically demand \$3,750 to \$4,500 to settle a case, although copyright law allows them to seek up to \$150,000 per illegal copy.

(5) Clearly, these lawsuits inflict some additional damage, not just on the industry but on notions of fair play and the law. When huge media corporations sue thousands of individual Internet users, they fuel the argument that copyright law is just a tool for the powerful, not a means to improve society by encouraging creativity and innovation. But like anyone else, the studios are entitled to defend their rights. You can moan about how blunt the instrument is, but you can't fault Hollywood for using it.

Los Angeles Times

Swarming the shelves

A TRIP to the supermarket may not seem like an exercise in psychological warfare—but it is. Shopkeepers know that filling a store with the aroma of freshly baked bread makes people feel hungry and persuades them to buy more food than they had intended. Stocking the most expensive products at eye level makes them sell faster than cheaper but less visible competitors. Now researchers are investigating how “swarm intelligence” (that is, how ants, bees or any social animal, including humans, behave in a crowd) can be used to influence what people buy.

At a recent conference in Rome, Zeeshan-ul-hassan Usmani, a computer scientist from Princeton University, described a new way to 10 impulse buying using this phenomenon. Supermarkets already encourage shoppers to buy things they did not realise they wanted: for instance, by placing 11 at the back of the store, forcing shoppers to walk past other tempting goods to reach them.

Dr Usmani and Ronaldo Menezes of the Florida Institute of Technology set out to enhance this tendency to buy more by playing on the herd instinct. The idea is that, if a certain product is seen to be popular, shoppers are likely to choose it too. The challenge is to keep customers informed about what others are buying.

12, enter smart-cart technology! In Dr Usmani's supermarket every product has a radio frequency identification tag, a sort of barcode that uses radio waves to transmit information, and every trolley has a scanner that reads this information and relays it to a central computer. As a customer walks past a shelf of goods, a



screen on the shelf keeps him updated from minute to minute on 13 have chosen that particular product. If there are many, he is more likely to select it too.

Dr Usmani's “swarm-moves” model appeals to supermarkets because it increases sales without the costly need to give people 14. And it gives shoppers the satisfaction of knowing that they bought the “right” product—that is, the one everyone else bought. The model has not yet been tested widely in the real but Dr Usmani says that both Wal-Mart in America and Tesco in Britain are interested in his work.

Another recent study on the power of social influence indicates that sales could, indeed, be boosted in this way. Matthew Salganik of Columbia University in New York and his colleagues have described creating an artificial music market in which some 14,000 people downloaded previously unknown songs. The researchers found that when people could see the songs ranked by how many times they had been downloaded, they followed the crowd. When the songs were not ordered by rank, but only the number of times they had been downloaded was displayed, the effect of social influence was still there but was 15. People

thus follow the herd when it is easy for them to do so.
In Japan a chain of convenience shops has been ordering its products according to sales data. The shops sell only the most popular items in each product category, and the rankings are updated weekly.

And the psychology that works in physical stores is just as potent on the internet. Online retailers such as Amazon are adept at telling shoppers which products are popular with like-minded consumers. 16 in the privacy of your home, you can still be part of the swarm.

The Economist

Tekst 5

Some Notes on Reality

- 1 It's not that female supermodels are not real. They are flesh – a little flesh – and blood like anyone else. But the phrase “real women” automatically excludes them if “real” means something like well within the range of normal body types. Ad campaigns from Dove featuring amateur models, with amateur bodies, in their underwear have turned the reality of real women into at least a temporary advertising asset.
- 2 These women – brightly lit, smiling broadly and unmodishly from the sides of buses – are not likely to put the tall, thin tribe of beauties out of work anytime soon. But they give heart to real women everywhere. And they remind us how strange the human species looks through the lens of advertising. Just imagine what would happen if the world of television and magazine and billboard ads really represented the world we see around us. All the female models would have to be replaced by more realistically proportioned models like the ones in the Dove ads.
- 3 You won't be seeing a “real men” movement anytime soon, of course, but only because there is no need for it. Fashion may be about the fantasies of women, but television and the movies are about the fantasies of men, which is why it's so easy to find so many plump or merely ordinary-looking male actors playing opposite beautiful, malnourished women. The fact is that we all, men and women, seem to wander through life wondering what we really look like, and what we really should look like, while taking our cues not from the mirror or the scales, or from a sense of health and well-being, but from the magazines that pile up in the dentist's office.

www.nytimes.com

Four legs good, two legs bad



Britain is the best place in the world to be a laboratory animal, but the worst place to breed one

1 AROUND 30 years ago, the Hall family diversified from dairy and sheep farming into breeding guinea pigs for use in research laboratories. Six years ago, they became the target of animal rights activists. They have been abandoned by frightened suppliers and employees and lost their entire dairy herd, which was slaughtered when their tormentors made it impossible for the milk to be collected. This week, the family gave up its struggle, saying that by the end of the year they would stop breeding guinea pigs at Darley Oaks Farm.

2 The brutality of the Hall's treatment at the hands of animal rights campaigners would never be suffered by one of their animals inside a British laboratory. Live animal research is more tightly regulated in Britain than anywhere else in the world. Before an experiment, the research laboratory

must show it has the facilities and staff to care for the animals; the researcher must show he has the skills and training; and there must be no alternative to using animals – with the likely benefits of the science outweighing any animal suffering.

3 22, researchers must seek more efficient methods that involve fewer animals, look for more humane procedures and work towards developing completely new forms of experimentation that do not call for animals.

4 But not all live animal research can be replaced. Although surgical techniques can sometimes be learned by practising on cadavers, microsurgery requiring careful control of bleeding needs living animals.

5 One disease under study is cystic fibrosis, which is caused by one of around 200 defects on a single gene. It has no satisfactory treatment, and sufferers cannot expect to live much past 30. Researchers can now create mice with the same genetic defects and

test potential treatments on them, or study the progress of the disease. This research could not be carried out on tissue cultures, as the disease affects several organs, and nor could it be done on humans – at least, not without killing them to study the results.

6 That amounts to a strong case for animal experimentation, you might think. Certainly 700 scientists and doctors sought to argue as much in a declaration this week. But it doesn't take very many extremists to make life unpleasant. The police reckon that around 20 fanatics are responsible for most of the damage. They now realise that terrorism proper is unlikely to help their cause. So they have developed ways of scaring people that stop short of threatening lives – damaging property by pouring paint on cars, say, or sending fake bombs to laboratory workers.

7 Although the extremists do not enjoy much support, many people share their aims. In part that's because animal rights extremists fought hard for a ban on foxhunting, which was widely supported. In 2002 a MORI poll

for the Coalition for Medical Progress showed that 67% of people were either very or fairly concerned about the use of animals in research – though almost everyone accepts that this is sometimes needed.

8 It is hard to avoid the conclusion that reducing animal suffering is not the activists' main concern. If it is, they have made a poor choice of target. Domesticated cats alone kill around 300m animals each year in Britain, including around 80m mice, 15m rabbits and 3m rats. And forcing British suppliers of laboratory animals to close will lead to more animals being imported, with an increase in suffering.

9 Since extremists first targeted small animal-breeders, in 1997, they have closed down four outfits, breeding dogs, cats, monkeys and rabbits. The longest any of the companies lasted was two years.

10 The Halls held out at Darley Oaks Farm for six years. In that sense their resistance has been a triumph, albeit a dismal one.

The Economist

Medical tourism in India

Regarding the article “India’s healthy appeal” (Aug. 31): India has been an exporter of medical doctors for some time. And now, as the article shows, it has excess capacity in health care facilities, skilled manpower and sophisticated technology, and the country has put this all on offer to high-paying clients worldwide who wish to go there for medical treatment.

There is, however, an urban-rural imbalance in the distribution of medical care facilities in India. Nearly 80 percent of its (mainly poor) population lives in the villages, while 80 percent of its medical manpower and health-care facilities are in the cities.

There is nothing wrong with promoting medical tourism if it is done as an initiative of the private sector in a market economy. But when the national government promotes the initiative, it raises serious questions of morality, social justice and equitable distribution of resources in a country where a large proportion of the population is poor and without access to proper medical care.

India’s pious goal of providing health care for all exists only on paper. I have not seen any substantial evidence of translating this goal into action.

S. Shivananda

International Herald Tribune

Thomas Sutcliffe

This time at least, listen to the critics

I overheard a woman on her mobile this morning, updating a friend about her weekend. “We went to see *The Da Vinci Code*,” she said. There was a brief
5 pause – just long enough to accommodate the words “What was it like?” – before she delivered the verdict: “Not good ... not good.” Well, we bloody told you so, I thought.

10 In common with millions of other people over the past few days this woman had ignored the devastating reviews of movie critics – and in doing so she had allowed the film’s studio and distributor to claim a kind of
15 victory. After the weekend the film was the top of the box-office lists in the United States and actually broke records for overseas earnings. And I couldn’t help wondering why, given the
20 virtual unanimity of the reviews. Had we all suffered for nothing?

I don’t really ask the question in a spirit of professional resentment.
25 Indeed it seems to me that it would be a bad thing if critics were able to dictate the success of cultural projects. But there was something in the way the woman spoke that seemed to imply a
30 larger statement.

“No, really,” she was saying, “they were actually telling the truth this time.” And the fact that she’d had to go and check it out for herself was one

35 solution to the riddle. The consumers don’t trust the critics, which means that quite a lot of people are willing to risk wasting their money and their time rather than take the reviews as
40 read.

Critics are conditioned to cinematic snobbery, might be one expression of this distrust – happy enough to send their readers to a low-budget Finnish tragedy about manic
45 depression but always sniffy about Hollywood thrill rides. They don’t want to lose face in front of their colleagues, after all.

50 In this case I suspect that the very consistency of the reaction was a kind of provocation in itself. This then unleashed that most lucrative box-office instinct - the urge to judge for
55 oneself. Without intending to, the critics wrote reviews so uniform that it looked like a conspiracy. It can’t really be that bad, readers must have thought, on seeing lines like “as
60 exciting as watching your parents play sudoku”. Well, yes it can. But, in writing that, I only contribute to the effect. If I were the movie-distributor, I’d select the worst insults from the
65 reviews and add the copy-line “Are you going to let them tell you what to do?” Since I’m not, I’ll just say trust the woman with the mobile phone. Please.

The Independent

Television shows scramble forensic evidence

Rowan Hooper

- 1 FORENSIC science's spell in the limelight has hugely raised its appeal. Glitzy TV shows like *CSI: Crime Scene Investigation* have sent students flocking to forensics courses. But while this interest is sexing up the image of scientists, is it also stopping police catching criminals and securing convictions?
- 2 "Jurors who watch *CSI* believe that those scenarios, where forensic scientists are always right, are what really happens," says Peter Bull, a forensic sedimentologist at the University of Oxford. It means that in court, juries are not impressed with evidence presented in cautious scientific terms.
- 3 Detective sergeant Paul Dostie of Mammoth Lakes Police Department, California, found the same thing when he conducted a poll of forensic investigators and prosecutors. "They all agree that jurors expect more because of *CSI* shows," he says. And the "*CSI* effect" goes beyond juries, says Jim Fraser, director of the Centre for Forensic Science at the University of Strathclyde, UK. "Oversimplification of interpretations on *CSI* has led to false expectations, especially about the speed of delivery of forensic evidence," he says.
- 4 Another problem caused by media coverage of forensic science is that it informs criminals of the techniques the police employ to catch them. "People are forensically aware," says Guy Rutty of the Forensic Pathology Unit at the University of Leicester, UK. For this reason, some forensics experts are reluctant to cooperate with the media.
- 5 There is an increasing trend for burglars to use plastic gloves to avoid leaving their DNA at the scene. Dostie describes a murder case in which the attacker tried to wash away his DNA using shampoo. Police in Manchester, UK, say that car thieves there have started to dump cigarette butts from bins in stolen cars before they abandon them. "Suddenly the police have 20 potential people in the car," says Rutty.
- 6 None of this makes the forensic scientist's job any easier, but it probably won't prevent them from seizing a suspect, says Carlton Jones, a business manager at the UK's Forensic Science Service. "Forensically aware criminals are not something we have to really worry about."
- 7 It is extremely difficult not to contaminate a crime scene, even by wearing protective clothing. Rutty tested just how easy contamination is by asking a volunteer to walk around a sterile room and repeat a phrase. Rutty was able to retrieve the subject's DNA even though the man had been in the room for only a few seconds. Contamination occurred even if the subject was wearing a face mask of the kind used by crime scene investigators.
- 8 Mr Bull doubts that even a forensic scientist could get away with murder, such is the variety and sensitivity of the techniques available to investigators. A forensically savvy criminal might set them on a false trail initially, but that's the best he can hope for, he says. "If you want to commit the perfect murder there's one thing I'll ask you," he says. "Do you feel lucky, punk?"

www.newscientist.com

An injection of reality

1 **N**o one, in this country or anywhere else in Europe, can be under any illusion about the harm inflicted on our societies by hard drugs. The effects are all too visible on the streets and estates of our major cities. And with supplies as plentiful as they have ever been, and the street price correspondingly low, it is not a problem that is going away. The debate, in so far as there is one, centres on what to do about it.

2 For years, the discussion in Britain has swung between advocates of more and less liberal policies. The measure of success should surely be how far new addiction can be discouraged and whether the number of drug-related deaths and crimes is being reduced. By any or all these standards, Britain's record is a disgrace.

3 We record more deaths from illegal drug use than any other European country, and have done for each of the past 10 years. An estimated 50 per cent of burglaries are believed to be drug-related, and possibly many more. The total cost of damage caused by drug addicts is put at more than 21bn pounds a year.

4 Worse, this government has seemed reluctant to learn from successful experiments conducted elsewhere. Ten days ago, the Rowntree Foundation published a report assessing the success of drug-consumption rooms. These provide a

more hygienic environment for drug users, reducing overdoses and encouraging addicts to seek help. The report recommended pilot projects in Britain, even though the Government, terrified of bad headlines in the conservative press, has ruled out similar proposals in the past.

5 Now, a widely respected medical journal, *The Lancet*, has published a study based on Switzerland, a country with relatively liberal policies on drugs. This found that prescribing methadone or other heroin-substitutes to addicts led to a decline in the number of new heroin users in Zurich, and sharply reduced the number of heroin-related deaths. It found the "medicalisation" of heroin dependence changed addiction from a rebellious act to an illness that requires treatment. The logical conclusion is that a more liberal approach, complementing needle-exchange programmes already in operation, could have a positive effect in Britain.

6 The Government's reluctance to learn from experience elsewhere, apparently for fear of public reaction, does not bode well. Yet the effect of the changes in our licensing laws¹⁾ shows that liberalisation can have a positive effect. With the licensing laws, the Government stuck to its guns. It is high time it extended the courage of its convictions to drugs policy as well.

The Independent

noot 1 licensing laws: laws which control the selling of alcoholic drinks

Tekst 11

When It Pays to Nix Instead of Fix

By Michelle Singletary

Chances are you have a broken household appliance collecting dust in your garage or basement. And chances are you're never going to take the time to find a repair shop to fix that appliance.

These days folks just figure, why bother? As prices continue to come down on many appliances and pieces of electronic equipment, by the time you pay to repair something, you're halfway to buying yourself a new and improved washing machine, microwave oven or DVD player.

In its latest repair-or-replace survey, Consumer Reports magazine confirmed what most of us already know - the repair road is a costly and often frustrating trip. Nearly half the respondents said they didn't seek repairs or quit along the way.

It took me several days and many telephone calls to find a repairman who would make a house call to diagnose and fix my 10-year-old, 32-inch television with a sound problem. If I got more than a couple of feet away from the set, I had to be able to read lips.

For a hot second, I, too, thought why bother, knowing full well that repair costs can be daunting. Consumer Reports found that readers paid as much as \$500 to fix projection TVs, \$400 to repair laptop computers and \$180 to fix digital cameras. A front-load washer typically costs \$350 to service.

With these costs it's easy to see why people don't want to call a repair shop.

Instead they go looking for a replacement as soon as they realize they've got a problem.

Some tips

Still, if you think it's worth your time and money to repair a product, follow this advice from Consumer Reports:

Make sure the product is really broken

Seriously, I once called a repair person for a freezer that wasn't working. Turns out the cord, which we had snaked around a corner to an outlet, kept coming unplugged.

Check the owner's manual

You know, it's the book that you tossed in a drawer after you opened your new electronic toy. Most instruction manuals have a troubleshooting section. Personally, I've saved a number of products from the recycling bin by just reading the owner's manual. (Okay, my husband has fixed them by reading it.)

Find help

If you've lost the manual but you are the do-it-yourself type, there are a number of Web sites that can help you with a broken product. Check out <http://www.repairclinic.com> or Appliance Repair Central at <http://www.pcappliancerepair.com>. Both provide troubleshooting help so you can figure out how to fix your appliance. Each also can help you find replacement parts. And if you're a handyman (or handywoman), Appliance Repair Central has a national in-home service referral database.

Contact the manufacturer

That's right, call the maker even if your product is no longer under warranty. In the Consumer Reports survey, 10 percent of readers who complained about a problem got an offer to fix or replace an out-of-warranty product free of charge. Hey, it never hurts to ask.

Do a cost analysis

If you're faced with the fix-it-or-nix-it choice, do a cost analysis. Don't assume a repair will be too expensive. When it came to my TV, I thought it was at least worth the effort because I had paid \$900 for it. (Under duress, I might add. My husband was tired of watching the Super Bowl on our 19-incher.) Trust me, having paid more than I ever thought I would for a television set, I wasn't going to heave-ho it into a landfill.

For \$80 I got the sound back. Now I don't have to strain to hear what those desperate housewives are saying as I prepare my kids' lunches for the next day.

<http://www.washingtonpost.com>

Calendar of Events



SCIENCE & THE CITY

It's easy to stay on top of all that New York City has to offer at the nexus of science and culture. How? Start by subscribing — for free — to S&C Weekly, a Monday morning email service brought to you by the Academy's webzine, Science & the City. S&C Weekly previews the most exciting and interesting things happening in science each week — lectures, exhibits, readings, performances, films, outdoor activities, edutainment for kids, and much more! Please visit **www.scienceandthecity.org**. Register for your free subscription and to find details on more than 100 events every week.

Sep 14 • 6:30 PM

Recent Advances in Astronomy Seminar *FREE*

This high-level discussion, hosted by the Amateur Astronomers Association of New York, focuses on the latest astronomical news and events taken from online sources, newspaper articles, and weekly periodicals.

Location: Amateur Astronomers Association of New York, Headquarters, 1010 Park Ave. at E. 85th St.

Sep 16

Opening!

Invoking Presence: Synthesizing Art and Science *FREE*

Check out this fascinating exhibit of images relating to forms found in nature, by Norman Galinsky, a chemical engineer turned artist.

Location: New York Hall of Science, 47-01 111th St at 48th Ave, Flushing Meadows - Corona Park, Queens
Hours: Tue - Thu 9:30am - 2pm, Fri until 5pm, Sat - Sun 10am - 6pm

Sep 16 • 8:00 AM

Saturday Nature Walks in Inwood Hill Park *FREE*

See migrating songbirds, raptors, and small mammals, and learn about the

ecosystems of North Manhattan Parks on this nature walk with Mike Feller, Chief Naturalist for the City of New York Parks & Recreation Department.

Location: Inwood Hill Park Nature Center, enter park at 218th St. & Indian Rd.

Hours: 8 - 10am, every Sat except the last Sat of each month

Through Sep 24

Solos: The Domestication of Technology

Solos is an interactive light and sound installation by French industrial designer Matali Crasset, whose work explores the ways technology works its way into all aspects of daily life.

Location: Cooper-Hewitt National Design Museum, 91st St. & Fifth Ave.

Hours: Tue - Thu 10am - 5pm, Fri until 9pm, Sat until 6pm, Sun noon - 6pm

Sep 26 • 7:00 PM

Opening!

Pertaining to Origins: Organization of Form and Function *FREE*

Artist and printmaker Paul Liam Harrison discusses his new exhibit exploring the inner workings of the cell as revealed to him through the work of

his scientific collaborators at Cold Spring Harbor Laboratory and the University of Dundee.

Location: Cold Spring Harbor Laboratory, Racker Room, Blackford Hall, Cold Spring Harbor, Long Island

Sep 28 • 12:00 PM
Chile Pepper Fiesta

At this annual festival, enjoy spicy cooking demonstrations and tasty food samplings from around the globe, listen to some hot Cajun music, and learn how to bring some chile pepper heat back to your own garden, fire escape, or window box.

Location: Brooklyn Botanic Garden, 1000 Washington Ave. at Eastern Parkway

Sep 29 • 10:30 AM
Push/Pull: The Physics of Skyscrapers *FREE*

At this workshop, the young learn about the physics of skyscrapers through interactive experiments and demonstrations, including playing in a tension tug-o-war. For ages 8-14.

Location: The Skyscraper Museum, 39 Battery Pl., Battery Park City

Sep 30 - Oct 1
WIRED NextFest

Check out robots, private space planes, fuel-cell concept cars, hypersonic sound beams, invisibility coats, and more, developed by the world's most innovative companies, R&D labs, government agencies, and individual inventors.

Location: Jacob Javits Center, 655 W. 34th St. between Eleventh & Twelfth Ave.

Oct 7 - 9
Ocean Explorer's Weekend

During this celebration of Columbus Day, kids learn about the famous ocean explorers connected to the Wildlife Conservation Society.

Location: New York Aquarium, Surf Avenue & W. 8th St., Brooklyn

Hours: Mon - Fri. 10am - 6pm, Sat & Sun until 7 pm

Through Oct 15
Best of Friends: R. Buckminster Fuller and Isamu Noguchi *FREE*

This exhibit documents the friendship and shared values of American visionary and inventor R. Buckminster Fuller and sculptor Isamu Noguchi, and their dedication to improving humanity through art, science and technology.

Location: The Noguchi Museum, 9-01 33rd Rd at Vernon Blvd., Long Island City

Hours: Wed - Fri. 10am - 5pm; Sat & Sun 11am - 6pm; Mon - Tues closed

Through Oct 29
Chihuly: Gardens and Glass

Artist Dale Chihuly brings his spectacular glass sculpture to the New York Botanical Garden this summer in a stunning exhibition designed specifically for the Garden's collections and vistas.

Location: New York Botanical Garden, Bronx River Parkway & Fordham Rd., Bronx

Hours: Daily 10am - 6pm

Through Oct 31
Please, Please, Pleased to Meet'Cha *FREE*

This outdoor installation features sound recordings of human voices speaking transliterated birdsongs. The work explores the challenge of translating bird sounds into human language, through use of diagrams and mnemonics.

Location: Wave Hill, W. 249th St & Independence Ave., Bronx

Hours: Tues - Sun 10am - 4:30pm, Wed (June & July) until 8pm

www.nyas.org