

ÅRSBERETNING - VIDENREGNSKAB

2003



ANNUAL REPORT - INTELLECTUAL CAPITAL STATEMENT



EXPERIMENTARIUMS ÅRSBERETNING 2003 / ANNUAL REPORT
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ÅBNINGSTIDER

Mandag, onsdag - fredag 9.30-17
Tirsdag 9.30-21
Lørdag, søndag og helligdage 11-17
Lukket 23-25/12, 31/12, 1/1

OPENING HOURS

Monday, Wednesday - Friday 9.30-17
Tuesday 9.30-21
Saturday, Sunday and holidays 11-17
Closed on 23-25/12, 31/12, 1/1

LEDELSESBERETNING 2003

EN AMBITIØS VISION FOR EXPERIMENTARIUM

I løbet af efteråret 2002 og foråret 2003 udvikledes Experimentariums Vision 2014.

Visionen er: Experimentarium som Danmarks kraftcenter for formidling af naturvidenskab og teknik.

Experimentariums kerneaktivitet er - og skal altid være - den hands-on interaktive formidling, som kan opleves i de faste og skiftende udstillinger. Men Experimentarium skal brede sin formidlingsvifte ud og gennemføre nye aktiviteter, der omhandler naturvidenskab og teknik på andre måder, med andre medier og ved andre metoder. Der tænkes på undervisningsmateriale, kursusvirksomhed, forlagsvirksomhed, konferencer, seminarer, nyhedsformidling, web site formidling, computerspil, videnskabsteater, forskning i formidling etc. Kun fantasien sætter faktisk grænsen.

Visionen er også, at disse nye initiativer skal hente deres inspiration i Experimentariums aktive, medinddragende, vedkommende formidling, som kendes fra udstillingerne. De nye aktiviteter skal således virke i en formidlingsmæssig synergi med de nuværende kerneaktiviteter.

I løbet af 2003 kom Experimentarium denne vision flere skridt nærmere. Ved etableringen af Formidlingsafdelingen fra den 1. januar 2003 tog Experimentarium et vigtigt organisatorisk skridt til igangsætning af formidlingsaktiviteter i association med udstillingsaktiviteterne.

LANDSDÆKKENDE SKOLEKONKURRENCE

Et af Formidlingsafdelingens første initiativer var den landsdækkende skolekonkurrence "Gi Lyd", som Safri Duo



støttede ved at være bannerførere for projektet. Otto Mønstedts Fond var projektets hovedsponsor og Kilroy group travel projektets præmiesponsor. Konkurrencen gik i sin enkelthed ud på, at en klasse skulle indlevere et eller flere eksperimenter, der belyste fænomenet "LYD". Experimentarium udviklede inspirationsmateriale og gennemførte et lærerkursus for over halvdelen af de klasser, der meldte sig til konkurrencen og i alt 118 klasser deltog i konkurrencen og mere end 80 eksperimenter blev indsendt til Experimentarium. I foråret 2004 bliver den vindende klasse udpeget og modtager præmien: En rejse til Paris for hele klassen i 6 dage.



TO INTERNATIONALE KONFERENCER OM BIOTEKNOLOGI

PUBLIC UNDERSTANDING OF LIFE SCIENCE (PULSE)

Med støtte fra EU gennemførtes den 4. og 5. november 2003 det ambitiøse formidlingsprojekt Public Understanding of Life Science, PULSE i samarbejde med science centrene i Trento og Lissabon. Projektet blev gennemført som led i Den Europæiske Videnskabsuge, som Experimentarium herved deltog i for 8. gang. Deltagerne i projektet var ca. 100 gymnasieelever i hvert af de 3 lande. Eleverne blev i løbet af de 2 dage bombarderet med aktiviteter vedr. bioteknologi. Ved konferencens start og afslutning blev eleverne anmodet om at udfylde et spørgeskema, der afdækkede deres holdning til en række spørgsmål vedr. bioteknologi. Spørgsmålene i de to skemaer var stort set identiske, hvorved ændringerne i elevernes opfattelse af bioteknologi før og efter formidlingsaktiviteterne kunne aflæses. Ved dybe interviews af et tilfældigt udpluk af eleverne fik Experimentarium en fornemmelse af, hvilke formidlingsaktiviteter havde medført ændringer i elevernes opfattelse af emnet.



De tre grupper af unge mennesker kommunikerede den sidste dag on line om projektets resultater. Her havde Novozymes A/S velvilligt stillet sit avancerede IT-udstyr til projektets rådighed.

Projektet havde ikke en ambition om at være et forskningsprojekt, der skulle bidrage med ny viden om formidling af forskning. Men ved oplysninger fra tre lande og data fra ca. 300 elever kunne nogle interessante konklusioner trods alt drages. De tre centre forsøger at rejse midler til gennemførelse af et PULSE II projekt, hvor set up'et skal sikre, at de opnåede data er repræsentative og kan benyttes i en forskningsmæssig sammenhæng.

Yderligere oplysninger på www.pulse.dk.



50 ÅRS JUBILÆET FOR DNA HELIXENS OPDAGELSE

Watson og Crick opdagede i 1953, at menneskets arvemasse lå gemt i det helixformede DNA molekyle. Med støtte fra The British Council og Novozymes A/S gennemførte Experimentarium en række aktiviteter vedr. DNA helixen i dagene fra den 31. oktober - 26. november 2003 (benævnt DNA50). Den centrale begivenhed var en konference den 18. november med Nobelprismodtageren Sidney Brenner som hovedtaler. Emnet for konferencen var, hvad fremtiden vil bringe vedr. den bioteknologiske forskning. På spørgsmålet om Sidney Brenner troede, at man ville lave mennesker kunstigt engang i fremtiden, svarede den 77-årige englænder lunt, at han i hvert fald kendte en mere spændende måde at skabe et menneske på. Den betragtning lå til grund for hele hans syn på bioteknologien, og hvad den skulle udføre i "menneskets tjeneste".

Af andre aktiviteter i løbet af DNA50 skal nævnes det vellykkede Guinness Book of Records forsøg med verdens længste DNA helix fremstillet i lego klodser. Graeme Jones fra Keele University underviste i opbygning af DNA helixen. Dean Maddon og John Scholar fra National Centre for Biotechnology Education afholdt over 2 uger workshops for gymnasieelever i DNA fingerprints og DNA screening.

Yderligere oplysninger på www.dna50.dk.

EN FORNYET HOVEDUDSTILLING

I 1999 havde Experimentarium rejst ca. 21 mill. kr. til en gennemgribende fornyelse af hovedudstillingen.

I oktober 2000 indviedes "Vores Utrolige Klode", og i december 2002 indviedes "Dig & Mig". Herved var hovedparten af den faste udstilling fornyet. Den tredje og sidste fornyelse, der omfattede alle de tidligere temaudstillinger (bortset fra børneafsnittet bagerst i hallen), blev forberedt til indvielse i løbet af hele 2003. Den 29. januar 2004 kunne en veloplagt videnskabsminister Helge Sander indvie den sidste etape i hovedudstillingens fornyelse, "Cirkus Fysikus".

Som altid ved nye udstillinger udarbejdedes et undervisningsmateriale til Cirkus Fysikus. Som noget nyt udarbejdedes materialet i to udgaver rettet mod henholdsvis 3. - 6. klasse og 7. - 10. klasse.

KRIBLEKRABLE - DU ER ALDRIG ALENE!

Denne tankevækkende sandhed - at vi aldrig er alene, men omgivet af et mylder af kriblekrable småkravl - er det



naturvidenskabelige udgangspunkt for særudstillingen "Kriblekrable - du er ALDRIG alene", som påkalder sig smilerynkernes opmærksomhed! Udstillingen er produceret af Experimentarium og skal på en europæisk turné fra september 2004, hvor udstillingen tages af plakaten her. Udstillingen beretter om støvmiderne i vores sengetæppe, småkravlet i vores mad, viser publikum sammen med 2.000 gange forstørrede bakterier og meget mere.

Undervisningsmaterialet blev udsendt til nu 5.900 skoleklasser og er blevet flittigt brugt før, under og efter klassernes besøg på Experimentarium.

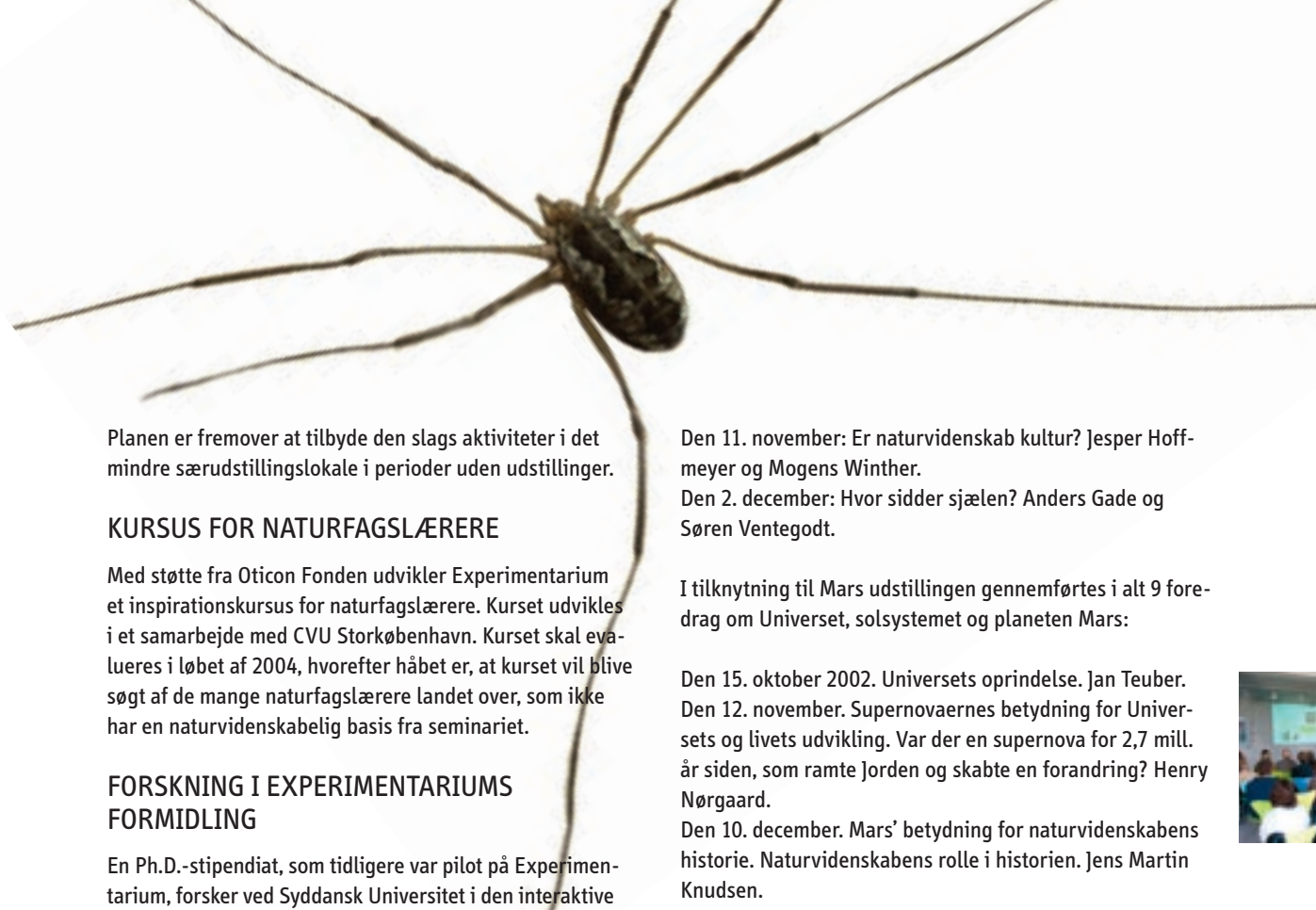
HJERNEN

I 1997 havde Experimentarium en formidabel succes med særudstillingen "Hjernen", som udvikledes i samarbejde med HjerneÅret 1997. I årene fra 1997 - 2002 var særudstillingen på rundrejse til museer og science centre i 7 forskellige europæiske lande. Udstillingens emne er om muligt endnu mere aktuelt i dag, og samtidig er udstillingen løbende blevet renoveret. Derfor var udstillingen rede til en repremiere på Experimentarium! Hvilket den fik den 4. september 2003, hvor kulturminister Brian Mikkelsen med stort engagement kom til stede og foretog den officielle indvielse. Ved samme lejlighed redegjorde hjerneforsker Peter Lund Madsen om udviklingen af dyrenes hjerne fra krybdyrenes mest primitive hjerner. Hjernen er opstillet i Experimentariums Særudstillingsområde 2 til udgangen af 2004. Håbet er derefter, at Hjerneudstillingen skal videre på en europæisk turné.

AKTIV SOMMER!

Dette var overskriften for en række aktiviteter, som Experimentarium i sommeren 2003 indbød publikum til at deltage i. Ved udstillingspiloternes medvirken opfordredes publikum i Særudstillingsområde 2 til at arbejde med robotter, kuglebaner og dominobrikkers sjove evne til at lave kæder af faldende brikker. Sommeraktiviteterne var særdeles populære, og de gode erfaringer vil Experimentarium bringe videre i betræbelserne på at lave fritidscenter-aktiviteter for de unge i Gentofte Kommune.





Planen er fremover at tilbyde den slags aktiviteter i det mindre særudstillingslokale i perioder uden udstillinger.

KURSUS FOR NATURFAGSLÆRERE

Med støtte fra Oticon Fonden udvikler Experimentarium et inspirationskursus for naturfagslærere. Kurset udvikles i et samarbejde med CVU Storkøbenhavn. Kurset skal evalueres i løbet af 2004, hvorefter håbet er, at kurset vil blive søgt af de mange naturfagslærere landet over, som ikke har en naturvidenskabelig basis fra seminarieret.

FORSKNING I EXPERIMENTARIUMS FORMIDLING

En Ph.D.-stipendiat, som tidligere var pilot på Experimentarium, forsker ved Syddansk Universitet i den interaktive formidling, som er Experimentariums særpræg. Ph.D.-stipendiat, som vil blive afsluttet i 2006, analyserer, hvilke påvirkninger i forståelsesmæssig sammenhæng, forskellige typer af opstillinger bibringer den eksperimenterende elev.

Endnu en forsker vil blive knyttet til Experimentarium i forbindelse med Forskningsstyrelsens tilskud til det 3-årige projekt, Danish Research Center for Education and Advanced Media Materials ved Syddansk Universitet med blandt Learning Lab Denmark, DR, Roskilde Universitetscenter og Undervisningsministeriet som partnere og interessenter. Emnet for dette Ph.D.-stipendiat er Den Intelligente Udstilling, som først udvikledes i forbindelse med millennium udstillingen Future Body.

MANGE, MANGE ANDRE FORMIDLINGSAKTIVITETER

Sammen med FOF i Gentofte afholder Experimentarium såkaldte debataftener, hvor et kontroversielt emne belyses ved to indlæg. Følgende emner har været genstand for debat:

- Den 25. februar: Gør velfærd og renlighed os allergiske? Vibeke Rosenfeldt, Niels Nielsen og Jerk W. Langer.
- Den 18. marts. Astrologi og astronomi. Karl Aage Jensen, Per Kjærgaard Rasmussen, Anja C. Andersen og Signe Buch.
- Den 29. april. Alternativ behandling. Fup eller fakta? Rachel Santini, Raben Rosenbert og Jerk W. Langer.
- Den 20. maj. Uf, en edderkop! Jakob Strachotta og Karen Kofod.
- Den 16. september: En historie om hjernens funktion og om hjernebilleder. Olaf Poulsen.
- Den 7. oktober: Smerter pist væk. Jes Olesen og Jakob Sander Hansen.

Den 11. november: Er naturvidenskab kultur? Jesper Hoffmeyer og Mogens Winther.

Den 2. december: Hvor sidder sjælen? Anders Gade og Søren Ventegodt.

I tilknytning til Mars udstillingen gennemførtes i alt 9 foredrag om Universet, solsystemet og planeten Mars:

Den 15. oktober 2002. Universets oprindelse. Jan Teuber.
Den 12. november. Supernovaernes betydning for Universets og livets udvikling. Var der en supernova for 2,7 mill. år siden, som ramte Jorden og skabte en forandring? Henry Nørgaard.

Den 10. december. Mars' betydning for naturvidenskabens historie. Naturvidenskabens rolle i historien. Jens Martin Knudsen.

Den 7. januar 2003. Missionen til Mars, 2003 - 2004. Vandets historie på Mars. Liv på Mars? Morten Bo Madsen.

Den 28. januar. Is på Mars. Liv? Christine Schøtt Hvidberg.

Den 18. februar. Fremtidig dansk deltagelse i udforskningen af Mars. John Jørgensen og Fritz Primdahl.

Den 4. marts. Den kommende flyvning til Mars. Peter Norsk.

Den 1. april. Planeter omkring andre stjerner. Eftersøgning af liv uden for Jorden. Uffe Gråe Jørgensen.

Den 6. maj. Kosmiske katastrofer. Jan Teuber.

Fra den 4. - 6. juni deltog Experimentarium i Gentofte Kommunes Fest- og Kulturdage med en række aktiviteter i samarbejde med Gentoftes Brandvæsen.



I samarbejde med Hellerup Skole gennemførtes en slags learning-by-teaching aktivitet, hvor 6. klasses elever og 10. klasses elever blev undervist i en række af Experimentariums demoer med henblik på senere at vise disse demoer for deres kammerater og senere igen for Experimentari-



ums almindelige publikum. Hellerup Skoles 6. klasse elever har også været "minipiloter" på et medlemsklub arrangement, hvor Børnenes Vandpyt var i fokus.

SALG OG UDLEJNING AF OPSTILLINGER OG UDSKILLINGER

Experimentarium udfører kommercielle udstillingsaktiviteter for derved at opnå bidrag til dækning af underskud i kerneaktiviteterne samt for at opnå synergi til de øvrige udstillingsaktiviteter. I 2003 udviklede og producerede Experimentarium for FDB en rejsende udstilling "Forbrugsjunglen", som siden maj måned har kørt Danmark tyndt og besøgt landets Brugsen'er. Udstillingens emne er forbrugertryghed gennem forbrugeroplysning. Herudover leverede Experimentarium i november 2003 et skitseforslag til en science center udstilling i Sintra nord for Lissabon. Experimentarium håber at skulle bygge opstillingerne i løbet af anden halvår 2004.



KØB AF TAPPEHALBYGNINGEN

Experimentarium har af Carlsberg A/S fået tilbudt at erhverve tappehalbygningen, som fonden har fået stillet lejefrit til rådighed til den 31. december 2010.

Experimentarium har rettet henvendelse til Gentofte Kommune, regeringen og en række fonde med henblik på opnåelse af tilskud og indskud til anskaffelse af bygningen.

Det er Experimentariums håb, at købet vil kunne effektueres pr. 1. januar 2005.

FORTSAT MANGE BESØGENDE

I 2003 modtog Experimentarium 337.371 besøgende. Det er færre end i jubelåret 2002, men fortsat et anseligt antal besøgende. Experimentariums tag i skolen er fortsat stærkt. Således var der i alt 107.203 elever og lærere på besøg i 2003.



UDVIKLINGEN I ØKONOMISKE FORHOLD

Driftsresultatet er fortsat utilfredsstillende. Fondens resultat blev et underskud på 9,739 mill. kr. (2002: 5,599 mill. kr.), hvoraf 6,588 mill. kr. er afskrivninger (2002: 6,628 mill. kr.).

Underskuddet dækkes ved overførsel fra dispositionsfonden, som ved årets udgang udgjorde 10,538 mill. kr. (2002: 14,310 mill. kr.).

Der er i den forløbne del af 2004 ikke indtrådt hændelser, som har betydning for fondens økonomiske situation pr. 31. december 2003.

FORVENTNINGER TIL FREMTIDEN

Budgettet for 2004 udviser et underskud på 6,968 mill. kr. på basis af et besøgstal på 307.000.

Den 30. januar 2004 åbnedes Fornyelse III af hovedudstillingen "Cirkus Fysikus" for publikum. Udstillingen er blevet godt modtaget af publikum.

Den 30. september 2004 åbnes særudstillingen "KønsExperimentet", der med stor succes har været vist hos Technopolis i Belgien.

VIDENREGNSKAB

Siden 2001 har Experimentarium udarbejdet et videnregnskab efter de af Erhvervs- og Boligministeriet udstukne retningslinier. Videnregnskabet har tidligere været udsendt som en selvstændig publikation, offentliggjort hvert år i juni måned. Videnregnskabet vil fra juni 2004 og fremover være tilgængeligt på www.experimentarium.dk

Hellerup, den 22. april 2004

Asger Høeg, Direktør



MANAGEMENT REPORT

AN AMBITIOUS VISION FOR THE EXPERIMENTARIUM

During autumn 2002 and spring 2003, the Experimentarium developed its Vision 2014.

The vision is: the Experimentarium as Denmark's communication powerhouse for science and technology.

The Experimentarium's core activity is – and always will be – the provision of hands-on interactive scientific education via its permanent and special exhibitions. But the Experimentarium must also broaden its educational remit and introduce new activities that take different approaches to science and technology, using different media and apply different methods. Here we envisage the provision of educational materials, courses, publishing, conferences, seminars, news services, web site information, computer games, science theatre, educational research, etc. In fact, only the imagination sets the limits.

The vision also foresees that these new initiatives will garner inspiration from the active, interactive, relevant information provided by the Experimentarium's exhibitions, thereby creating educational synergy with the current core activities.

During 2003, the Experimentarium came several steps closer to realising this vision. With the establishment of the Department of Communication and Public Services from 1 January 2003, the Experimentarium made an important organisational move towards launching educational activities in association with its exhibitions.

NATIONAL SCHOOL COMPETITION

Among the first initiatives of the Department of Communication and Public Services was the national school competition *Gi Lyd* ("Make Some Sound"), for which the percussion group *Safri Duo* provided free support by acting as figurehead for the project. The *Otto Mønsted Fond* was the project's principal sponsor, while *Kilroy group gravel* sponsored the prizes. The competition quite simply involved asking school classes to submit one or more experiments that would illustrate the phenomenon of "SOUND". The Experimentarium developed inspirational material and provided teachers' courses for more than half of all the classes that entered the competition. A total of 118 classes participated, and more than 80 experiments were submitted to the Experimentarium. The winning class will be chosen in the spring of 2004, and will receive a prize of a six-day trip to Paris for the entire class.

TWO INTERNATIONAL BIOTECHNOLOGY CONFERENCES

PUBLIC UNDERSTANDING OF LIFE SCIENCE (PULSE)

With support from the EU, the ambitious educational project PULSE, Public Understanding of Life Science, took place on 4 and 5 November in co-operation with the science centres in Trento and Lisbon. The project was carried out as part of European Science Week, in which the Experimentarium was participating for the eighth time. Around 100 secondary school students from each of the three countries took part in the project, and the students were showered with biotechnology-related activities for the two days of the event. At the beginning and end of the conference, the students were requested to complete a questionnaire revealing their attitudes towards a number of biotechnological issues. The questions on the two forms were more or less identical, to allow changes in the students' attitudes to biotechnology before and after the educational activities to be

measured. Through in-depth interviews with a random sample of students, the Experimentarium was able to gain a sense of which educational activities had helped to change the students' views towards the subject.

On the final day, the three groups of young people discussed the project's results via on-line communication, using sophisticated IT equipment that was kindly placed at the disposal of the project by *Novozymes A/S*.

The project was not intended to be a research project that could contribute new knowledge on scientific education, but with information from three countries, and data from approximately 300 students, some interesting conclusions could nonetheless be drawn. The three centres are attempting to raise funds for a PULSE II project, in which efforts will be made to ensure that the data collected is both representative and capable of being used in a research-related context.

Further information from: www.pulse.dk

50TH ANNIVERSARY OF THE DISCOVERY OF THE DNA DOUBLE HELIX

In 1953, James Watson and Francis Crick discovered that the human genome lay hidden in the helical DNA molecule. With support from the British Council and *Novozymes A/S*, the Experimentarium carried out a number of activities relating to the DNA double helix in the period 31 October-26 November 2003, entitled DNA50. The central event was a conference held on 18 November, which featured Nobel prize-winner Sydney Brenner as principal speaker. The subject of the conference was what the future will bring in biotechnological research. To the question of whether he believed that it would be possible in the future to create human beings by artificial means, the 77-year-old Englishman replied with a twinkle in his eye that he certainly knew a more exciting way to create human beings. This view underlay his whole understanding of biotechnology and the activities it ought to perform "in the service of mankind".

Other activities in connection with DNA50 included a successful Guinness Book of Records attempt to create the world's longest DNA helix from Lego bricks. Graeme Jones of Keele University provided instruction on the construction of the DNA helix. Dean Maddon and John Scholar of the National Centre for Biotechnology Education held two weeks of workshops for secondary school students on DNA fingerprinting and DNA screening.

Further information from: www.dna50.dk





REFURBISHMENT OF THE MAIN EXHIBITION

In 1999, the Experimentarium raised approximately DKK 21 million for the purpose of undertaking a thorough renewal of its main exhibition.

In October 2000, the exhibition Vores Utrolige Klode ("Dynamic Earth") was launched, and in December 2002, the exhibition Dig & Mig ("You and Me"). This completed the renewal of most of the permanent exhibition. The third and final stage of the renewal, which was to encompass all of the previous theme exhibitions (apart from the children's section at the rear of the hall) was under preparation throughout 2003. On 29 January 2004, the Minister of Science, Helge Sander, could with satisfaction inaugurate the final stage in the renewal of the main exhibition, Cirkus Fysikus.

As always with new exhibitions, educational materials for Cirkus Fysikus were prepared by the Experimentarium. As an innovation, this material was produced in two versions, aimed at the 3rd-6th grades and 7th-10th grades, respectively.

CREEPCRAWLY – YOU ARE NEVER ALONE!

The thought-provoking fact that we are never alone, but are always surrounded by a myriad of creepy-crawly insects, was the scientific starting point for the special exhibition "CreepyCrawly – you are NEVER alone", which raised quite a few smiles! The exhibition was produced by the Experimentarium, and will be going on a European tour after September 2004, when it closes in Copenhagen. The exhibition tells us about the dust mites in our bedspreads and the small fry in our food, shows audience members together with bacteria enlarged 2,000 times, etc.

Teaching materials have now been sent out to 5,900 school classes, who have put them to good use both before, during and after their visits to the Experimentarium.

THE BRAIN

In 1997, the Experimentarium enjoyed remarkable success with a special exhibition entitled "The Brain", which was developed in co-operation with "Year of the Brain 1997". In 1997-2002, the special exhibition went on tour to museums and science centres in seven different European countries. The exhibition's subject is, if anything, even more relevant today, and the exhibition is being continually renewed and updated. Accordingly, it was ripe for a renewed premier at the Experimentarium, which it received on 4 September 2003, when the Minister for Cultural Affairs, Brian Mikkelsen, participated



enthusiastically in the official inauguration. On the same occasion, brain researcher Peter Lund Madsen gave a talk on the evolution of animals' brains from the primitive brains of insects. The Brain will be on exhibition in Special Exhibition Area 2 of the Experimentarium until the end of 2004, after which it is hoped that the exhibition will go on another European tour.

ACTIVE SUMMER!

This was the overall headline for a number of activities in which the Experimentarium invited its audience to participate during the summer of 2003. With the help of the exhibition pilots, the audience in Special Exhibition Area 2 was encouraged to work with the amusing properties of robots, marbles and dominos to create chains of falling bricks. The summer activities were very popular, and the Experimentarium will apply the valuable lessons gained here in the leisure centre activities it is creating for young people in Gentofte Municipality.

The plan for the future is to present this kind of activity in the smaller special exhibition area, when this is not in use for exhibitions.

COURSES FOR LIFE SCIENCE TEACHERS

With support from the Oticon Fonden, the Experimentarium is developing an inspirational course for life science teachers in co-operation with the Centre for Higher Education, Copenhagen. The course will undergo evaluation during 2004, after which time it is hoped that it will be followed by the many life science teachers from all over the country who have not received a scientific education at teacher training college.

RESEARCH INTO THE EXPERIMENTARIUM'S COMMUNICATION METHODS

A PhD student at the University of Southern Denmark, formerly a "pilot" at the Experimentarium, is undertaking research into the interactive communication that is the Experimentarium's trademark. The doctoral thesis, which will be published in 2006, analyses the ways in which the understanding of the experimenting pupil is influenced by the various types of exhibit.

Another PhD student from the University of Southern Denmark will be attached to the Experimentarium in connection with a grant by the Danish Research Agency for a three-year project to be undertaken by the Danish Research Centre for Education and Advanced Media Materials, involving Learning Lab Denmark, Danmarks Radio, Roskilde University and the Ministry of Education as partners and stakeholders. The subject of this doctoral thesis is the Intelligent Exhibition, a concept which was first developed in connection with the millennium exhibition "Future Body".

MANY, MANY OTHER EDUCATIONAL ACTIVITIES

In co-operation with the FOF adult education centre in Gentofte, the Experimentarium held a series of so-called debate evenings, in which a controversial subject was illustrated by two presentations. The following subjects were debated:

25 February: Do welfare and hygiene make us allergic? Vibeke Rosenfeldt, Niels Nielsen and Jerk W. Langer.

18 March: Astrology and astronomy. Karl Aage Jensen, Per Kjærgaard Rasmussen, Anja C. Andersen and Signe Buch.

29 April: Alternative therapies – fact or con? Rachel Santini, Raben Rosenbert and Jerk W. Langer.



20 May: Ugh, a spider! Jakob Strachotta and Karen Kofod.
 16 September: The history of the brain's functions and brain concepts. Olaf Poulsen.
 7 October: The abolition of pain. Jes Olesen and Jakob Sander Hansen.
 11 November: Is science culture? Jesper Hoffmeyer and Mogens Winther.
 2 December: Where is the soul? Anders Gade and Søren Ventegodt.

In association with the Mars exhibition, nine talks were presented on the universe, the solar system and the planet Mars:

15 October 2002: The origins of the universe. Jan Teuber.
 12 November: The significance of supernovas for the universe and the development of life. Did a supernova 2.7 million years ago affect the Earth and create a change? Henry Nørgaard.
 10 December: The importance of Mars in the history of science. The role of science in history. Jens Martin Knudsen.
 7 January 2003: The mission to Mars, 2003-2004. The history of water on Mars. Is there life on Mars? Morten Bo Madsen.
 28 January: Ice on Mars. Life? Christine Schøtt Hvidberg.
 18 February: Future Danish participation in Mars research. John Jørgensen and Fritz Primdahl.
 4 March: The coming Mars mission. Peter Norsk.
 1 April: Planets orbiting other stars. The search for life beyond the Earth. Uffe Græe Jørgensen.
 6 May: Cosmic catastrophes. Jan Teuber.

From 4-6 June, the Experimentarium contributed to Gentofte Municipality's Cultural Festival with a number of activities, in co-operation with Gentofte Fire Service.

In co-operation with Hellerup School, a kind of learning-by-teaching activity was carried out in which 6th and 10th grade pupils were taught to give a number of the Experimentarium's scientific demonstrations with a view to presenting these to their fellow students, and subsequently to the ordinary visitors to the Experimentarium. Hellerup School's 6th grade students also acted as "mini-pilots" at a membership event focusing on the Children's Puddle.

SALE AND HIRING-OUT OF EXHIBITS AND EXHIBITIONS

The Experimentarium undertakes commercial exhibition activities in order to finance the deficit in its core activities, and to create synergy with other exhibition activities. In 2003, the Experimentarium developed and produced a travelling exhibition for the FDB supermarket chain entitled Forbrugsjunglen ("The Consumer Jungle"), which has visited many supermarkets the length and

breadth of Denmark since May of that year. The subject of the exhibition is consumer safety through information. In addition, the Experimentarium produced a draft proposal in November 2003 for a science centre exhibition at Sintra, north of Lisbon, which the Experimentarium hopes to be able to produce during the second half of 2004.

PURCHASE OF THE BOTTLING HALL

Carlsberg A/S has offered the Experimentarium the chance to purchase the bottling hall building, which has been placed at the disposal of the Foundation free of rent until 31 December 2010.

The Experimentarium has directed inquiries to Gentofte Municipality, the Government and a number of foundations with a view to raising the necessary finance to acquire the building.

It is the Experimentarium's hope that the purchase can be realised as of 1 January 2005.

CONTINUING HIGH VISITOR NUMBERS

In 2003, 337,371 people visited the Experimentarium. This is fewer than the record year 2002, but is nonetheless a considerable number. The Experimentarium continues to enjoy popularity among schools; a total of 107,203 school students and teachers visited in 2003.

FINANCIAL DEVELOPMENTS

Operating profits remain unsatisfactory. In 2003, the Foundation made a loss of DKK 9,739 million (2002: DKK 5,599 million) of which DKK 6,588 million represents depreciation (2002: DKK 6,628 million).

The deficit was covered by transfers from the liquid reserve fund which amounted at year-end to DKK 10,538 million (2002: DKK 14,310 million).

No events of significance for the Foundation's financial situation as of 31 December 2003 have thus far occurred during 2004.

FUTURE EXPECTATIONS

The budget for 2004 predicts a deficit of DKK 6,968 million, assuming 307,000 visitors.

Stage III of the renewal of the main exhibition, Cirkus Fysikus, opened on 30 January 2004, and has proved popular among visitors.

The special exhibition KønsEksperimentet ("The Great Sexperiment"), which has enjoyed great success in Belgium, will open on 30 September 2004.

KNOWLEDGE ACCOUNTING

Since 2001, the Experimentarium has undertaken knowledge accounting in accordance with the guidelines issued by the Ministry of Trade and Housing.

These knowledge accounts have been published in June of each year as an independent publication, and will be accessible from June 2004 at www.experimentarium.dk

Hellerup, 22 April 2004
 Asger Høeg, Director



RESULTATOPGØRELSE

for 1. januar - 31. december 2003

Beløb i 1.000 kr.

Indtægter	2002	2003
Entréindtægter	20.865	17.213
Indtægter i butik og café	1.269	969
Salg af serviceydelser	2.622	1.351
Andre indtægter	4.188	5.010
Tilskud	797	4.314
Modtaget statsstøtte	3.000	3.000
Hovedudstillings Fornyelse		
Ovf. til øvrig grundkapital	0	0
Finansielle poster	1.312	506
Indtægter ialt:	34.053	32.363
Udgifter		
Andre eksterne udgifter	17.031	16.483
Personaleomkostninger	15.993	19.021
Afskrivninger	6.628	6.588
Udgifter ialt:	39.652	42.092
Årets resultat	-5.599	-9.729

MILJØREGNSKAB

	2002	2003
Elforbrug i kWh	875.686	885.690
Fjernvarme GJ	5.955	5.236
Vandforbrug / m ³	4.299	3.862

BALANCE

pr. 31. december 2003

Beløb i 1.000 kr.

Aktiver	2002	2003
Opbygning og indretning	27.741	24.274
Permanent udstilling	14.086	13.324
Inventar og udstyr	537	396
Driftssikringsmidler	10.244	7.590
Anlægsaktiver ialt	52.608	45.584
Omsætningsaktiver		
Varebeholdninger og igangværende arbejde		
Tilgodehavender	6.912	4.583
Likvide beholdninger og værdipapirer	1.727	308
Omsætningsaktiver ialt	8.639	4.891
Aktiver ialt	61.247	50.475
Passiver		
Egenkapital		
Grundkapital	36.638	30.681
Dispositionsfond	14.310	10.538
Egenkapital ialt	50.948	41.219
Gæld		
Leverandører af varer og tjenesteydelser	1.715	1.006
Periodeafgrænsningsposter	669	610
Bankgæld	0	0
Anden gæld	7.915	7.640
Gæld ialt	10.299	9.256
Passiver ialt	61.247	50.475

Hellerup, maj 2004

Direktør Asger Høeg

Bestyrelse:
Jannik Johansen, formand
Peter Augustinus, næstformand
Hans Peter Jensen
Hans Skov Christensen
Lene Lange
Anders Eldrup
Fritz Schur

Revisor KPMG C. Jespersen

Foranstående resultatopgørelse og balance er en forenklet udgave af årsregnskabet, herunder ved udeladelse af noter.

INCOME STATEMENT

for 1 January - 31 December 2003

Amounts in thousand DKK

Income	2002	2003
Admission revenue	20,865	17,213
Shop and Café sales	1,269	969
Sale of services	2,622	1,351
Other income	4,188	5,010
Contributions from fund-raising	797	4,314
State subsidy	3,000	3,000
The value of the main exhibit's renewal		
Transferred to additional basic capital	0	0
Financial entries	1,312	506
Total income	34,053	32,363
Expences		
Other external expences	17,031	16,483
Salaries and wages	15,993	19,021
Depreciation	6,628	6,588
Total expences	39,652	42,092
Net income for the year	-5,599	-9,729

ENVIRONMENTAL AUDIT

	2002	2003
Electricity consumption in kWh		
heating consumption/m ³	875,686	885,690
District heating Gj	5,955	5,236
Water consumption	4,299	3,862

BALANCE SHEET

As of 31 December 2003

Amounts in thousand DKK

Assets	2002	2003
Non current assets		
Building modifications and installations	27,741	24,274
Main exhibition	14,086	13,324
Equipment	537	396
Endowment funds	10,244	7,590
Total non current assets	52,608	45,584
Current assets		
Inventories and work in progress		
Accounts receivable	6,912	4,583
Cash and bonds	1,727	308
Total current assets	8,639	4,891
Total assets	61,247	50,475
Capital and liabilities	2002	2003
Capital		
Foundation capital	36,638	30,681
Liquid reserve fund	14,310	10,538
Total capital	50,948	41,219
Liabilities		
Accounts payable, trade	1,715	1,006
Deferred expences	669	610
Bank loans and credits	0	0
Other liabilities	7,915	7,640
Total liabilities	10,299	9,256
Total capital and liabilities	61,247	50,475

Hellerup, May 2004


Executive Direktor Asger Høeg

Board
 Jannik Johansen, Chairman
 Peter Augustinus, Vice Chairman
 Hans Peter Jensen
 Hans Skov Christensen
 Lene Lange
 Anders Eldrup
 Fritz Schur


Auditor KPMG C. Jespersen

The above income statement and balance sheet is a simplified version of the original, hereunder by the omission of the notes.


VIDENREGNSKAB 2003



Experimentariums formål er at øge kendskabet til naturvidenskab og teknik bredt i befolkningen. Det brede sigte kombineret med nødvendigheden af økonomisk overlevelse betyder, at Experimentarium i gennemsnit årligt skal opnå ca. 340.000 tilfredse besøgende. Det stiller krav til god produktudvikling, kvalitetspræget drift og målrettet markedsføring. Det fordrer en organisation, som tør udvikle sig i takt med både publikums og medarbejdernes ønsker. Og det handler dybest set om at være en virksomhed, der prioriterer et bevidst strategisk arbejde.



Derfor har Experimentarium siden 2001 udarbejdet et Videnregnskab.



Videnregnskabet bruges internt til at styrke virksomhedens mulighed for at nå sine mål samt sikre både kvalitet og fornyelse, således at Experimentarium lever op til sit slogan "En ny oplevelse hver gang". Samtidig giver Videnregnskabet omverdenen mulighed for at få indsigt i Experimentariums tilstand og udvikling. Derved kan interessenter udefra vurdere, om Experimentarium opfylder sit formål og forventes at gøre det i fremtiden.

EXPERIMENTARIUMS OVERORDNEDE MÅL:

Experimentarium er en almennyttig, erhvervsdrivende fond, hvis formål er at udbrede kendskabet til naturvidenskab og teknik bredest muligt i befolkningen – særligt med henblik på ungdommen. Fonden stiftedes den 6. november



1986. Centralt for opfyldelsen har været iværksættelsen af en science center virksomhed på Tuborg Havnevej 7 i Hellerup.

I 2001 formuleredes følgende overordnede mål for arbejdet i de kommende 6 til 7 år:

Experimentarium skal udbygge sin position som:

- et nationalt kulturcenter for naturvidenskab, teknik, miljø og sundhed.
- skolernes mest benyttede besøgsmaal i Danmark og i Sydsverige ved hjælp af formidlingstilbud, der er relevante i forhold til Folkeskolens, gymnasierne og andre ungdomsuddannelsers læseplaner.
- et af de mest eftertragtede besøgsmaal for danskerne og sydsvenskerne ved at tilbyde en helhedsoplevelse af høj kvalitet, som på samme tid er underholdende, relevant og lærerig.
- et af verdens mest innovative science centre ved til stadighed at forny centrets aktiviteter, således at disse er tidsaktuelle, relevante og fremtidsorienterede.

Experimentarium skal desuden:

- yde en kundeservice, som er den bedste blandt Danmarks publikumsattraktioner.
- være førende og forbilledlig med hensyn til formidling og forskning inden for den interaktive formidlingsform.
- skabe en attraktiv og udviklende arbejdsplads, således at virksomheden til stadighed kan tiltrække og fastholde dygtige medarbejdere.
- drive science centret og den øvrige virksomhed efter forretningsmæssige principper med en professionel markedsføring og kundeservice samt en effektiv drift med en høj produktivitet.
- opnå så høj grad af selvfinansiering, at fondens uafhængighed aldrig kan betvivles.

Hvem besøger Experimentarium?

Experimentariums besøgende består af 3 grupper: Det almene publikum, uddannelsessektoren og møder, konferencer og selskaber. Siden 1999 har besøgstallet for disse 3 grupper udviklet sig således:

	1999	2000	2001	2002	2003
Alment publikum	223.851	216.022	189.258	293.015	211.551
Skoleelever	103.096	93.909	87.883	118.730	111.106
Møder, konferencer, selskaber m.v.	7.631	10.580	15.153	14.456	14.714
I alt besøgende	334.578	320.511	292.294	426.201	337.371

I 2004 forventes 330.000 besøgende.

Ungdommen som særlig målgruppe

	1999	2000	2001	2002	2003
Unge under 14 år	97.790	95.263	84.326	125.198	98.320
Skoleelever	103.096	93.909	87.883	118.730	111.106
Voksne	133.692	131.339	120.085	182.273	127.945
I alt	334.578	320.511	292.294	426.201	337.371

Unge under 14 år og unge under uddannelse har i alle 5 år udgjort omkring 60% af de besøgende. Det er i særdeles god overensstemmelse med Experimentariums formålsparagraf, der netop lægger vægt på formidling til den yngre del af befolkningen.

HVAD SYNES PUBLIKUM OM EXPERIMENTARIUM?

Det almindelige publikum vil gerne komme igen!

Hver dag udvælges 20 besøgende, som bliver bedt om at udfylde et spørgeskema med 16 spørgsmål. Elleve spørgsmål omhandler, hvor tilfredse publikum er med udvalgte tilbud lige fra Experimentikken til besøget som helhed. Publikum skal give en karakter mellem 1 og 7, hvor karakteren 7 er meget tilfredsstillende, mens 1 er meget utilfredsstillende.

Publikums vurdering af Experimentariums forskellige tilbud

	1998-2000	2001	2002	2003	Mål
Helhedsindtryk af Experimentarium?	6,0	6,0	6,2	6,2	6,0
Helhedsindtryk af den nye udstilling?	5,5	5,3	5,6	5,7	5,7
Er den nye udstilling underholdende?	5,2	5,2	5,2	5,3	5,3
Er den nye udstilling lærerig?	4,2	4,7	4,5	4,8	5,0
Antal opstillinger ude af funktion?	4,7	4,2	4,7	4,8	5,0
Udstillingspiloterne?	5,9	5,9	6,0	5,9	6,0
Shows, demoer m.v.?	5,6	5,8	5,8	5,9	6,0
Internet@bc?	5,1	5,1	5,2	5,3	5,5
Café Kloden?	4,4	4,5	4,6	4,7	4,5
Butikken?	4,8	5,1	5,2	5,2	5,3
Baseret på antal besvarelser	8529	1848	2503	3053	

På fire områder opfylder publikums vurdering de mål, som Experimentarium har sat. Det gælder helhedsindtrykket af Experimentarium, helhedsindtryk af den nye udstilling "KribleKrabbe", om den er underholdende og bedømmelsen af Café Kloden.

Udstillingens driftsstabilitet er forbedret siden 2001 som følge af øget fokus på dette område.

Den generelle tilfredshed med besøget afspejler sig i besvarelsen af følgende spørgsmål:

Vil du besøge Experimentarium igen?

	1999	2000	2001	2002	2003
Ja	76%	74%	77%	86%	86%
Nej	2%	2%	2%	1%	1%
Måske	22%	24%	21%	13%	13%
I alt	100%	100%	100%	100%	100%

Skolernes forventning

Skolelærere på besøg på Experimentarium med en klasse bliver også spurgt, hvad der var godt og skidt i forhold til eleverne og undervisningsplanerne. Vi uddeler løbende spørgeskemaer til en stor del af disse lærere. Her er bedømmelsen:

	2001	2002	2003	Mål
Samlet vurdering af besøget?	6,0	5,8	5,8	6,2
Lærerigt for eleverne?	5,5	5,7	5,6	5,7
Motiverende for eleverne?	5,9	5,8	5,7	6,2
Experimentariums service?	6,5	6,6	6,7	6,2
Antal besvarelser	66	230	222	

Som det ses, har Experimentarium i forhold til skolerne sat et højt mål for det samlede indtryk af et besøg. Det hænger sammen med, at skolerne besøger Experimentarium i en professionel sammenhæng, og det stiller større krav til nytten af besøget. Der er fortsat behov for, at Experimentarium bedre tilpasser sine tilbud til skolernes behov.

Særlige krav til møder, konferencer, selskaber m.v.

Hvert år åbner Experimentarium dørene for mere end 100 arrangementer med møder, konferencer, selskaber m.v. Disse arrangementer er en vigtig indtægtskilde for Experimentarium. Alle kunder anmodes om at udfylde et evalueringsskema, hvor Experimentarium får karakter som både arrangør, vært og rammerne. Der gives karakter på den generelle skala fra 1 til 7, med følgende resultat:

	2001	2002	2003	Mål
Helhedsindtryk af arrangementet?	6,3	6,3	6,4	6,5
Indtryk af bookingpersonalet?	6,5	6,7	6,6	6,5
Indtryk af Cafépersonalet?	5,7	5,9	6,3	6,0
Vurdering af traktament?	6,2	6,2	6,2	6,5
Vurdering af rengøringsstandard?	5,9	6,0	6,2	6,0
Indtryk af mødelokale, St.Scene m.v.	5,6	5,4	5,8	6,0





Den samlede vurdering af mødefaciliteterne er forbedret i det forgangne år.

Experimentariums markedsføring

Høj service og hyppig produktfornyelse er ikke nok til at få 340.000 besøgende til at myldre ind af dørene. Udstillingerne skal også markedsføres og sælges professionelt.

Markedsføringen over for det almindelige publikum sker gennem anvendelse af traditionelle virkemidler som plakater, brochurer, annoncer, internet, PR samt medlemskab af Experimentariums medlemsklub.

Masser af redaktionel omtale

Medierne interesserer sig fortsat for Experimentariums udstillinger og aktiviteter. Og i langt de fleste tilfælde er omtalen meget positiv. Således opnåede KribleKrable udstillingen at få 5 stjerner ud af 6 mulige i en regulær (kunst)anmeldelse i Politiken, noget som ikke er hændt før. Her var det bl.a. den specielle scenografi, som anmelderen havde fundet inspirerende. Igen ved genopsættelsen af Hjernen fandt pressen udstillingen væsentlig nok til omtale, og udstillingen fik mange roser med på vej.

Medlemsklubben er vokset støt siden 1999

	1999	2000	2001	2002	2003
Medlemmer på besøg	7518	8910	11010	20434	20746
I alt besøgende	334.578	320.511	292.294	426.201	337.371
Medlemsbesøg i % af total	2,2	2,8	3,8	4,1	6,1
Antal betalende medlemmer		2771	5191	6350	6895

Hjemmesiden ivrigt besøgt

Antal besøg på Experimentariums hjemmeside, www.experimentarium.dk - vokser hele tiden. Flere og flere besøgere hjemmesiden før et besøg. Hjemmesiden forventes da også at være det mest betydningsfulde markedsføringsinstrument i løbet af ganske få år.

	1998	1999	2000	2001	2002	2003
Brugere af hjemmeside før et besøg i %	9	12	17	24	34	38

Antallet af besøg på Experimentariums hjemmeside har udviklet sig således:

	1999	2000	2001	2002	2003
Besøgende på hjemmesiden	150.000	220.000	300.000	576.000	789.000

Et gennemsnitsbesøg varer ca. 2,5 minut – og den enkelte bruger ser 4 – 6 sider pr. besøg.

Kontaktlærere på næsten 1300 skoler

Markedsføringen over for skolerne sker via direkte kontakt – enten til den enkelte skoles ledelse eller til en kontaktlærer, som skolen selv har udpeget. Kontaktlæreren formidler kommunikation mellem skolen og Experimentarium. Ved udgangen af 2003 havde Experimentarium kontaktlærere på 1066 skoler i Danmark samt på 213 skoler i Sydsverige. Skoler kan købe et abonnement som koster kr. 19 pr. skoleelev pr. år. Skoler med abonnement kan gratis komme på besøg. I alt har 206 skoler med 67.869 elever anskaffet skoleabonnement.

Herudover har Experimentarium et særligt samarbejde med naboen Hellerup Skole der blev indviet i august 2002. Skolens elever og lærere kan frit benytte Experimentarium som ekstra ressource i undervisningen.

Skolebesøgene har udviklet sig således:

	1999	2000	2001	2002	2003
Antal abonnements elever på besøg	34773	33302	32186	46196	47245
Elever uden abonnement på besøg	68323	60607	55677	71228	59958
Hellerup Skole				1088	2053
Klippeark				218	1850
I alt	103096	93909	87863	118730	111106
Abonnement i %	34	35	37	39	43

Experimentariums personale

Virksomhedens evne til at løse de kommende års udfordringer hænger uløseligt sammen med medarbejdernes evne og motivation.



Siden år 2000 har Experimentarium gennemført en undersøgelse af personalets syn på en række forhold vedrørende deres ansættelses- og arbejdsforhold. Samarbejdsudvalget har gennemgået besvarelserne af disse skemaer og har fastsat mål for de enkelte områder. Et sådant personalepolitisk regnskab skal forstås som en vurdering af "værdien" af Experimentariums personale – set i relation til de opgaver der skal løses i de kommende år.

Informationsniveau på Experimentarium

	2000	2001	2002	2003	Mål
Er der det nødvendige antal møder i afdelingen?	4,96	5,40	4,60	5,20	5,50
Bruger du referaterne til noget?	4,54	4,67	4,60	4,00	5,00
Har du en god fornemmelse af hvad der sker i egen afdeling?	5,67	5,09	4,90	5,00	6,00
Har du nødvendig information for at udføre dit arbejde?	5,29	5,31	5,10	4,50	6,00
Får du nyttig information fra fredagsmøderne?	3,92	4,28	4,20	4,10	4,50
Føler du dig orienteret om hvad der sker på Experimentarium?	4,56	4,89	4,30	4,60	5,50
Har du en god fornemmelse af, hvad der sker i andre afdelinger?	2,87	3,22	3,00	3,40	4,50

Indflydelse:

Har du tilstrækkelig indflydelse på dit arbejde?	4,66	4,81	4,80	5,00	5,50
Oplever du, at ideer er velkomne?	4,98	4,78	4,50	5,10	6,00
Ønsker du indflydelse på overordnede beslutninger?	4,31	4,89	4,90	5,10	5,00
Mener du at have indflydelse på overordnede beslutninger?	2,52	2,76	2,50	2,60	4,00

Dialog med ledelsen

Har sidste medarbejder-samtale resulteret i noget positivt?	3,96	4,59	4,60	3,90	5,50
Løses uoverensstemmelser på en god måde?	4,02	4,26	4,40	4,70	5,50
Oplever du opbakning og støtte fra din chef?	5,17	4,51	4,40	5,00	6,00
Oplever du ansvar og tillid fra din chef?	5,25	5,06	4,90	5,30	6,00
Overholder din chef de aftaler I laver i afdelingen?	5,75	5,15	4,70	5,40	6,00
Er du klar over dine opgaver i det daglige?	6,21	5,98	5,70	6,20	6,00

Dialog med kollegerne

	2000	2001	2002	2003	Mål
Hvad mener du om antallet af personalearrangementer?	3,92	3,94	3,80	4,00	4,00
Snakker du med kolleger om andet end arbejde?	6,19	5,92	6,10	6,30	6,00
Får du opbakning/støtte fra kolleger?	5,85	5,58	5,90	6,00	6,00
Mener du, at dine kolleger i afdelingen udfører et godt arbejde?	5,67	5,74	5,50	5,90	6,00
Mener du, at dine kolleger i andre afdelinger gør et godt arbejde?	4,94	5,16	5,10	5,40	5,50
Mener du, at dine kolleger overholder de aftaler I indgår?	5,37	5,22	5,30	5,50	6,00
Er du tilfreds med den måde, konflikter løses på?	4,90	4,98	5,20	5,10	6,00

Oplevelse af egne kvalifikationer

Synes du, at dine kvaliteter er gode nok til at udføre dit arbejde?	5,85	6,15	5,90	5,80	6,00
Synes du, at Experimentarium udnytter dine kvalifikationer godt nok?	4,19	4,57	4,30	4,70	5,50
Oplever du faglig udvikling?	4,25	4,57	4,60	4,50	5,50
Oplever du personlig udvikling?	5,40	4,97	5,50	5,10	6,00
Er der penge nok til efteruddannelse og videreuddannelse?	3,08	3,43	2,90	3,40	5,50
Synes du, at du er godt rustet til at søge job andre steder?	5,23	5,48	5,30	5,20	6,00

Experimentariums formålsparagraf

Er du enig med Experimentariums formålsparagraf?	5,27	5,85	5,90	5,80	6,00
Mener du, Experimentarium handler efter formålsparagraffen?	4,13	4,71	4,60	4,60	5,50
Synes du, Experimentarium lever op til de fastsatte kvalitetskrav?	4,23	4,81	4,10	4,20	6,00

Arbejdsforhold

Føler du dig presset til at gå på arbejde, selvom du er syg?	3,25	3,11	3,10	4,80	4,00
Hvor ofte er du underbeskæftiget	5,63	5,98	6,00	6,00	6,00





	2000	2001	2002	2003	Mål
Hvor ofte har du for stor en arbejdsbyrde?	3,67	4,45	3,80	4,00	5,50
Er dine arbejdsredskaber gode nok?	4,73	4,94	4,70	5,00	6,00
Er din arbejdsplads ergonomisk godt nok indrettet?	3,54	3,92	4,20	4,50	5,50
Er dit ansættelsesforhold sikkert nok?	4,69	5,40	5,30	5,10	5,50
Hvordan er introduktionen af nye medarbejdere?	4,64	5,14	4,90	4,60	6,00
Synes du undersøgelsen bliver taget alvorligt og har medført ændringer			3,80	4,00	5,00

Analysen:

Antal udsendte skemaer	114	93
Antal besvarelser	66	56
Besvarelsesprocent	63	58

Ud af besvarelserne for 2003 har personalet konkluderet, at informationsniveauet er utilstrækkeligt og beslutningsstrukturen for uklare. Til afhjælpning af dette problem har ledelsen iværksat en struktur for den interne information, hvor afdelingschefen ved mundtlig og skriftlig information, ved afdelingsmøder hver 14. dag, er det centrale led i informations-spredningen.

MANGE FORSKELLIGE EKSPERTISER

Experimentariums medarbejdere repræsenterer en stor mangfoldighed af faglige kompetencer. Det er en væsentlig styrke for virksomheden, fordi det skaber en spændende arbejdsplads med mange forskellige holdninger til problemer og løsninger.

Experimentariums personale omfatter bl.a. akademikere indenfor fysik, biologi, geografi og kommunikation. Der er ansat 2 pædagogiske medarbejdere med en læreruddannelse som ballast. Der er endvidere ansat udstillingsarkitekter, designere og grafikere.. Værkstederne er bemandede med 8 faglærte håndværkere, der bl.a. omfatter snedkere, finmekanikere, smede og elektronikteknikere. Administrationen håndteres af 9 medarbejdere med kontorfaglig uddannelse (heraf 3 med højere uddannelse). Dertil kommer 4 socialt uddannede medarbejdere samt 6 medarbejdere med en autodidaktisk baggrund. Endelig kommer det store korps af udstillingspiloter, der fungerer som publikums guider i det daglige. Det er for hovedpartens vedkommende studerende på videregående uddannelser inden for det naturvidenskabelige og tekniske område.

Personale fra det rummelige arbejdsmarked omfatter 3

medarbejdere i flex-job i henhold til Lov om aktiv Socialpolitik §62, samt 3 medarbejdere i Lov om handicappede i Erhverv. Endelig beskæftiger Experimentarium p.t. 10 medarbejdere i aktiveringsordning i henhold til Bistandslovens § 60. Herudover beskæftiger Experimentarium civile værnepligtige.

Gennemsnitsalderen for de faste medarbejdere var i 2003 44,3 år. Personalet har i gennemsnit arbejdet 7,0 år på Experimentarium. Den gennemsnitlige ansættelsesperiode for piloter var i 2003 på 3,0 år. Der var 51 piloter ansat ved udgangen af 2003 med en gennemsnitsalder på 24,2 år.

Experimentarium har i 2003 taget afsked med 4 faste medarbejdere – og ansat 2 nye.

Sygefraværet (for alle medarbejdere) var i 2003 på 4,36 dage.

Til sammenligning i 2002 – 3,49 dage, 2001 3,11 dage og 2000 3,29 dage.

Stigningen skyldes primært fravær af 2 medarbejdere grundet længerevarende sygdom – men der er stadig tale om et lavt sygefravær.

Personalets velfærd

Der har i 2003 været afholdt 10 velfærdsarrangementer med i gennemsnit 35 deltagere pr. arrangement. Disse arrangementer spænder over fodbold, Christiansborg, Glyptoteket, Nationalmuseet i Brede, TV-Byen, Louisiana, Guidet tur til den indre by(Pisserenden), Lufthavnen, Sommerfesten og Julefrokost.

Ikke mindre end 77 ansatte deltog i en vellykket studietur til Paris med besøg på Muséum National d'Histoire Naturelle, Palais de la Decouverte og Cité des Sciences et de l'Industrie.

Tuborg Nord Panorama er en medarbejderklub for de ansatte på Tuborg Nord, med deltagelse af 10 forskellige firmaer. I 2003 blev afholdt et foredrag af Det Kongelige Teaters operachef Kasper Bech Holten.

Det interne ugebrev for Experimentariums ansatte, Xpressen, udkommer hver fredag ved middagstid. Xpressen indeholder løbende indlæg fra Experimentariums ledende medarbejdere med nyt fra den forløbne uge og planerne for fremtiden.

I 2003 blev der afholdt 5 Fredagsmøder med deltagelse af ca. 60 medarbejdere pr. gang.

Kunstforeningen X-art udstillede i 2003 værker af kunstnerne: Faith Alice Andersen, Jesper de Lund, Erik Clausen og Jimmy Jørgensen.

Personalet i tal

Experimentarium har ca. 120 medarbejdere. Omregnet til årsværk udgør dette ca. 79 årsværk. Experimentarium giver sit bidrag til udviklingen af det rummelige arbejdsmarked ved ansættelse af personale, der i høj grad afspejler de mange forskellige mennesker i samfundet blandt os – uden skelen til nationalitet, religion eller hudfarve.

Experimentarium havde i 2003 ansat 18 årsværk, med tilknytning til Det rummelige arbejdsmarked.

Personale omregnet til årsværk:

	2000	2001	2002	2003
Almindeligt aflønnede medarbejdere	68,2	61,9	62,6	60,5
Personale fra det rummelige arbejdsmarked	11,8	13,2	13,5	18,1
I alt	80,4	75,1	76,1	78,6

For samtlige fastansatte månedslønnede medarbejdere på Experimentarium er der i løbet af 2003 gennemført medarbejderudviklingssamtaler med referat.

Experimentarium har i 2003 i alt brugt kr. 125.000 til efteruddannelse, svarende til 0,7% af lønsummen.

Produktudvikling

Experimentariums evne til at udvikle nye udstillinger med et relevant, lærerigt og underholdende indhold er helt afgørende for virksomhedens evne til at overleve. Det kræver ikke mindst medarbejdere, der er opdaterede med den mest aktuelle viden vedr. indenfor interaktive udstillinger.



Udstillingsprojekterne styres af to særligt udpegede projektledere. Den ene er en videnskabelig medarbejder, der bærer det faglige, tidsmæssige og økonomiske ansvar for selve udstillingen. Den anden projektleder er en pædagogisk medarbejder, der har ansvaret for udarbejdelsen af aktiviteter rettet mod undervisningssektoren. Alle videnskabelige medarbejdere og formidlingsmedarbejdere i Experimentarium har erfaring fra gennemførelsen af udstillingsprojekter. For at øge styringen og koordineringen af Experimentariums mange projekter er der udarbejdet et Projektstyringsværktøj.

Der er følgende program for Experimentariums store særudstillinger:

- **KønsExperimentet** (september 2004)
Lejes af Technopolis, Mechelen, Flandern
- **Sport & Spinat** (oktober 2005)
Egenproduceret udstilling
- **Killer Question** (oktober 2006)
Lejes af Natural History Museum, London
- **Xtremes** (oktober 2007)
Udvikles og produceres i samarbejde med Stichting Nationaal Natuurhistorisch Museum – Naturalis og Koninklijk Belgisch Instituut Natuurwetenschappen, Institut Royal des Sciences Naturelles de Belgique
- **I Spy** (oktober 2008)
Udvikles og produceres i samarbejde med Technopolis, Mechelen, Flandern

Experimentariums kommercielle aktiviteter udvikler sig positivt, idet udstillingen "KribleKrabbe" er udlejet i perioden fra oktober 2004 til januar 2006 til Stichting Nationaal Natuurhistorisch Museum – Naturalis og Koninklijk Belgisch Instituut Natuurwetenschappen, Institut Royal des Sciences Naturelles de Belgique. Desuden har Experimentarium skrevet kontrakt med Associacao Centro Ciencia Viva de Sintra om udvikling og produktion af en turnkey udstilling til levering i september 2005.

Fornyelsen af udstillingerne er gennem de seneste år sket i et meget højt tempo. Experimentarium har således i de sidste 5 år præsenteret følgende fornyelser for publikum.

Februar 1999	BørnePavillonen	22 opstillinger	Hovedudstilling
Oktober 1999	Robotten er løs	15 opstillinger	Særudstilling
April 2000	Future Body	38 opstillinger	Særudstilling



Oktober 2000	Vores (U)trolige klode	61 opstillinger	Hovedudstilling
Januar 2001	Hånd på fremtiden	14 opstillinger	Særudstilling
Maj 2001	Kommunik@tion	37 opstillinger	Særudstilling
Dec. 2001	Dig og mig	70 opstillinger	Hovedudstilling
April 2002	Dinosaurer på Rov	25 opstillinger	Særudstilling
Oktober 2002	Rejsen til Mars	17 opstillinger	Særudstilling
Februar 2003	KribleKrable	28 opstillinger	Særudstilling
Januar 2004	Cirkus Fysikus	42 opstillinger	Hovedudstilling

Formidlingsafdelingen, der blev etableret i januar 2003, har arbejdet med følgende projekter i 2003:

Busprojektet "Redningshold for en dag".

Redningshold for en dag er et spændingsfyldt og lærerigt undervisningsforløb, der i et autentisk set-up handler om kroppen, dens funktioner, førstehjælp i katastrofesituationer m.v. Undervisningsforløbet "bæres" ud til skoleklasser over hele landet i en bus fra foråret 2005. Redningshold for en dag udvikles med støtte fra TrykFonden og Knud Højgaards Fond, og selve bussen er en foræring fra MTHøjgaard.

Skolekonkurrencen "Gi' Lyd"

117 skoleklasser fra hele landet deltog i Experimentariums skolekonkurrence Gi' Lyd. Opgaven var at udvikle det bedste eksperiment om lyd, og 42 eksperimenter blev præsenteret i en særudstilling på Experimentarium i februar-marts måned. Den 23. marts 2004 overrakte gruppen Safri Duo hovedpræmien - en klasserejse til Paris - til 6.-7. klasse fra Fole Friskole. Projektet blev støttet af Otto Mønstedts Fond og Kilroy group travel, som også støtter Experimentariums skolekonkurrence 2004-2005.



Konferencen "Hjerne og læring".

I samarbejde med CVU Storkøbenhavn og CVU København og Nordsjælland planlagde Experimentarium en stor konference om den nyeste hjerneforsknings resultater i relation til læring. Konferencen blev afholdt d. 5.-6. marts 2004.

Lærerkurset "Klassens eksperimentarium i natur/teknik"

Som inspiration til natur/teknik-lærere udvikler Experimentarium et fem-dages efteruddannelseskursus i samarbejde med CVU Storkøbenhavn. Kurset afholdes første gang i 2004 og er støttet af Oticon Fonden.

Future Science Education (FUSE)

FUSE er et eliteprojekt, hvor udvalgte elever fra grundskolen arbejder med naturvidenskabelige emner og lærer at formidle disse til andre elever. Elever og lærere deltager i kurser på Experimentarium og projekter på skolen. FUSE er et pilotprojekt, som indledes ultimo 2004 med støtte fra EU.

PULSE-projektet, Public Understanding of Life Science

Som et led i Den Europæiske Videnskabsuge 4. - 5. november 2003 deltog 160 danske gymnasieelever i en 2 dages konference på Experimentarium. Eleverne blev bombarderet med viden og aktiviteter om genteknologi, og deres holdninger blev udfordret. Gymnasieelever i Trento og Lisabon deltog samtidig i parallelle konferencer. PULSE blev gennemført med støtte fra EU.

DNA50

Experimentarium fejrede hele november måned 50-året for Watsons og Cricks opdagelse af DNA-helixen. Det skete med en udstilling, konferencer, skoleaktiviteter og bygning af verdens længste DNA model. D. 19. november holdt Nobelpristager Sydney Brenner oplæg på jubilæumskonferencen. Jubilæet blev støttet af Novozymes A/S og British Council Denmark samt Statens Naturvidenskabelige Forskningsråd.

Hellerup Skole Projektet

Elever fra 10. klasse på naboskolen Hellerup Skole gennemførte Learning by teaching aktiviteter på Experimentarium i skoleåret 2002/2003. De imponerende erfaringer indgår bl.a. i FUSE projektet. Hellerup Skole projektet blev gennemført med støtte fra Birch & Krogboe Fonden.

INTERNATIONALE KONTAKTER

Udgivelse af lærebøger i samarbejde med Alinea

Experimentariums ønske om at udgive en bogserie med naturvidenskabelige temaer bliver en realitet i kraft af den rammeaftale, der er indgået med skolebogsforlaget Alinea. De første to bøger støttes af Egmont Fonden og er planlagt til udgivelse i forbindelse med bogmessen i Forum november 2004.

Virtuelt undervisningsmateriale til særudstillingen "KønsExperimentet"

Den 1. oktober 2004 åbner Experimentarium en ny, spændende særudstilling om drenge og piger. Med støtte fra Undervisningsministeriet, Lærerstandens Brandforsikring, Tuborgfondet, Industriens Uddannelsesfond og IBM udvikles et netbaseret undervisningsmateriale, der træder nye veje med hensyn til forberedelse og efterbehandling af et besøg på Experimentarium.

Nye undervisningsmaterialer

Elevhæfter til Experimentariums særudstillinger Hjernten og Krible Krable, til fornyelsen af hovedudstillingen - Cirkus Fysikus - samt til skolekonkurrencen Gi' Lyd blev udviklet til aktuelle klassetrin.



Fremtiden

Processen med udarbejdelsen af Videnregnskaber har været nyttig. Der foreligger en samlet vurdering af, hvorledes kunder og personale vurderer Experimentarium. Dette er en nu en løbende proces, der skal sikre at Experimentariums publikumstilbud er af en blivende høj kvalitet med en stadig intens fornyelse. På denne måde kan Experimentarium blive bevaret som en spændende arbejdsplads med stor medarbejderengagement og inspiration.

Fortsættelse følger næste år!

Asger Høeg
Direktør

Naturvidenskab og teknik kender ingen grænser.

Udvikling og vedligeholdelse af et science center fordrer gode internationale forbindelser.

Experimentarium skal præsentere det nyeste og ypperligste inden for science communication. Det kan man kun gøre, hvis man løbende har kontakt med verdens største og mest innovative science centre og museer.

Experimentarium har gennem årene opbygget et stærkt net af kontakter. Netværket styrkes løbende gennem Experimentariums indsats i de europæiske science center netværk. Således er Experimentariums direktør Asger Høeg, Founding Father og gennem de seneste 4 år Treasurer for European Collaborative for Science, Industry and Technology Exhibitions (ECSITE) 1. november 2002 blev Asger Høeg valgt som Vice President for ECSITE.

Experimentariums udviklingschef, Nils Hornstrup er Founding Father og formand for Nordisk Science Center Forbund.

Experimentarium opfattes i international sammenhæng som et forbilledligt eksempel på et science center. Dette skrives ikke i et anfald af uheldelig selvglæde, men som en konstatering af, hvor mange udenlandske delegationer der i løbet af årene har besøgt Experimentarium for at hente råd, dåd og inspiration.

I 2003 var der eksempelvis besøg fra:

Dundee Science Centre.

ECSITE Board.

CosmoCaixa, Madrid.

Germantown, NY, USA.

Kosovo Science Center Project.

The New Curiosity Shop.

The China National Museum.

INTELLECTUAL CAPITAL STATEMENT 2003



The Experimentarium's objective is to increase the general public's knowledge about natural science and technology. Combined with the necessity to survive financially, this broad objective means that the Experimentarium must attract 340,000 satisfied visitors each year. This calls for excellent product development skills, quality focus in daily operations and targeted marketing. It also calls for an organisation that is willing to develop in step with the wishes and requirements of its staff and the general public. Basically, it is a question of being an organisation that prioritises well-considered strategic work.

Consequently, the Experimentarium has decided to prepare an intellectual capital statement for 2003.

The intellectual capital statement will be used internally to increase our possibilities of achieving our objectives and to ensure both quality and innovation in our performance so that we will live up to our slogan: "A new experience each time". The intellectual capital statement also gives people outside the organisation an opportunity to assess the Experimentarium's status and development. External stakeholders can thus see whether the Experimentarium meets its objectives and can be expected to continue to do so in the future.

OVERALL OBJECTIVES

The Experimentarium is a non-profit corporate fund whose purpose is to disseminate knowledge about natural science and technology to as large a segment of the population as possible – with special focus on young people. The corporate fund was created on 6 November 1986. In order to achieve its objectives, the fund has established a science centre at 7 Tuborg Havnevej in Copenhagen.

In 2001 the following overall objectives for the Experimentarium's activities in the forthcoming 6-7 years were formulated:

The Experimentarium must develop its position as:

- A national culture centre for natural science, technology, environment and health.
- The most popular excursion destination for schools in Denmark and southern Sweden as a result of activities that are relevant in relation to the curricula applying to primary, secondary and upper secondary education.
- One of the most popular destinations for people living in Denmark and southern Sweden as a result of activities that offer these visitors an all-encompassing, high-quality experience, which is entertaining, relevant and educational.
- One of the world's most innovative science centres as a result of continual updating and modernisation of activities so as to ensure that they activities always up to date, relevant and oriented towards the future.

In addition the Experimentarium must:

- offer a customer service which is second to that of no other attraction in Denmark;
- be on the cutting edge and a role model as regards interactive dissemination of knowledge and as regards research concerning interactive dissemination of knowledge;
- be an attractive workplace so as to ensure that the organisation will always be able to attract and maintain competent staff;
- operate the science centre and its other activities in accordance with business principles that are based on professional marketing and customer service and in accordance with principles ensuring efficient operation and high productivity; and

- be self-financing to such an extent that the fund's integrity can never be questioned.

WHO VISITS THE EXPERIMENTARIUM?

The Experimentarium has three visitor categories: the general public; the education sector; and meetings, conferences and social functions.

	1999	2000	2001	2002	2003
General public	223,851	216,022	189,258	293,015	211,551
schoolchildren	103,096	93,909	87,883	118,730	111,106
Meetings, conferences, social functions etc	7,631	10,580	15,153	14,456	14,714
Total number of visitors	334,578	320,511	292,294	426,201	337,371

330,000 visitors are expected in 2004.

Young people are a special target group:

	1999	2000	2001	2002	2003
Young people under 14	97,790	95,263	84,326	125,198	98,320
Schoolchildren	103,096	93,909	87,883	118,730	111,106
Adults	133,692	131,339	120,085	182,273	127,945
Total number of visitors	334,578	320,511	292,294	426,201	337,371

In all five years listed above, young people under 14 and students have made up about 60% of visitors. This complies excellently with our objective of disseminating information to young groups in the population.

WHAT DO PEOPLE THINK ABOUT THE EXPERIMENTARIUM?

The general public would like to come back!

Each day we select up to twenty visitors whom we ask to fill in a questionnaire with eleven questions. Respondents are asked how satisfied they are with a number of selected 'products', ranging from the shop Experimentikken to their overall impression of the Experimentarium and their visit to it. They can give scores between 1 and 7, where 7 means 'very satisfied' and 1 means 'not satisfied at all'.

This is how visitors rate the Experimentarium:

	1998-2000	2001	2002	2003	Target
Overall impression of the Experimentarium?	6.0	6.0	6.2	6.2	6.0
Overall impression of the new exhibition?	5.5	5.3	5.6	5.7	5.7
Is the new exhibition entertaining?	5.2	5.2	5.2	5.3	5.3
Is the new exhibition educational?	4.2	4.7	4.5	4.8	5.0
Number of exhibits of order?	4.7	4.2	4.7	4.8	5.0
Experimentarium pilots?	5.9	5.9	6.0	5.9	6.0
Shows, demonstrations etc.?	5.6	5.8	5.8	5.9	6.0
Internet@bc?	5.1	5.1	5.2	5.3	5.5
Café Kloden?	4.4	4.5	4.6	4.7	4.5
The shop Experimentikken?	4.8	5.1	5.2	5.2	5.3
Completed questionnaires	8,529	1,848	2,503	3,053	

In four areas, the public's assessment of the Experimentarium lives up to the goals that it has set itself: overall impression of the



Experimentarium, overall impression of the new "CreepyCrawly" exhibition, whether they found it entertaining, and the assessment of Café Kloden.

The exhibition's level of operating stability has improved since 2001 as a consequence of increased focus on this area.

Visitors' general satisfaction with a visit to the Experimentarium appears from the replies to the following question:

Would you like to visit the Experimentarium again?

	1999	2000	2001	2002	2003
Yes	76%	74%	77%	86%	86%
No	2%	2%	2%	1%	1%
Maybe	22%	24%	21%	13%	13%
Total	100%	100%	100%	100%	100%

THE EXPECTATIONS OF SCHOOLS

Schoolteachers visiting the Experimentarium with a class were also asked what they considered to be good or bad in relation to their students and teaching plans. We distribute questionnaires on an ongoing basis to many of these teachers. The assessment was as follows:

	2001	2002	2003	Target
Overall evaluation of the visit?	6.0	5.8	5.8	6.2
Did the students learn something?	5.5	5.7	5.6	5.7
Was the visit motivating the students?	5.9	5.8	5.7	6.2
Service provided by the Experimentarium?	6.5	6.6	6.7	6.2
Completed questionnaires	66	230	222	

The table shows that the Experimentarium has set very high targets for schools' overall evaluation of visits. The reason for this is that schools visit the Experimentarium for academic reasons and have higher expectations concerning the educational value of visits. There is a continuing need for the Experimentarium to adjust its offers to better match the requirements of schools.

SPECIAL REQUIREMENTS CONCERNING MEETINGS, CONFERENCES, SOCIAL FUNCTIONS AND THE LIKE

Each year the Experimentarium opens its doors for more than 100 events: meetings, conferences, social functions and the like. These events are a major source of income for the Experimentarium. We ask all customers to fill in an evaluation form, where they rate the Experimentarium as organiser, host and venue on a scale from 1 to 7. The scores being as follows:

	2001	2002	2003	Goal
Overall impression of the event?	6.3	6.3	0	6.5
Impression of the booking staff?	6.5	6.7	0	6.5
Impression of café staff?	5.7	5.9	0	6.0
Impression of food, etc?	6.2	6.2	0	6.5
Impression of cleaning standards?	5.9	6.0	0	6.0
Impression of meeting room, Large Stage, etc	5.6	5.4	0	6.0
Completed questionnaires	116	64	0	

THE EXPERIMENTARIUM'S MARKETING

A high level of service and frequent product renewal is not enough

to get 340,000 visitors to pour through the doors. The exhibitions must also be professionally marketed and sold.

Marketing towards the general public takes place via traditional means such as posters, brochures, advertisements, the Internet and PR, as well as membership of the Experimentarium's members' club.

PLENTY OF MEDIA PUBLICITY

The media continues to show an interest in the Experimentarium's exhibitions and activities, and in the vast majority of cases, the publicity provided is very favourable. The CreepyCrawly exhibition, for example, was awarded five stars out of a possible six in a regular (arts) review column in Politiken, something which has not occurred before. Here it was the unusual scenography, amongst other things, that the reviewer found particularly stimulating. The re-exhibition of The Brain was also something that the Press felt was important enough to publicise, and the exhibition received a great deal of praise.

The Experimentarium Club has grown steadily since 1999

	1999	2000	2001	2002	2003
Members visiting the Experimentarium	7,518	8,910	11,010	20,434	20,746
Total number of visitors	334,578	320,511	292,294	426,201	337,371
Percentage of members out of total number of visitors	2.2	2.8	3.8	4.1	6.1
Number of contributing member	2,771	5,191	6,350	6,895	

MANY VISITS TO OUR WEBSITE

The number of visitors to the Experimentarium website – www.experimentarium.dk – is constantly growing. An increasing number of people visit the website before they go to the Experimentarium, and we expect the website to become our most important marketing tool in a very near future.

	1998	1999	2000	2001	2002	2003
Percentage of people visiting the Experimentarium website before a visit	9	12	17	24	34	38

The number of visits to the Experimentarium's web site has grown as follows:

	1999	2000	2001	2002	2003
Number of visitors to the Experimentarium website over the past three years:	150,000	220,000	300,000	576,000	789,000

The average visit lasts approximately 2.5 minutes, and the average visitor views 4–6 pages per visit.

CONTACT TEACHERS AT ALMOST 1,300 SCHOOLS

Marketing towards schools occurs via direct mail, forwarded either to the school board or to a contact teacher appointed by the school itself. The contact teacher facilitates communication between the school and the Experimentarium. At the end of 2003 the Experimentarium had contact teachers in 1,066 Danish schools, as well as in 213 schools



in Southern Sweden. Schools can purchase a subscription costing DKK 19 per pupil per year, and schools with subscriptions can visit the Experimentarium free of charge with up to two classes per day. A total of 206 schools with 67,869 students have purchased school subscriptions.

We also have a special partnership with Hellerup School, which opened in August 2002. Students and teachers from this school may freely use the Experimentarium as an extra teaching resource.

The number of school visits has grown as follows:

	1999	2000	2001	2002	2003
Number of subscription students on visits	34,773	33,302	32,186	46,196	47,245
Students without subscriptions on visits	68,323	60,607	55,677	71,228	59,958
Hellerup School				1,088	2,053
Clip sheets				218	1,850
Total	103,096	93,909	87,863	118,730	111,106
Subscription in %	34	35	37	39	43

THE EXPERIMENTARIUM STAFF

The Experimentarium's ability to tackle challenges in the future clearly depends on the competence and motivation of its staff.

At the end of 2000 and the end of 2001, the Experimentarium conducted surveys to map staff views on a number of matters relating to their employment and working conditions. Our works council has reviewed the answers submitted and have formulated goals for individual areas. Such a staff policy statement should be seen as an assessment of the 'value' of the Experimentarium staff in relation to the tasks to be carried out in the years to come.

Information level at the Experimentarium

	2000	2001	2002	2003	Target
Is the number of meetings held in the section adequate?	4.96	5.40	4.60	5.20	5.50
Do you use minutes of meetings?	4.54	4.67	4.60	4.00	5.00
Do you have a good idea of what is going on in your section?	5.67	5.09	4.90	5.00	6.00
Do you have the information needed to carry out your job?	5.29	5.31	5.10	4.50	6.00
Do you get useful information at Friday Meetings?	3.92	4.28	4.20	4.10	4.50
Do you feel well informed about activities at the Experimentarium?	4.56	4.89	4.30	4.60	5.50
Do you have a good idea of what is going on in other sections?	2.87	3.22	3.00	3.40	4.50

Influence

Do you have enough influence on your own job?	4.66	4.81	4.80	5.00	5.50
Do you think ideas are welcome?	4.98	4.78	4.50	5.10	6.00

	2000	2001	2002	2003	Target
Do you want to have influence on major decisions?	4.31	4.89	4.90	5.10	5.00
Do you think you have influence on major decisions?	2.52	2.76	2.50	2.60	4.00

Dialogue with management

Did your last job appraisal interview have any positive outcomes?	3.96	4.59	4.60	3.90	5.50
Are disagreements solved in a good manner?	4.02	4.26	4.40	4.70	5.50
Does your boss help and support you?	5.17	4.51	4.40	5.00	6.00
Do you think your boss is willing to delegate responsibility and trust you?	5.25	5.06	4.90	5.30	6.00
Does your boss observe agreements made in the section?	5.75	5.15	4.70	5.40	6.00
Do you know what your assignments are in your daily work?	6.21	5.98	5.70	6.20	6.00

Dialogue with colleagues

What do you think of the number of staff arrangements?	3.92	3.94	3.80	4.00	4.00
Do you talk with your colleagues about subjects?	6.19	5.92	6.10	6.30	6.00
Do you get help and support from your colleagues?	5.85	5.58	5.90	6.00	6.00
Do you think your section colleagues are doing a good job?	5.67	5.74	5.50	5.90	6.00
Do you think your colleagues in other sections are doing a good job?	4.94	5.16	5.10	5.40	5.50
Do you think your colleagues keep the agreements you have made?	5.37	5.22	5.30	5.50	6.00
Are you pleased with the way conflicts are solved?	4.90	4.98	5.20	5.10	6.00

Own qualifications

Do you think your own skills are adequate to carry out your job?	5.85	6.15	5.90	5.80	6.00
Do you think the Experimentarium makes adequate use of your skills?	4.19	4.57	4.30	4.70	5.50
Do you feel you are developing professionally?	4.25	4.57	4.60	4.50	5.50
Do you feel you are developing personally?	5.40	4.97	5.50	5.10	6.00
Do you think sufficient funds are available for continued and further training and education?	3.08	3.43	2.90	3.40	5.50
Do you think you in a good position to apply for a job elsewhere?	5.23	5.48	5.30	5.20	6.00



	2000	2001	2002	2003	Target
Experimentarium objectives					
Do you agree with the Experimentarium objectives?	5.27	5.85	5.90	5.80	6.00
Do you think the Experimentarium acts in accordance with its objectives?	4.13	4.71	4.60	4.60	5.50
Do you think the Experimentarium meets the quality standards defined?	4.23	4.81	4.10	4.20	6.00
Working conditions					
Do you feel under pressure to go to work when you are sick?	3.25	3.11	3.10	4.80	4.00
How often are you under-employed?	5.63	5.98	6.00	6.00	6.00
How often do you think your workload is excessive?	3.67	4.45	3.80	4.00	5.50
Do you have the right tools to carry out your job?	4.73	4.94	4.70	5.00	6.00
Is your workstation satisfactory from an ergonomic point of view?	3.54	3.92	4.20	4.50	5.50
Do you feel secure in your employment?	4.69	5.40	5.30	5.10	5.50
What do you think of the insertion of new staff?	4.64	5.14	4.90	4.60	6.00
Do you feel the survey is taken seriously and has led to changes?			3.80	4.00	5.00
Analysis:					
Number of questionnaires sent out				114	93
Number of responses			66	56	
Response rate		63	58	60	

It is clear from the responses for 2003 that the staff feels the level of information is insufficient and the decision structure is too unclear. To remedy this problem, the management has established a structure for the dissemination of internal information, with department directors functioning as the central element, distributing oral and written information at departmental meetings held every 14 days.

MANY DIFFERENT TYPES OF COMPETENCE

The Experimentarium staff represent a multitude of professional competencies, which is a major asset for the organisation since it contributes to making the Experimentarium an attractive place to work – with many different approaches to problems and their solution.

The Experimentarium staff comprise ten university graduates in the fields of physics, biology, geography, communication and other areas of interest. We also have a number of creative designers and graphic designers. Our workshops are manned with eight skilled craftsmen, mechanical technicians and metalworkers. The administrative functions are handled by a staff of nine clerical workers (of whom three have finished a programme of higher education). In addition we have four employees who are trained in social studies as well as six self-taught employees. Finally we have a large group of exhibition

pilots, who help and assist visitors to our exhibitions. Most of these pilots are students enrolled in a programme of higher education.

Staff representing the inclusive labour market are: three people employed on flexible terms in accordance with section 62 of the Active Social Policy Act, and three people employed in accordance with the Employment of People with Disabilities Act. Furthermore the Experimentarium currently has ten employees who participate in an activation programme in accordance with section 60 of the Social Assistance Act. The Experimentarium also employs conscientious objectors.

In 2003 the average age of our permanent staff was 44.3 years. The average period of employment of permanent staff was 7 years, while the average period of employment for exhibition pilots was 3 years. At the end of 2003, a total of 51 exhibition pilots with the average age of 24.2 years were employed at the Experimentarium.

Four members of the permanent staff left the Experimentarium in 2003, and 2 new employees were hired.

Absenteeism (all staff groups) in 2003 amounted to 4.36 days per employee, compared with 2002: 3.49 days, 2001: 3.11 days and 2000: 3.29 days.

The increase has primarily been caused by the absence of two staff members due to chronic illness. However, the level of absence due to illness remains low.

STAFF WELFARE

Ten staff social events were held in 2003, with an average of 35 participants per event. These events encompassed football matches and visits to Christiansborg, the Glyptotek, the National Museum of Denmark in Brede, the TV Centre, Louisiana art gallery and the Airport, as well as a guided tour of the inner city and the staff summer and Christmas parties.

No less than 77 staff members participated in a successful study trip to Paris, which included visits to the Muséum National d'Histoire Naturelle, the Palais de la Découverte and the Cité des Sciences et de l'Industrie.

Tuborg Nord Panorama is a staff club for employees working at Tuborg Nord, with the participation of 10 different companies. Kasper Bech Holten, Artistic Director of the Royal Danish Opera, gave a lecture to the club in 2003.

Xpressen, the internal weekly newsletter for Experimentarium staff, is published every Friday at noon. Xpressen contains regular articles by the Experimentarium's leading staff, with news from the previous week and plans for the future.

Five Friday Meetings were held in 2003, with the participation of approximately 70 employees on each occasion.

In 2003, the art society X-art exhibited works by the artists Faith Alice Andersen, Jesper de Lund, Erik Clausen and Jimmy Jørgensen.

STAFF STATISTICS

The Experimentarium has a total of approximately 120 employees. In full-time equivalents, this corresponds to approximately 79 full-time positions. The Experimentarium contributes to the development of the inclusive labour market by recruiting personnel who reflect to a large extent the society around us, regardless of nationality, creed or colour.

In 2003, the Experimentarium employed 18 full-time equivalents associated with the inclusive labour market.





Staff numbers, in full-time equivalents:

	2000	2001	2002	2003
Ordinary hourly-waged employees	68.2	61.9	62.6	60.5
Staff from the inclusive labour market	11.8	13.2	13.5	18.1
Total	80.4	75.1	76.1	78.6

Staff development interviews, with minutes, were carried out in 2003 with all permanent, salaried staff members at the Experimentarium.

The Experimentarium's expenditure on further training in 2003 amounted to DKK 125,000, corresponding to 0.7% of the payroll.

PRODUCT DEVELOPMENT

The Experimentarium's ability to develop new exhibitions with relevant, educational and entertaining content is decisive for the company's ability to survive. This requires, in particular, that its staff are up-to-date with the most cutting-edge knowledge with respect to interactive exhibitions.

The exhibition projects are managed by two specially-appointed project managers. One is a scientific staff member who bears the professional, chronological and financial responsibility for the actual exhibition, while the other is an academic staff member, with responsibility for the preparation of activities aimed at the educational sector. All scientific and academic members of staff at the Experimentarium are experienced in running exhibition projects. A project management tool has been created to enhance the level of control and co-ordination of the Experimentarium's many projects.

The Experimentarium's large special exhibitions will take place according to the following programme:

- The Great sEXPERIMENT (September 2004).
On hire from Technopolis, Mechelen, Flandern.
- Sport and Spinach (October 2005).
Self-produced exhibition.
- The Killer Question (October 2006).
On hire from the Natural History Museum, London
- Xtremes (October 2007).
Developed and produced in co-operation with the Stichting Nationaal Natuurhistorisch Museum – Naturalis and the Koninklijk Belgisch Instituut Natuurwetenschappen, Institut Royal des Sciences Naturelles de Belgique.
- I Spy (October 2008).
Developed and produced in co-operation with Technopolis, Mechelen, Flandern.

The Experimentarium's commercial activities are developing in a positive direction, inasmuch as the exhibition "CreepyCrawly" is on loan from October 2004 to January 2006 to the Stichting Nationaal Natuurhistorisch Museum – Naturalis and the Koninklijk Belgisch Instituut Natuurwetenschappen, Institut Royal des Sciences Naturelles de Belgique. In addition, the Experimentarium has signed a contract with Associacao Centro Ciencia Viva de Sintra to develop and produce a turnkey exhibition for delivery in September 2005.

Renewal of the exhibitions has occurred at a very rapid rate in recent years; over the past five years, the Experimentarium has presented the following new displays and activities to the public:

February 1999	Kids' Pavilion	22 displays	Main exhibition
October 1999	The robot is loose	15 displays	Special exhibition
April 2000	Future Body	38 displays	Special exhibition
October 2000	Dynamic Earth	61 displays	Main exhibition
January 2001	Get in touch with the Future	14 displays	Special exhibition
May 2001	Communic@tion	37 displays	Special exhibition
December 2001	You & Me	70 displays	Main exhibition
April 2002	Dinosaurs on the Hunt	25 displays	Special exhibition
October 2002	Voyage to Mars	17 displays	Special exhibition
February 2003	CreepyCrawly	28 displays	Special exhibition
January 2004	Cirkus Fysikus	42 displays	Main exhibition

The Department of Communication and Public Services, founded in January 2003, worked on the following projects in 2003:

Bus project "Rescue Team for a Day"

"Rescue Team for a Day" is an exciting and educational project, dealing with the body, its functions, first aid in disaster situations, etc., in an authentic set-up. From spring 2005 onwards, the educational programme will be brought out in a bus to school classes all over the country. Rescue Team for a Day has been developed with support from the foundations TrygFonden and Knud Højgaard's Fond, while the bus itself is a gift from MT Højgaard.

School Competition "Gi' Lyd" ("Make a Sound")

117 school classes from all over the country participated in the Experimentarium's 'Make a Sound' school competition. The aim of the competition was to develop the best experiment with sound; 42 experiments were presented in a special exhibition at the Experimentarium in February-March. On 23 March 2004, the group Safri Duo presented the grand prize – a trip to Paris for the whole class – to the 6th and 7th grade pupils of Fole Friskole. The project was sponsored by the Otto Mønsted Fond and Kilroy group travel, who are also supporting the Experimentarium's 2004-2005 school competition.

The "Brain and Learning" conference

In co-operation with the Centres for Higher Education of Greater Copenhagen and Copenhagen/North Sealand, the Experimentarium organised a major conference presenting the latest results in brain research in relation to learning. The conference was held on 5 - 6 March 2004.

Teachers' course: "The class's science and nature experimentarium"

As inspiration for science teachers, the Experimentarium is developing a five-day training course in co-operation with the Greater Copenhagen Centre for Higher Education. The course will be held for the first time in 2004, and is sponsored by the Oticon Foundation.

Future Science Education (FUSE)

FUSE is an elite project in which selected elementary school students work on scientific subjects and learn how to teach these to other students. Students and teachers participate in courses at the Experimentarium and in projects at the school. FUSE is a pilot project which will commence at the end of 2004 with EU support.

INTERNATIONAL CONTACTS

The PULSE project, Public Understanding of Life Science.

As part of European Science Week, 160 Danish secondary school students took part in a two-day conference at the Experimentarium on 4 - 5 November 2003. The students were bombarded with facts and activities relating to gene technology, challenging their pre-formed attitudes towards the subject. Secondary school students in Trento and Lisbon participated at the same time in parallel conferences. PULSE was implemented with support from the EU.

DNA50

For the entire month of November, the Experimentarium celebrated the 50th anniversary of the discovery of the DNA helix by Crick and Watson. The occasion was marked with an exhibition, conferences, school activities and the construction of the world's longest DNA model. On 19 November, Nobel prize-winner Sydney Brenner gave a lecture to the anniversary conference. The anniversary celebrations were sponsored by Novozymes A/S, the British Council of Denmark, and the Danish Natural Science Research Council.

The Hellerup School Project

Students from the 10th grade at nearby Hellerup School carried out Learning By Teaching activities at the Experimentarium during the 2002/2003 school year. The impressive lessons learned were included in the FUSE project. The Hellerup School Project was carried out with support from the Birch & Kroghoe Foundation.

Publication of school textbooks in co-operation with Alinea

The Experimentarium's long-standing ambition to publish a series of books on scientific themes is shortly to become a reality, thanks to the framework agreement signed with the schoolbook publishing house Alinea. The first two books, sponsored by the Egmont Foundation, will be published in connection with the book fair to be held at Forum Copenhagen during November 2004.

Virtual teaching materials for the special exhibition "The Great sEXPERIMENT"

On 1 October 2004, the Experimentarium will open a new, exciting special exhibition about boys and girls. With support from the Ministry of Education, Lærerstandens Brandforsikring, the Tuborg Foundation, Industriens Uddannelsesfond and IBM, Internet-based teaching materials have been developed to explore whole new possibilities in the preparation and subsequent educational use of a visit to the Experimentarium.

New teaching materials

Pupils' pamphlets for the Experimentarium's special exhibitions The Brain and CreepyCrawly, as well as for the renewal of the main exhibition, Cirkus Fysikus, and the school competition Give a Sound, have been developed for the relevant age groups.

THE FUTURE

The process of preparing knowledge accounts has been a useful one. An overall evaluation has been obtained of how customers and staff perceive the Experimentarium. This has now become an ongoing process, designed to ensure that the Experimentarium's offers to the public remain of permanently high quality, with a constant and intense rate of renewal. In this way, the Experimentarium will remain an exciting workplace with a high degree of staff involvement and inspiration.

The story continues next year!
Asger Høeg, Director

Science and technology recognise no borders.

The development and maintenance of a science centre requires good international contacts.

The Experimentarium must present the latest and the best techniques in science communication, which is only possible via ongoing contact with the world's largest and most innovative science centres and museums.

Over the years, the Experimentarium has built up a strong network of contacts which is constantly strengthened by the Experimentarium's contributions to the European science centre networks. The Experimentarium's director, Asger Høeg, is a founder member and, for the last four years, treasurer of the European Collaborative for Science, Industry and Technology Exhibitions (ECSITE). On 1 November 2002, Asger Høeg was elected vice president of ECSITE.

The Experimentarium's development director, Nils Hornstrup, is a founder member and chairman of the Nordic Science Centre Association.

The Experimentarium is viewed internationally as an exemplary example of a science centre. We say this, not in a fit of self-congratulation, but in simple acknowledgement of the many international delegations who have visited the Experimentarium over the years in search of advice and inspiration.

2003 saw, for example, visits from:

Dundee Science Centre.

ECSITE Board.

CosmoCaixa, Madrid.



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