Republic of the Philippines
Department of Education

DepEd MEMORANDUM
No. 176 , s. 2017

30 OCT 2017

2017 SCIENCE FILM FESTIVAL

To: Regional Directors
Schools Division Superintendents
Public and Private Elementary and Secondary School Heads
All Others Concerned

1. In support of the Memorandum of Agreement (MOA) between Goethe Institut-Philippinen and the Department of Education (DepEd), the **2017 Science Film Festival**, with the theme Anthropocene–Welcome to the Human Age, will be conducted from November 7 to December 18, 2017.

2. The festival aims to promote science literacy and to enhance awareness of contemporary scientific, technological and environmental issues through film and television.

3. The mechanics of the festival screening are contained in Enclosure No. 1. The synopses of the films are provided in Enclosure No. 2.

4. Learners from both public and private schools, particularly those from Regional Science High Schools (RSHSs), Science, Technology and Engineering (STE)–implementing schools, and Special Science Elementary Schools (SSES), are invited to watch the films.

5. The Regional Science Education Program Supervisor shall coordinate the conduct of the 2017 Science Film Festival and shall retrieve the **Visitor Count and Survey Form** per school. The DepEd Regional Office (RO) shall submit a **soft copy in Excel format** of the Visitor Count Summary Form through email address glenne.basio@deped.gov.ph, and a hard copy of the Survey Form on or before **December 18, 2017**. The RO shall also collect the hard copy of the Visitor Count Summary Form, including all the films, and submit to Director Jocelyn Andaya, Bureau of Curriculum Development, 3rd Floor Bonifacio Building, DepEd Central Office, DepEd Complex, Meralco Avenue, Pasig City **on or before January 5, 2018**. The list of participating schools is found in Enclosure No. 3.

6. The opening of the festival will be on **November 6, 2017** at the Imax Theater, SM North EDSA, North Avenue corner EDSA, Diliman, Quezon City, with the screening of the 3D film Voyage of Time. Participants to the opening of the festival are pupils/students from selected schools in the Schools Divisions of Quezon City and Caloocan City listed in Enclosure No. 4, as well as the Science Education Supervisors of the National Capital Region and the Schools Divisions of Quezon City and Caloocan City.

7. There will be scheduled school visits during which the visiting team will evaluate the film viewing sessions and parallel activities. Focus group discussions with students and teachers will likewise be conducted. The list of possible schools for school visit is provided in Enclosure No. 4.

8. Participation of schools shall be subject to the no-disruption-of classes policy stipulated in DepEd Order No. 9, s. 2005 entitled Instituting Measures to Increase Engaged Time-on-Task and Ensuring Compliance Therewith. The activity is also subject to the no-collection policy stated in Section 3 of Republic Act No. 5546, An Act Prohibiting the Sale of Tickets and/or the Collection of Contributions for Whatever Project or Purpose from Students and Teachers of Public and Private Schools, Colleges and Universities.

9. Expenses relative to the transportation of students shall be charged to the schools Maintenance and Other Operating Expenses, subject to the usual accounting and auditing rules and regulations.

10. Operational costs, including communications, shall be charged to the 2017 Bureau of Curriculum Development Funds. Other expenses relative to the conduct of the festival in participating schools shall be charged to the 2017 Program Support Funds, pursuant to DepEd Order No. 13, s. 2016 entitled Implementing Guidelines on the Direct Release and Use of Maintenance and Other Operating Expenses Allocations of Schools, Including Other Funds Managed by Schools, subject to the usual accounting and auditing rules and regulations.

11. For more information, contact **Ms. Grace T. Panganiban** of the Goethe Institut-Philippinen at telephone nos. (02) 840-5723 to 24.

12. Immediate dissemination of this Memorandum is desired.

LEONOR MAGTOLIS BRIONES
Secretary

Encls.:
As stated

References:
DepEd Order: (Nos. 9, s. 2005 and 13, s. 2016)
DepEd Memorandum No. 181, s. 2016

To be indicated in the Perpetual Index
under the following subjects:

FILM SHOWING
LEARNERS
SCIENCE EDUCATION
TEACHERS

DJP/CAR, DM 2017 Science Film Festival
0889-September 22/October 9. 2017

(Enclosure No. 1 to DepEd Memorandum No. **176**, s. 2017)

MECHANICS FOR THE SCIENCE FILM FESTIVAL SCREENING

1. Preparation:

   a. Room equipped with screen and video player (DVD player or PC/laptop).
   b. Science Films (in DVD format).
   c. Teacher or Guide to facilitate the viewing and activities. (It is highly recommended that teachers/guides watch the films in advance and prepare guide questions that may help stimulate students' interest and understanding of the film.)

The copies of the film will be forwarded to the Regional Offices (RO). The RO will then forward the films to the Division Offices (DO). The DO will forward the films to specific schools in the list.

2. Reception and Work Instruction:

The teacher or guide introduces the Science Film Festival and briefly explains the film/s to be screened. The synopses can be used for this purpose.

3. Screening of the Film

Let the viewers watch the film completely and without interruption.

4. Processing (Pre- or Post-Screening)

This is to reinforce the information from the film and to strengthen students' understanding of concepts espoused by the film. The guide questions prepared before the screening will help with the processing of students' understanding.

5. Teacher/Guide shall prepare the Visitor Count Form and submit the same to the Regional Science Education Program Supervisor. This form is in Enclosure No. 5.

6. The DepEd RO shall collate the Visitor Count Form and prepare the summary following the format in Enclosure No. 6.

(Enclosure No. 2 to DepEd Memorandum No. **176**, s. 2017)

INTERNATIONAL SHORTLIST 2017

Family Edutainment

Ecology & Environment

Natural Science, Life Science & Technology

Culture & History

Non-Verbal & Science Shorts

[Festival Theme 2017: Anthropocene – Welcome to the Human Age]

Family Edutainment

Title:	Checker Can – The Transportation Check
Original Title:	Checker Can – Der Transport-Check
Category:	Family Edutainment
Directors:	Johannes Honsell
Produced by:	Megaherz GmbH, Bayerischer Rundfunk
Running Time:	24:45 min.
Country:	Germany
Year:	2013
Age Guideline:	Primary School (9-11)

Every day millions of tons of goods are moved around the globe: by ship, plane, truck or train. In order to cope with this volume huge transporters are used from time to time. Checker Can is able to watch as one of the largest transport aircraft in the world is loaded in Hamburg: even the wings of the aircraft "Beluga" have storage space. However, not every product reaches its destination by air: Checker Can also accompanies transports with a steam locomotive and a truck. What's being carried via means of technology nowadays used to be carried by animals like donkeys. And they can carry a great many things as Checker Can learns in the Eselgarten in Augsburg.

Title:	Checker Tobi – The Climate Check
Original Title:	Checker Tobi – Der Klima-Check
Category:	Family Edutainment
Directors:	Antonia Simm
Produced by:	Megaherz GmbH, Bayerischer Rundfunk
Running Time:	25:00 min.
Country:	Germany
Year:	2016
Age Guideline:	Primary School (9-11)

Everyone knows rain, cold and storms as "weather". And this is directly related to the climate. Checker Tobi explains vividly what the climate is, how it works and why people need to protect it. He even flies into a thundercloud with a propeller engine from the German Aerospace Center. He explains what the greenhouse effect, climate change and the personal ecological footprint is all about in simple terms – and what every individual can do to protect the climate and thus the earth.

Title: Checker Tobi – The Robot Check
Original Title: Checker Tobi – Der Roboter-Check
Category: Family Edutainment
Directors: Antonia Simm
Produced by: Megaherz GmbH, Bayerischer Rundfunk
Running Time: 25:00 min.
Country: Germany
Year: 2015
Age Guideline: Primary School (9-11)

In the German Research Center for Artificial Intelligence in Bremen, Checker Tobi meets robot woman "Aila". The machine moves almost like a real human and can do many actions thanks to ingenious programming. Robots support people not only in everyday life, but also carry out dangerous tasks: In Bremen, for example, the researchers are testing spider-shaped space robots on a reconstructed moon landscape, which also manage in extremely hilly terrain. In this episode of Checker Tobi, the audience learns a lot about robot technology – and also whether a machine can develop and show feelings.

Title: Dino Dana: Dino Divers – A Game of Micro raptor and Mouse
Category: Family Edutainment
Director: J.J. Johnson
Produced by: Sinking Ship Entertainment
Running Time: 22:00 min.
Country: Canada
Year: 2016
Age Guideline: Primary School (9 – 11)

The nine-year-old Dana is not just a dinosaur fan, but she can put dinosaurs into her own everyday life with her imagination. In this episode of the series, Dana asks the prehistoric animals Deinosuchus, Spinosaurus and Pterodactyl to show another girl how to overcome her fear. Saara is facing a swimming test, but is scared of failing it. In addition, Dana shows how a microraptor hunts to catch a mouse in the kitchen. However, things become complicated when the Microraptor accidentally goes on a mouse-hunt as well.

Title: Earth to Future – The City in the Year 2121
Original Title: Erde an Zukunft – Die Stadt im Jahr 2121
Category: Family Edutainment
Directors: Katja Engelhardt
Produced by: tvision
Running Time: 24:51 min.
Country: Germany
Year: 2016
Age Guideline: Primary School (9-11)

Felix the host takes a trip through time and lives in the environmentally friendly "City in the Year 2121", where garbage drones recycle the waste on site and where flying spacegliders are on the road instead of cars. However, the fact that future-oriented ideas can already be found in 2016 is also shown by Felix: the Swedish city of Hammarby has developed an underground waste disposal system. And at the Berlin-Südkreuz train station, there are environmentally-friendly means of transport such as rail, electric buses, electric cars and e-bikes, driven by wind and solar energy that is generated there. In addition, modern methods of vegetable or fish farming are presented for large cities.

Title: ENE MENE BU
Category: Family Edutainment
Directors: KiKA
Produced by: KiKA – Der Kinderkanal von ARD und ZDF
Running Time: 10:29 min.
Country: Germany
Year: 2016
Age Guideline: Early Learners (5 – 8)

The young viewers of "ENE MENE BU" experience in this series of participation, how a large pendulum swings and how these movements can be captured with colors. In addition the show is about tongue twisters, where individual syllables or even entire sentences are the focus - and sometimes prove to be real "stumbling blocks" for speakers. A visit to the museum is also on the agenda: You can see the frogs made of sheets of paper, before the viewers are shown how to make these figures themselves by example of a lion.

Title: Full Proof – Salt
Category: Family Edutainment
Director: Uif Putters
Produced by: NTR
Running Time: 12:43 min.
Country: The Netherlands
Year: 2016
Age Guideline: Primary School (9 – 11)

In this series of the children's science fiction show "Full Proof" the twelve-year-old Masai girl Joy presents the phenomenon of Lake Magadi in her homeland in Kenya. The salt lake regularly dries out, the salt settles on the ground and can be scraped off there. The program explains the properties of salt by means of small experiments. For example, Joy builds a chain of salt crystals, uses osmosis to preserve vegetables, uses salt to make coconut ice, and explains why you should never drink the salt water.

Title: House of Little Scientists – Beehive
Orinigal Title: บ้านนักวิทยาศาสตร์น้อย - ตอนรังผึ้ง
Category: Family Edutainment
Director: Warinnet Termsirikamol
Produced by: National Science Museum Thailand
Running Time: 10:53 min.
Country: Thailand
Year: 2016
Age Guideline: Early Learners (5 – 8)

The program "House of Little Scientists" encourages children in a preschool age to approach science topics with fun and in an age-appropriate manner. The episode "Beehive" shows how children learn more about a beehive, which they are studying. For example, how a beehive is constructed and how it serves the animals that live in it. A beehive made of paper helps them understand the subject even better.

Title: House of Little Scientists – Lotus Leaf
Orinigal Title: บ้านนักวิทยาศาสตร์น้อย - ตอนใบบัว
Category: Family Edutainment
Director: Warinnet Termsirikamol
Produced by: National Science Museum Thailand
Running Time: 10:12 min.
Country: Thailand
Year: 2016
Age Guideline: Early Learners (5 – 8)

In the episode "Lotus Leaf" the young viewers of the "House of Little Scientists" learn the peculiarities of a lotus leaf – for example, that water drops can roll on the leaves and roll around like tiny marbles. The small researchers compare the characteristics of lotus leaves with those of other surfaces – and discover amazing differences. The program "House of Little Scientists" helps children in the preschool age to approach scientific topics in an age-appropriate manner.

Title: House of Little Scientists – Water Permeability
Orinigal Title: บ้านนักวิทยาศาสตร์น้อย - ตอนน้ำซึม
Category: Family Edutainment
Director: Warinnet Termsirikamol
Produced by: National Science Museum Thailand
Running Time: 11:33 Minutes
Country: Thailand
Year: 2016
Age Guideline: Early Learners (5 – 8)

The flow rate of water is at the center of this episode of the "House of Little Scientists". The young researchers are observing that water can flow better through stones than through sand – and during their own experiments they find out why. The small researchers use their new knowledge right away in a very practical way: They are setting up irrigation sieves for the plants - with which they can individually adjust the water flow for each plant species.

Title: I Got It! - Global Warming
Category: Family Edutainment
Director: Khin Nita Htun
Produced by: MRTV-4 Ever Group and Goethe-Institut
Running Time: 10:11 min.
Country: Myanmar
Year: 2015
Age Guideline: Primary School (9 – 11)

In this episode of "I Got It!", Oaksoe Ka from Myanmar is dealing with global warming – in a very practical way. That's because he is interested in plants and is taking part in a planting competition at his school. To this end, the children are looking for the seeds themselves. Oaksoe Ka does so as well and decides to use a certain kind of plant. The film explains how important plants are for the climate and how they can influence global warming.

Title: I Got It- Proboscis Monkey
Category: Family Edutainment
Director: Siti Halipah Hj Mohd Taha
Produced by: RTB - Radio Television Brunei and Goethe-Institut
Running Time: 10:02 min.
Country: Brunei
Year: 2015
Age Guideline: Primary School (9 – 11)

The habitat of the proboscis monkeys is the focus of this episode of "I Got it!". The animals are found in the wild on the island of Borneo. The audience is taken on a boat ride together with the two friends, Danial and Zafran, through the mangrove forests to get to know the habitat of the proboscis monkeys. They learn that these monkeys with their big nose differ not only visually from other monkey species.

Title: Kids Science Series - Rain
Category: Family Edutainment
Running Time: 3:19 min.
Country: Egypt
Year: 2017
Age Guideline: Primary School (9 – 11)

The "Kids Science Series", a children's science series, encourages children to approach scientific topics playfully and curiously. The fun of learning is very important: each episode is filled with games, experiments and references to other websites. In doing so, the series does not address the subject of science in a dry manner, but also conveys complex relationships very easily and in a way that the viewers are encouraged to deal with the topics themselves. The children should discover, ask questions, be open and learn from their own interest and not because they have to do it for an exam.

Title: Kids Science Series - Moon
Category: Family Edutainment
Running Time: 3:23 min.
Country: Egypt
Year: 2017
Age Guideline: Primary School (9 – 11)

The "Kids Science Series", a children's science series, encourages children to approach scientific topics playfully and curiously. The fun of learning is very important: each episode is filled with games, experiments and references to other websites. In doing so, the series does not address the subject of science in a dry manner, but also conveys complex relationships very easily and in a way that the viewers are encouraged to deal with the topics themselves. The children should discover, ask questions, be open and learn from their own interest and not because they have to do it for an exam.

Title: Neuro ... What?
Original Title: Neuroqué
Category: Family Edutainment
Director: Marcelo Goobar
Produced by: Pakapaka
Running Time: 13:00 min.
Country: Argentina
Year: 2016
Age Guideline: Secondary School (12 - 16)

Neuroscientist Fabricio answers questions about the brain that his niece Martina asks him after school everyday: How does this incredibly complex think-tank actually work? Each episode of "Neuro ... what?" not only answers simple questions and provides explanations about the brain, but also encourages young audiences to deal with the subject themselves and to ask further questions, because curiosity is the key to knowledge.

Title: nine-and-a-half: Ew, Insects? – Siham Tries the Food of the Future
Original Title: neuneinhalb: Igitt, Insekten!? – Siham probiert das Essen der Zukunft
Category: Family Edutainment
Directors: Nasibah Sfar
Produced by: tvision GmbH im Auftrag des WDR
Running Time: 09:30 min.
Country: Germany
Year: 2016
Age Guideline: Primary School (9-11)

Open your mouth and put an insect inside? Siham is tasting the food of the future. Together with Chef René she conjures an exotic menu: worms on tomato sauce, salad of brown algae and as dessert grasshopper snacks! These special ingredients should be healthy and in many countries around the world they are regularly consumed. And she learns why it is good to eat insects. Let's see if Shiham likes it? And which ingredient makes her sick? All this you will see in this nine-and-a-half episode.

Title: nine-and-a-half: Green Wonder – Can Algae Save the Climate?
Original Title: neuneinhalb: Grünes Wunder – Können Algen das Klima retten?
Category: Family Edutainment
Directors: Nasibah Sfar
Produced by: tvision GmbH im Auftrag des WDR
Running Time: 09:30 min.
Country: Germany
Year: 2016
Age Guideline: Primary School (9-11)

Algae are green, slippery and they smell funny – at least that's what reporter Johannes thought until now. At a research center in Jülich he now learns that these tiny creatures have a giant force and are real saviors of the climate. They consume a lot of carbon dioxide, that is, exactly the gas that hurts the climate. Researchers have bred billions of microalgae in Jülich in giant plastic tubes. The plants are not just saviors of the climate, but also store the very precious algae oil – which you can even use to fuel an airplane.

Title: nine-and-a-half: Nothing Goes without Codes – Why Programming is the Language of the Future
Original Title: neuneinhalb: Ohne Codes nix los – Warum Programmieren die Sprache der Zukunft ist
Category: Family Edutainment
Directors: Nasibah Sfar
Produced by: tvision GmbH im Auftrag des WDR
Running Time: 09:30 min.
Country: Germany
Year: 2016
Age Guideline: Primary School (9-11)

Cars that drive autonomously, robots that help elderly people in the household, or computers that help doctors with risky operations: machines will play an increasingly important role in the future. That is why more and more people are needed who can speak with machines – for example Harald Bergermann. He has programmed robots that are now speeding through a huge warehouse, helping human workers pack packages. The audience learns how important it is to be able to speak with machines and how to learn a programming language.

Title: nine-and-a-half: The Super Tree – Johannes Discovers the Wood of the Future
Original Title: neuneinhalb: Der Superbaum – Johannes erforscht das Holz der Zukunft
Category: Family Edutainment
Directors: Christine Roskopf
Produced by: tvision GmbH im Auftrag des WDR
Running Time: 09:30 min.
Country: Germany
Year: 2016
Age Guideline: Primary School (9-11)

The Asian Kirib tree is the fastest growing tree in the world. Within a year it grows up to five meters. The turbo growth has a secondary effect: The tree produces very much wood within a short time. Since the global demand for wood has been increasing for years, Kiri wood is a coveted raw material for the future. The Kiri tree has recently been planted in Germany. Reporter Johannes visits a tree school for the program. It reveals the secret of the fast-growing super tree and explains how the Kiri tree helps protect local forests.

Title: Playdate: Whistle While You Escape
Category: Family Edutainment
Director: J.J. Johnson
Produced by: Sinking Ship Entertainment
Running Time: 5:00 min.
Country: Canada
Year: 2015
Age Guideline: Early Learners (5 – 8)

Mac, Sammy, Priscilla and Buckie are the stuffed animals of Jacob and his friends. They lead an airy life when the children are gone. Then they meet to play and experience their own adventures. In this episode, Jacobs grandfather brings home a bird and Jacos is supposed to watch over it. When Jacob and his grandfather leave the room, however, the stuffed animal Mac accidentally opens the cage. The bird flies away and must be caught before Jacob and his grandfather come back.

Title: Quarks & Caspers: 7 Things – How We Became What We Are
Original Title: Quarks & Caspers: 7 Dinge – Wie wir wurden, was wir sind
Category: Family Edutainment
Directors: Claudia Heiss
Produced by: WDR
Running Time: 43:45 min.
Country: Germany
Year: 2016
Age Guideline: Primary School (9-11)

How come people nowadays live in houses and no longer move through vast landscapes as nomads? For more than 200 000 years, Homo sapiens have moved around in small groups until they suddenly settled down about 10 000 years ago and invented farming. It was the beginning of a development that led to space rockets, computers and a world-wide networked society. But would people be healthier if they lived and ate as their ancestors? The film explores the birth cycle of civilization and explains the consequences that people are still struggling with today.

Title: Show with the Mouse – Catalyst
Original Title: Sendung mit der Maus – Katalysator
Category: Family Edutainment
Directors: Jan Marschner
Produced by: Armin Maiwald im Auftrag des WDR
Running Time: 08:34 min.
Country: Germany
Year: 2016
Age Guideline: Primary School (9-11)

In this episode of "The Show with the Mouse," moderator Armin explains how a catalyst works. Especially in cities the streets are full of cars. They are gathering at traffic lights, drive around and permanently blow harmful exhaust fumes into the air. To ensure that as little as possible of these exhaust gases leave the exhaust, cars are equipped with catalysts. The program shows how a catalyst is built - and how it can help reduce the pollution of the air.

Title: Show with the Mouse – Flying Saw
Original Title: Sendung mit der Maus – Fliegende Säge
Category: Family Edutainment
Directors: Matthias Wegmann
Produced by: Matthias Wegmann im Auftrag des WDR
Running Time: 06:50 min.
Country: Germany
Year: 2016
Age Guideline: Primary School (9-11)

High-voltage masts are common in the landscape nowadays: across fields, along roads and sometimes through the forest, they often lead power lines straight on for a few kilometers at several meters above the ground. However, the lines are sensitive: when branches touch them, a short circuit occurs and the current is interrupted. A special flying saw is supposed to prevent this: it maintains the sections and cuts overhanging branches so that the power supply is not disturbed. This episode of "The Show with the Mouse" explains how this works.

Title: Show with the Mouse – Paper from Elephant Dung
Original Title: Sendung mit der Maus – Papier aus Elefantendung
Category: Family Edutainment
Directors: Monika Hulshoff
Produced by: WDR
Running Time: 07:05 min.
Country: Germany
Year: 2015
Age Guideline: Primary School (9-11)

The fact that wood is used for the production of paper is known. The fact that elephant droppings can also be used for the production sounds strange. This episode of "The Show with the Mouse" is based on a book that shows how the process works – and whether a book made of elephant droppings smells oddly. A reporter tries it out himself and collects elephant droppings at the zoo to produce his own piece of paper in the paper museum.

Title: The Apple Seed – Gravitational Waves
Original Title: Het Klokhuis – Zwaartekrachtsgolven
Category: Family Edutainment
Director: Neeltje Bollen
Produced by: NTR
Running Time: 14:45 min.
Country: The Netherlands
Year: 2016
Age Guideline: Secondary School (12 - 16)

The Dutch edutainment children's program "The Apple Seed" (Het Klokhuis) is aimed at young audiences between eight and thirteen years. Each episode deals with a mixture of drama and documentary with a different topic every time: from highly scientific to cultural to social issues. The aim is for the children to learn as much as possible about the society in which they live.

Ecology & Environment

Title: Bugs – Nature's Little Superheroes
Original Title: Insekten – Superhelden auf sechs Beinen
Category: Ecology & Environment
Directors: Björn Platz
Produced by: a & o buero filmproduktion
Running Time: 52:00 min.
Country: Germany
Year: 2016
Age Guideline: University and General Public

They are small and are not exactly loved by everyone: insects. Yet, insects are much more than just annoying creepy crawlers: they are true mini-geniuses. The documentary shows how the animal superheroes on six legs help solve some of the greatest problems of mankind. For example, by assisting in the development of new biomaterials, scientists can use animal behavior to solve traffic problems. Insects also play an important role in the investigation of more effective antibiotics.

Title: Dynamic Salt
Category: Ecology & Environment
Director: Jerome-Cecil Auffret
Produced by: ALTOMEDIA
Running Time: 51:50 min.
Country: France
Year: 2016
Age Guideline: University and General Public

Scientists around the world are working on ideas and concepts on how to get energy from salty seawater. The documentation "Dynamic Salt" takes the viewers to unknown places, to strange laboratories in magnificent landscapes, next to gigantic dikes or on impressive salt marshes. Scientists explain the state of research and what problems, hopes, and failures are involved in exploring new sources of energy.

Title: Ethnobotany and Human Nutrition: A Samoa Case Study
Category: Ecology & Environment
Director: Ondrej Semotan
Produced by: Czech University of Life Sciences Prague and Ondrej Semotan
Running Time: 24:50 min.
Country: Czech Republic
Year: 2016
Age Guideline: University and General Public

More and more residents of the Pacific island state of Samoa are plagued by diabetes or are overweight. The researchers argue that the dramatic development has something to do with the fact that the inhabitants of Samoa are consuming more and more imported calorie-rich foods. The film draws on research conducted by scientists from the Czech Agricultural University of Prague. It examines ethnobotanics for the island state of Samoa. The researchers want to use locally known agricultural crops to improve the health and nutrition of the local population.

Title: Lake of Apples
Category: Ecology & Environment
[Festival Theme 2017: Anthropocene – Welcome to the Human Age]
Directors: Ljubo Stefanov and Tamara Kotevska
Produced by: Apollo Images in cooperation with the United Nations Development Progamme (UNDP) and Swiss Agency for Development and Cooperation (SDC)
Running Time: 29:55 min.
Country: Macedonia
Year: 2017
Age Guideline: University and General Public

The Prespasee in the interior of the Balkan Peninsula is one of the oldest freshwater lakes on the planet and is a habitat for more than 2 000 plant and animal species. The documentary "Lake of the Apples" shows the life on and in the lake over a period of one year. It can be seen how the ecosystem has changed: instead of fishing, an older fisherman only finds algae in his nets; Birds such as pelicans and cormorants are no longer as numerous as they used to be. Two scientists are investigating the changes and show that pollution is destroying the lake – but this is being mitigated by the United Nations Development Program (UNDP).

Title: Second Century Stewardship
Category: Ecology & Environment
Director: David E. Shaw
Produced by: David E. Shaw
Running Time: 41:52 min.
Country: United States of America
Year: 2016
Age Guideline: Secondary School (12 - 16)

On the occasion of the 100th Anniversary of the Acadia National Park in the USA, this documentary is concerned not only with the breathtaking landscape of the park, but also with the scientific research possibilities offered by such a natural space. Scientists use the park as a natural laboratory in which they try to understand and learn more about climate change and other environmental issues. With a clever marketing strategy and a deep understanding of nature, future generations of areas like the Acadia National Park will also benefit.

Title: Spaceship Earth
Category: Ecology & Environment
Director: Kevin McMahon
Produced by: Primitive Entertainment
Running Time: 122:26 min.
Country: Canada
Year: 2016
Age Guideline: Secondary School (12 - 16)

The documentary presents the global energy crisis with all its problems, such as global warming, in ways that offer insights into new energy technologies and the latest scientific knowledge. In doing so, the film is based on a very special metaphor and presents the Earth as a ship, on which there are no passengers but only a crew, faithful to the opinion of the philosopher and media theorist Marshall McLuhan: People who constantly change the "decks" of the Earth, the environmental conditions so to speak.

Title: Treasures of the Earth – Gems
Category: Ecology & Environment
Director: Doug Hamilton; Terri Randall; Kate Dart - Series Director
Produced by: A NOVA Production co-produced by Pioneer Film and Television Productions Limited with China International TV Corporation with CCTV-10 and PAAN Media Holdings Co., Limited, with KBS Korea in association with PBSd, for WGBH and KBS; A NOVA Production by Hamilton Land and Cattle, Inc. for WGBH Boston; A NOVA Production by Terri Randall Productions for WGBH Boston.
Running Time: 56:57 min.
Country: Ecuador
Year: 2016
Age Guideline: Secondary School (12 - 16)

Their beauty has captivated us for millennia. Their cost can be extraordinary – some are even considered priceless. Precious gems like diamonds, rubies, emeralds, opal, and jade are the ultimate treasures of the earth, and each one is made from a specific–and often torturous–recipe of chemistry, pressure, and heat. The secrets to their sparkle, color, and even strength lie deep inside the gems themselves, but could they also hold clues to one of the most enduring mysteries in the field of geology?

Title: Treasures of the Earth – Metal
Category: Ecology & Environment
Director: Doug Hamilton; Terri Randall; Kate Dart - Series Director
Produced by: A NOVA Production co-produced by Pioneer Film and Television Productions Limited with China International TV Corporation with CCTV-10 and PAAN Media Holdings Co., Limited, with KBS Korea in association with PBSd, for WGBH and KBS; A NOVA Production by Hamilton Land and Cattle, Inc. for WGBH Boston; A NOVA Production by Terri Randall Productions for WGBH Boston.
Running Time: 58:16 min.
Country: United States of America
Year: 2016
Age Guideline: Secondary School (12 - 16)

The enduring luster of gold, the conductivity of copper, the strength of steel—the special properties of metals have reshaped societies and defined eras; they have such an important role in human history that entire ages have been named after them. But what gives metals their astounding characteristics? And how have metals enabled our modern hi-tech world? Explore the science of metals with chemists and engineers as they literally test the mettle of metals and investigate how these remarkable materials have ushered humanity from the Stone Age to the stars.

Title: Treasures of the Earth – Power
Category: Ecology & Environment
Director: Doug Hamilton; Terri Randall; Kate Dart - Series Director
Produced by: A NOVA Production co-produced by Pioneer Film and Television Productions Limited with China International TV Corporation with CCTV-10 and PAAN Media Holdings Co., Limited, with KBS Korea in association with PBSd, for WGBH and KBS; A NOVA Production by Hamilton Land and Cattle, Inc. for WGBH Boston; A NOVA Production by Terri Randall Productions for WGBH Boston.
Running Time: 56:51 min.
Country: United States of America
Year: 2016
Age Guideline: Secondary School (12 - 16)

Drill down to discover the treasures beneath our feet that power our world. Fossil fuels–coal, oil, and natural gas–powered the industrial revolution and allowed us to build a way of life that many cherish today. Personal cars, planes, lights, hot showers – all of these are gifts from our fossil fuels, but they have a dirty dark side in that they are polluting the planet. Where did that energy

come from, and can we find alternative energy resources that come in a cleaner form? The hunt is on for new treasures that might allow us to power our modern way of life without damaging the environment. Travel the globe to see how our energy treasures are changing — and if they can keep the lights on.

Title: Wild Ways
Category: Ecology & Environment
Director: James Brundige
Produced by: A NOVA Production by First Light Films Production
Running Time: 52:53 min.
Country: United States of America
Year: 2016
Age Guideline: Secondary School (12 - 16)

For humans, highways, large buildings and wide roads are a necessary infrastructure – for animals they are insurmountable obstacles. Many die in search of food or on hikes to their reproductive sites. Individual protected areas such as the Serengeti or the Yellowstone National Park are too small to sustain generations of healthy wild animal populations permanently. Hope is offered by the approach of "connections for species survival". The concept is to connect great wilderness shelters with tunneling systems, secured "elephant highways" and overpasses. This creates secure routes for lions, bears, antelopes and elephants across borders.

Title: Xenius: Fighting for Biodiversity in the Mediterranean
Original Title: Xenius: Kämpfen für den Artenreichtum im Mittelmeer
Category: Ecology & Environment
Directors: Ingo Knopf
Produced by: Bilderfest (im Auftrag des WDR)
Running Time: 26:13 min.
Country: Germany
Year: 2016
Age Guideline: University and General Public

Gérard Carrodano used to be an award-winning harpoon fisherman: he caught fish in the Mediterranean sea with his harpoon. Then his attitude changed and he changed from underwater hunter to guardian of the sea, who is now working for the species diversity in the Mediterranean. The film gives an insight into the working life of the "fish protector", who now catches the animals and sells them to aquariums and research institutes all over Europe, and also examines the question of whether or not a single person can actually make a difference in terms of marine protection.

Natural Science, Life Science & Technology

Title: ADHD: Not Just For Kids
Category: Natural Science, Life Science & Technology
Director: Michael McNamara
Produced by: Markham Street Films Inc. & The Canadian Broadcasting Corporation
Running Time: 44:00 min.
Country: Canada
Year: 2017
Age Guideline: University and General Public

ADHD, or Attention Deficit Hyperactivity Disorder, has long been regarded as a neurobiological syndrome affecting only children. Though not only children live undiscovered with this disorder, as even adults can experience the same. Especially women tend to ignore the symptoms – or they get wrongly diagnosed of suffering from "depression". In this film, adults tell how they didn't know what they suffered from, but who had to cope with typical ADHD difficulties. In addition, experts and researchers will provide insights into the current state of science, and the audience will learn how unrecognized ADHD can affect life.

Title: Amos, The Impossible Shot
Original Title: Capturer !'impossible
Category: Natural Science, Life Science & Technology
Director: Yonatan Nir, Dani Menkin
Produced by: Les Films d'Ici- Hey Jude Productions
Running Time: 52:10 min.
Country: France
Year: 2016
Age Guideline: University and General Public

Amos Nachoum is one of the greatest underwater photographers of all time: he already caught dangerous animals such as anacondas, leopard seals, white sharks, killer whales and crocodiles with his lens. The photographer always approaches the animals without protection. At the age of 65, Nachoum faces his last major challenge: he wants to swim with a polar bear without any barriers. The film accompanies him on his journey to the high arctic of Canada, which also awakens painful memories for the underwater photographer.

Title: Atome Sweet Home
Category: Natural Science, Life Science & Technology
Directors: Vincent Gaullier et Raphael Girardot
Produced by: Blanche Guichou
Running Time: 52:30 min.
Country: France
Year: 2015
Age Guideline: University and General Public

Synthetic biology, the construction of living matter from DNA and genes, will revolutionize science. Just as synthetic chemicals have changed the industry, a new form of synthetic science is about to influence the way people think about the living world. The series shows worldwide examples of how researchers intervene in evolutionary processes by changing genetic codes, thereby creating things that nature has not produced. From new possibilities of energy generation to completely new materials, synthetic biology can provide more efficiency, lower costs and less pollution – but all this has its price.

Title: Body Mechanics
Original Title: La mécanique des corps
Category: Natural Science, Life Science & Technology
Director: Matthieu Chatellier
Produced by: Alter Ego Production
Running Time: 78:28 min.
Country: France
Year: 2016
Age Guideline: University and General Public

The film accompanies women and men who have recently lost limbs through amputation. They train in a rehabilitation center with the aim of regaining their independence. They are supported by a medical team, which is primarily concerned with ensuring that women and men can be left alone by means of ingenious mechanisms, which must precisely fill those gaps that are felt by those affected by the amputation.

Title: Brave New World – How Silicon Valley is Shaping our Future
Original Title: Schöne neue Welt – Wie Silicon Valley unsere Zukunft bestimmt
Category: Natural Science, Life Science & Technology
[Festival Theme 2017: Anthropocene – Welcome to the Human Age]
Directors: Angela Andersen, Claus Kleber
Produced by: ECO Media TV-Produktion GmbH im Auftrag des ZDF
Running Time: 60:00 min.
Country: Germany
Year: 2016
Age Guideline: University and General Public

The term Silicon Valley stands for economic miracle, digital revolution and the creation of ingenius inventions and success stories. Facebook, Google & Co. are conquering new lifestyles and areas of research from Silicon Valley with billions of investment money. In the 60-minute documentary, Angela Andersen and Claus Kleber summarize the many-faceted phenomenon: viewers learn about concepts and meet industry pioneers, and they also learn how the future of people is determined in Silicon Valley – and how important it is to keep informed about this rural valley and the ideas that emerge there.

Title: Budapest Inferno
Category: Natural Science, Life Science & Technology
Director: Balazs Lerner & Gergely Balazs
Produced by: Filmjungle
Running Time: 50:34 min.
Country: Hungary
Year: 2017
Age Guideline: University and General Public

Life on earth is fed by sunlight – but there is also life in the dark, for example in caves. The film shows how cave divers and biologists have discovered hitherto unknown species in the Monas-Janos cave below Budapest, the picturesque capital of Hungary. "Budapest Inferno" illuminates the underground wonders of the city and explains the deepest secrets of evolution. However, the largest underwater cave in Europe still contains more surprises.

Title: Bug Technology
Category: Natural Science, Life Science & Technology
Director: Kenichi Sugawara
Produced by: NHK in association with NHK ENTERPRISES
Running Time: 48:00 min.
Country: Japan
Year: 2016
Age Guideline: Secondary School (12 - 16)

The amazing abilities of insects inspire researchers to ever new developments. For example, the idea of "pain-free needles" is based on the principle of a mosquito spike. And the structure of dragonfly wings was the basis for an effective wind power generator. Their special abilities helped insects to survive on Earth for 400 million years. Modern science decodes these animal technologies using 4K shots, macro pictures, and high-speed cameras to take advantage of them for new human development.

Title: Children of the Sun – Wild Bees
Original Title: Biene Majas wilde Schwestern
Category: Natural Science, Life Science & Technology
Director: Jan Haft
Produced by: nautilusfilm GmbH – Natural History Germany
Running Time: 44:00 min.
Country: Germany
Year: 2016
Age Guideline: Secondary School (12-16)

When most people think of bees, they are thinking about honey bees. Less known is the incredible diversity of native wild bees and their amazing adaptability to the most varied habitats and conditions. The film provides an informative and interesting insight into the realm of the maiden sisters of the honey bee, whose behavior and lifestyle are as diverse as their appearance, size and habitats. Some wild bees are as diligent as their reputation, while others on the other hand are burglars or animal killers.

Title: Connected Seeds
Category: Natural Science, Life Science & Technology
Director: Donna Lipowitz
Produced by: Donna Lipowitz
Running Time: 26:35 min.
Country: United Kingdom
Year: 2017
Age Guideline: University and General Public

A group of computer scientists from the Queen Mary University in London is responsible for a research project that collects information about seeds: seeds, plants, their properties, growth and susceptibility are observed and recorded by the participants. The idea of the project is to use the new technique to collect experiences and data to create a seed library that helps gardeners to protect and save their seeds.

Title: David Attenborough´s Light on Earth
Category: Natural Science, Life Science & Technology
Directors: Joe Loncraine, Producer: Martin Dohrn & Joe Loncraine
Produced by: A TERRA MATER FACTUAL STUDIOS/ AMMONITE FILMS production in co-production with CURIOSITYSTREAM in association with BBC UKTV and ABC Australia
Running Time: 51:29 min.
Country: Austria
Year: 2016
Age Guideline: Secondary School (12 - 16)

Bioluminescence is the light of creatures: whether a firefly or a luminous plankton in the sea, which provides a true light show during movement: the magic glittering, the flashing and the radiance makes the night sparkle. Nature film icon Sir David

Attenborough takes the viewers on a journey into a previously unexplored, mysterious empire and explains how living creatures "switch on" their own light and why they do it. Attenborough and a team of world-leading scientists describe the realm of living light as a world that is quite different from our own – and incredibly fascinating.

Title: Evolving AI: Blessing or Curse?
Category: Natural Science, Life Science & Technology
Director: Akihiko Nakai, Kei Uematsu
Produced by: NHK
Running Time: 49:00 min.
Country: Japan
Year: 2016
Age Guideline: University and General Public

In Spring 2016, an artificial intelligence developed by Google (Artifical Intelligence = AI) was better than a South Korean world champion in a particularly complicated strategic board game. In a detailed interview, Demis Hassabis, developer of the Google DeepMind AlphaGo program, explains to what extent human intuition and creativity are involved in the creation of artificial intelligence. The program shows various AI areas, such as the use in medicine or even research attempts to connect human feelings and artificial intelligence – and what that can mean for the future.

Title: Exoskeletons and Cobots
Original Title: Exoskelette und Cobots
Category: Natural Science, Life Science & Technology
Directors: Carolin Conrady
Produced by: Galileo, ProSiebensat1 TV Deutschland
Running Time: 14:00 min.
Country: Germany
Year: 2016
Age Guideline: Secondary School (12 - 16)

The journalist Carolin Conrady follows the symbiosis of man and machine. In Japan, she tries out the latest developments in the field of exoskeletons and describes how it feels to move in them. In Kyoto, she tests the prototype of the so-called "Ninja". The support suit impresses with its potential abilities, but its development is still in its infancy – which is clearly noticeable when worn. When visiting a technology company, Conrady meets the manufacturers of other so called Cobots. She tests cobots, which are already used today on selected construction sites and in logistics.

Title: Giraffe – Up High and Personal
Category: Natural Science, Life Science & Technology
Directors: Herbert Ostwald
Produced by: A Terra Mater Factual Studios Production in Co-Production with National Geographic Channel
Running Time: 50:02 min.
Country: Austria
Year: 2015
Age Guideline: Secondary School (12 - 16)

With their long legs, long neck and big eyes, giraffes are true beauties of the African savannah. The gentle giants not only have an extraordinary appearance, but also a distinctive behavior with hardly known social structures. The film takes the viewers into the savannah of Kenya, South Africa and the Namibian desert and presents the animals with amazing camera shots and never before seen material from an exciting, fresh angle.

Title: Golden Genes
Original Title: Goldene Gene
Category: Natural Science, Life Science & Technology
Directors: Wolfgang Konrad, Ursula Hansbauer, Clemens Stachel
Produced by: LucFilm
Running Time: 90:00 min.
Country: Austria
Year: 2016
Age Guideline: University and General Public

Genes and the information contained in them enable researchers in modern biobanks to travel on a journey of time and at the same time through dreams of the future. With data from plants, stem cells from animals and even drops of human blood, they can reconstruct the order of nature and work to revive extinct animal species aswell as getting rid of world hunger or fatal diseases.

The film accompanies an expedition that compiles one of the largest and oldest archives of life and also the most modern biobanks and explains the importance of the genes.

Title: Gravitational Waves
Original Title: Gravitationswellen
Category: Natural Science, Life Science & Technology
Directors: Lindau Nobel Laureate Meetings, Matthias Bazyli, Anderthalb Medien
Produced by: Anderthalb Medien
Running Time: 10:03 min.
Country: Germany
Year: 2016
Age Guideline: University and General Public

The famous physicist Albert Einstein during his time suspected that there are gravitational waves. However, he could not prove their existence until his death in 1955. This was only achieved by researchers in 2016 - a breakthrough in the history of science. For non-physicists, the short film also explains the phenomenon of gravitational waves which, like an earthquake, shake the structure of the cosmos and distort space-time.

Title: Grey Matter – Is Fat Bad for our Health or is it Not?
Category: Natural Science, Life Science & Technology
Director: Patrice Goldberg
Produced by: RTBF
Running Time: 25:40 min.
Country: Belgium
Year: 2015
Age Guideline: University and General Public

Anaïs and Elisa live in a residential community. The two cunning young people talk about nutrition - and specifically about the topic of "fat". Although many people like to eat, they do not want it to show in their stomach or hip. But how dangerous and unhealthy is fat really, should you avoid it or is it not as bad as most people believe? These questions are answered by Anaïs and Elisa, partly through use of an experiment.

Title: Handshake with an Astronaut
Original Title: Handschlag mit dem Astronauten
Category: Natural Science, Life Science & Technology
Directors: Stefan Geier
Produced by: Bayerischer Rundfunk
Running Time: 13:00 min.
Country: Germany
Year: 2016
Age Guideline: Secondary School (12 - 16)

A man on earth shakes the hand of a cosmonaut, who is on the International Space Station ISS, using a so-called feedback connection. An experiment conducted at the German Aerospace Center in southern Germany shows that this kind of contact actually works. The humanoid robot "Space Justin" mediated so that the cosmonaut felt the pressure of the earth through the force feedback. The viewers experience the impressive experiment thanks to a 360-degree video with an Youtube app for mobile devices and a virtual reality application.

Title: Hugh Herr: Biomechatronic Leg Joints
Original Title: Hugh Herr: Bionische Beinprothesen
Category: Natural Science, Life Science & Technology
Directors: Anke Rau
Produced by: Bilderfest
Running Time: 8:41 min.
Country: Germany
Year: 2016
Age Guideline: University and General Public

As a teenager, the passionate climber Hugh Herr lost his legs due to a frostbite after having been stuck in a snow storm for several days together with a friend. The American, however, uses his own fate of amputation and develops breakthrough bionic knee and ankle prostheses that imitate natural movements perfectly. The "bionic knees" can allow thousands of leg-amputees to live without mobility constraints. For his development, Herr was nominated for the European Inventor Award 2016 in the "Non-European Countries" category – the European Patent Office's Prize for inventors.

Title: Life behind the Stars
Category: Natural Science, Life Science & Technology
Directors: Daniel Vega
Produced by: 291 Science Films
Running Time: 51:40 min.
Country: The Netherlands
Year: 2016
Age Guideline: University and General Public

Atoms, which have originated in stars, make up what surrounds humans: animals, air, water – all this consists of atoms. One can say that the world is made of star material. The role the stars play, however, does not stop with the globe: researchers believe that stars can also create, develop and also extinguish life throughout the universe. The film follows a non-visible natural phenomenon and illuminates the cosmic radiation. In the search for a connection between life and the most distant stars, astronomy meets with particle physics and biology.

Title: Life of the Caddis
Original Title: Żywot Chruścika
Category: Natural Science, Life Science & Technology
Director: Zbigniew Baczyński, Monika Zawadzka
Produced by: Wytwórnia Filmów Oświatowych (Educational Film Studio in Lodz, Poland)
Running Time: 81:00 min.
Country: Poland
Year: 2017
Age Guideline: University and General Public

Caddies flies, less colorful relatives of butterflies, are among the most extraordinary creatures on Earth. The larvae of the caddies flies live in rivers, streams and lakes and have a special ability: they spit out a silk-like material that they use to glue stones and sand together to build a protective cover. Caddies flies are also considered natural indicators that a water is clean. Thanks to a sensitive camera the film is able to dive into the secret and unknown world of caddies flies – animals of incredible but also fragile beauty.

Title: Migrating Birds – Scouts of Distant Worlds
Original Title: Zugvögel – Kundschafter in fremden Welten
Category: Natural Science, Life Science & Technology
Directors: Petra Hofer and Freddie Rockenhaus
Produced by: colourFIELD
Running Time: 89:00 min.
Country: Germany
Year: 2016
Age Guideline: University and General Public

Every year billions of birds die on their migration routes. They starve, die of thirst, are killed by exhaustion or environmental poisons, by enemies, by winds or by power lines. Nevertheless, their migration has been anchored for generations; Year after year, the animals take the hardships and dangers of a long flight. The film shows the voyages of migratory birds with breathtaking aerial photography: from the Arctic to Africa, from Siberia to Serengeti. It explains how the animals orientate themselves and how, for example, a young stork finds the way to Africa even though he has never been there.

Title: Nature Wonder Land – Rear End Defense: Wombat, Australia
Category: Natural Science, Life Science & Technology
Director: Kazunori Watanabe
Produced by: NHK in Association with NHK ENTERPRISES
Running Time: 24:00 min.
Country: Japan
Year: 2015
Age Guideline: Secondary School (12 - 16)

Wombats live in Australia. The fluffy animals look harmless and cute – almost like cuddly stuffed animals, but they are real power houses that use their strong hind legs to defend themselves. If another animal threatens a wombat in its den, the latter uses its back to crush the skull of its opponent. The film takes the viewers into the world of wombats. Thanks to a snake-like robot camera, even extraordinary shots from a wombat cave and images of a battle can be seen.

Title: Ninjaboys – Quest for the Cosmic Front: Friends in the Solar System
Category: Natural Science, Life Science & Technology
Director: Haruna Kimura, Aki Serizawa
Produced by: NHK in association with NHK ENTERPRISES
Running Time: 25:00 min.
Country: Japan
Year: 2016
Age Guideline: Secondary School (12 - 16)

Rantaro, Kirimaru and Shinbei are the "Ninjaboys" – they learn at the Ninja school to become first class ninjas. Together they experience exciting space adventures. In this episode of the Japanese animation series, Happosai, leader of another Ninja group, is hit by a shooting star during a theft attempt. Happosai becomes an astronomical genius who, together with the ninja boys, leaves the Earth and travels to the sun, the source of all energy, to Mars, Jupiter and Pluto: always in search of life beyond the Earth.

Title: Ocean Heroines
Category: Natural Science, Life Science & Technology
Directors: Alexandra Sorgenicht
Produced by: Gruppe5 Filmproduktion, ZDF/ARTE
Running Time: 52:00 min. x 2
Country: Germany
Year: 2016
Age Guideline: Secondary School (12 - 16)

The documentary series "Ocean Heroines" portrays six women, who have dedicated themselves to the protection of the world's oceans as outstanding female scientists. In remote and sometimes very wild workplaces around the world, they are concerned with exploring and protecting the important cornerstones of the ecosystem. This includes the White Shark at the top of the food chain as well as tiny phytoplankton, which is the main source of oxygen supply. In between there are huge humpback whales, fragile corals and promising bacteria in the deep sea. Each of these creatures is important to preserve the oceans - and the ocean heroines support this.

Title: Once Upon a Time: The Amazing Adventures of Rosetta and Philae
Category: Natural Science, Life Science & Technology
Directors: A collaboration between European Space Agency and Design & Data GmbH
Produced by: European Space Agency
Running Time: 24:42 min.
Country: European Space Agency (Intergovernmental Organisation with 22 Member States)
Year: 2016
Age Guideline: Secondary School (12 - 16)

The animation film is based on a comic series, which should provide more attention for the Rosetta comet mission of the European Space Agency. Two anthropomorphic characters depict the Rosetta probe and the Philae-Lander in the film, and tell the story of this comet mission, the scientific objectives and the technical prerequisites for a ten-year journey through the solar system until their goal is reached.

Title: The Brain and I
Original Title: El cerebro y Yo
Category: Natural Science, Life Science & Technology
Director: Luis Hassan
Produced by: La brújula for Encuentro
Running Time: 27:26 min.
Country: Argentina
Year: 2015
Age Guideline: University and General Public

The two neuroscientists Diego Golombek and Mariano Sigman provide the viewers with the understanding of one of the most complex structures in the universe – the brain – in an informative and appealing way. All thoughts, movements and abilities, simple and extremely complicated actions, as well as all sensory perception spring from this incredible organ. The whole thing is presented with varied exercises and practical exercises and tests so that it is very easy to understand how the human think-tank and control system works.

Title: The Measurement of Feelings
Original Title: Die Vermessung der Gefühle
Category: Natural Science, Life Science & Technology
Directors: Luise Wagner
Produced by: doc.station
Running Time: 52:05 min.
Country: Germany
Year: 2015
Age Guideline: University and General Public

Virtual therapists help psychologists diagnose depression and traumas. Robots with empathic skills assist teachers during lessons. Data glasses transmit in real-time how the wearer feels at the moment. But how do these machines decode emotions and how does this differ from human skills? The documentation shows how scientists around the world work to make emotions technically readable. They measure facial expressions, language and gestures and create avatars that can react to real people and interpret and even influence feelings.

Title: The Quest for the Perfect Athlete
Original Title: A la recherche du sportif parfait
Category: Natural Science, Life Science & Technology
Director: Benoit Laborde
Produced by: French Connection Films, Amopix, Codex Now, Arte France
Running Time: 52:00 min.
Country: France
Year: 2015
Age Guideline: University and General Public

The performances of athletes have evolved considerably over the last twenty years. Highly trained and built to be winning machines, certain champions intrigue neuroscientists with their exceptional talent. Now thanks to new technology and new experimental protocols, scientists finally have the tools to understand just what hides behind this talent.

Title: The Singing Ape – Gibbon
Category: Natural Science, Life Science & Technology
Director: Pyeongsoon Choi
Produced by: Korea Educational Broadcasting System
Running Time: 49:09 min.
Country: South Korea
Year: 2017
Age Guideline: Secondary School (12 - 16)

Gibbons (Hylobatidae) are the apes whose behavior and characteristics are most similar to those of humans – for example, their social structure is based on monogamy. Gibbons are also the only ape species that can even sing and communicate through songs. The film presents the lifeworld of the threatened and quite unknown Asian gibbons. The animals are difficult to film as they live high up in the trees in Southeast Asian countries like Thailand and Indonesia and they are moving fast. This documentary not only shows five of the 18 known Gibbon species for the first time, but also how different their songs are.

Title: The Story of the Fox Who Lost His Mind
Original Title: Die Geschichte vom Fuchs, der den Verstand verlor
Category: Natural Science, Life Science & Technology
Directors: Christsian Asmussen, Matthias Bruhn
Produced by: TrickStudio Lutterbeck GmbH, Film- und Medienstiftung NRW, BKM, Kuratorium junger deutscher Film, FFA
Running Time: 11:10 min.
Country: Germany
Year: 2015
Age Guideline: Primary School (9-11)

The animation film "The Story of the Fox, Who Lost his Mind" tells the story of a sly fox who can look back on a long and exciting life in a very poetic way – but now the fox becomes forgetful. However, this impairment also opens up new possibilities for him. A film that approaches the elderly, dementia and even the cohabitation of different generations in an extraordinary way.

Title: The Wonder of Puberty – The Science behind the Wild Years
Original Title: Wunder Pubertät – Die Wissenschaft der wilden Jahre
Category: Natural Science, Life Science & Technology
Directors: Judith König
Produced by: a & o büro
Running Time: 52:02 min.
Country: Germany
Year: 2016
Age Guideline: Secondary School (12 - 16)

During puberty the brain is a large construction site: little used connections are dissolved and recombined. The prefrontal brain, responsible for the control of the feelings, is difficult to access due to the permanent renovation work – this provides for rapid changes from anger to crying. The body also changes drastically. While children learn basic skills during their first years, they develop their full potential only after puberty. The film shows this world of change with scientific insights and imaginative pictures.

Title: What Makes Us Human: Learning from Chimpanzees
Category: Natural Science, Life Science & Technology
Director: Miho Nakamura
Produced by: NHK in Association with NHK ENTERPRISES and ANC Productions
Running Time: 52:00 min.
Country: Japan
Year: 2016
Age Guideline: University and General Public

Since 1978, Dr. Tetsuro Matsuzawa from the Institute for Primate Research at Kyoto University has been researching what makes humans different from their next living animal relative, the chimpanzee. Within the framework of the 38-year-old "Ai Project", chimpanzee "Ai" learned concepts and math problems. Astonishingly: Ais son Ayumu could notice many things much faster than humans. That inspired scientist Matsuzawa to find out which skills humans have lost during the course of evolution and which they have developed further. And also whether chimpanzees are helpful to one another or not, if this willingness to help is necessary on the basis of an imaginary situation.

Title: Zapata's Science
Original Title: Ciencia Zapata
Category: Natural Science, Life Science & Technology
Director: Pablo Accame
Produced by: Pakapaka
Running Time: 14:53 min.
Country: Argentina
Year: 2016
Age Guideline: Secondary School (12 - 16)

The young scientist Sofía and her little brother Zapata, a fan of the supernatural who is always waiting to prove that there is extraterrestrial life, are at the center of this Argentinian animation series. The two siblings solve problems together and face challenges that have arisen through their archrival Dr. No, a scientist who only uses science to his own advantage.

Title: Zero Gravity – Mission in Space
Category: Natural Science, Life Science & Technology
Directors: Jürgen Hansen
Produced by: La Vingt-Cinquième Heure, Prospect TV
Running Time: 55:00 min.
Country: Germany
Year: 2016
Age Guideline: Secondary School (12 - 16)

The film accompanies two young astronauts on their first space mission: the Germans Alexander Gerst from the European Space Agency (ESA) and the American Reid Wiseman from NASA. For the first time in history, the audience has the opportunity to experience this whole journey. After five years of training, Gerst and Wiseman started their six-month mission to the International Space Station in May 2014. "Zero Gravity – Mission in Space" is a unique close-up of life in space and presents the viewers stunning images of the Earth.

Culture & History

Title: Gottfied Wilhelm Leibniz – The Last Universal Genius
Original Title: Gottfied Wilhelm Leibniz – Auf der Suche nach der Weltformel
Category: Culture & History
Directors: Holger Preusse
Produced by: Heidefilm GmbH, gefördert durch Nordmedia
Running Time: 52:00 min.
Country: Germany
Year: 2016
Age Guideline: University and General Public

November 2016 was the 300th anniversary of the death of Gottfried Wilhelm Leibniz. The German was a philosopher, mathematician, historian, diplomat, lawyer and much more. Leibniz is considered the ultimate universal genius. His discoveries and the revolutionization of the payment system have made computers, the Internet and social networks possible. The film takes a look at Leibniz and brings him back to the present with the help of his ideas and concepts.

Title: Great Human Odyssey
Category: Culture & History
Director: Niobe Thompson
Produced by: NOVA Production by Clearwater Documentary Inc. in association with CBC; A NOVA Production by Lawrence Klein Productions, LLC for WGBH Boston
Running Time: 116:46 min.
Country: United States of America
Year: 2016
Age Guideline: University and General Public

The ancestors of today's people, a few thousand hunters and collectors, once lived in Africa. From there they populated the whole Earth. The film portrays the great odyssey of the people of Africa, that traveled around the world, explaining how people developed skills and means to survive in almost every environment: how did the prehistoric ancestors cross the Sahara on foot, how did they endure ice ages, and how did they sail to remote Pacific islands? Unique insights into the life of today's Kalahari hunters, Siberian reindeer herders and Polynesian navigators help explain the amazing achievements of the ancestors.

Title: Iceman Reborn
Category: Culture & History
Director: Bonnie Brennan
Produced by: A NOVA Production by Bsquared Media for WGBH Boston in association with ARTE France
Running Time: 52:52 min.
Country: United States of America
Year: 2016
Age Guideline: University and General Public

Ötzi is the oldest known natural mummy. More than 5 000 years ago, Ötzi was attacked and killed in the Alps, with an arrowhead in his shoulder. Since the body has been optimally conserved in glacier ice, it offers ideal conditions for scientists, historians and archaeologists to gain new insights into human history. The mummy is kept protected in a strictly closed ice crypt. The documentation accompanies the artist and paleo sculptor Gary Staab, who creates a replica of the mummy with a 3-D printing process – with surprising findings from Ötzi's genetic code.

Title: Traces in Stone – The Story of the Swabian Alps
Original Title: Spuren im Stein – Die Geschichte der Schwabischen Alb
Category: Culture & History
Directors: Dirk Neumann
Produced by: Südwestrundfunk
Running Time: 90:00 min.
Country: Germany
Year: 2016
Age Guideline: University and General Public

The striking limestone cliffs of the Swabian Alps are a product of the sea. 200 million years ago between Tuttlingen and Ulm, only mussels, corals and other marine inhabitants were gathered here. Castles and monasteries were build on top of these limestone skeletons. Owls build their nests here and sometimes cave explorers explored the depths of the Swabian highlands. Well-preserved fossils appear in quarries. Even the cement for modern large-scale projects like "Stuttgart 21" comes from this age. The film explores how the soil has shaped the entire region over a thousand years and how fascinating the Swabian Alps are.

Non-Verbal & Science Shorts

Title: Devoted to Science
Original Title: Die Akribie des Forschens
Category: Non-Verbal & Science Shorts
Directors: Ron Jäger
Produced by: DEKRA Hochschule für Medien, REKLIM
Running Time: 6:45 min.
Country: Germany
Year: 2016
Age Guideline: University and General Public

The scientist Torsten Sachs leads a Helmholtz group at the Alfred Wegener Institute in Potsdam. The film "The meticulousness of Research" portrays the professor and his detailed work: Sachs deals with permafrost and climate change. He has already visited remote parts of the world, but he spends most of his working hours at the desk, where he analyzes diagrams and tables in which he depicts the visible ice masses of the Arctic and the gases enclosed.

Title: Rhinospider: An Operation in Three Acts
Category: Non-Verbal & Science Shorts
Directors: Luzi Katamay
Produced by: Art University Linz, Medical University Innsbruck, Las Gafas Films, Ars Electronica Center Linz, Anton Bruckner Private University and WTZ-West
Running Time: 11:27 min.
Country: Austria
Year: 2016
Age Guideline: University and General Public

The rhinospider is a patented invention that facilitates the orientation of complex surgery in the head area by means of a novel 3-D navigation system. The experimental film presents the method and the advantages in a very unusual and vivid way: scientific insights are clarified with an artistic dance performance. The film was created in close collaboration between the University of Art and Design Linz, the Medical University of Innsbruck, the Las-Gafas Filmteam, the Ars Electronica Center Linz and the private Anton Bruckner University.

Title: Catch
Category: Non-Verbal & Science Shorts
Director: Paul Cooke & Dom Rees-Roberts
Produced by: Stephen Overs (Borderpoint Films)
Running Time: 15:59 min.
Country: United Kingdom
Year: 2016
Age Guideline: University and General Public

The movie "Catch" tells the story of Tom and his daughter Amy, who have to live in quarantine inside their home during a deadly pandemic. A scenario like the one in the film, which plays in the near future, is already possible today, as can be shown by the experiences of doctors and scientists: Again and again they experience that previously reliable antibiotics do not achieve the desired effect anymore because of overuse and abuse. Leading scientists were involved in the script of "Catch".

Title: Drone in Greenland
Category: Non-Verbal & Science Shorts
Director: Guillaume Jouvet
Produced by: ETHZ
Running Time: 5:10 min.
Country: Switzerland
Year: 2017
Age Guideline: Secondary School (12 - 16)

The film shows how glaciologists use drones to monitor the calving – the breaking of large ice masses at the front of the tidal glacier. With aerial images created by drone flights, the scientists follow the movements of the ice masses and the formation of glacial clefts. This data is important to develop models that help to understand the process of ice breaking. The so-called calving is responsible for about half the mass loss of the Greenland ice sheet.

Title: Einstein-Rosen
Category: Non-Verbal & Science Shorts
Director: Olga Osorio
Produced by: Miss Movies
Running Time: 9:00 min.
Country: Spain
Year: 2016
Age Guideline: University and General Public

The short film "Einstein-Rosen" deals with wormholes. These are possible bridges in space-time, which allow for the theory of relativity. The film, a science fiction comedy is set in the summer of 1982. A young boy, Teo, claims he has found a wormhole. His brother Óscar does not believe him – at least at first.

Title: Extrapolate
Category: Non-Verbal & Science Shorts
Director: Johan Rijpma
Produced by: Johan Rijpma, Mondriaan Fonds, Japic
Running Time: 2:00 min.
Country: The Netherlands, Japan
Year: 2017
Age Guideline: University and General Public

This hand-drawn animation film starts with a hand dragging a pencil over a drawn grid to create a straight line. With this extrapolation, the "border crossing" of the straight line beyond the actual framework of the original grid, this process continues and forms the surrounding environment with the system, which is not foreseeable but nevertheless systematic for the viewers.

Title: (Not) Just A Touch
Category: Non-Verbal & Science Shorts
Director: Maria Lia Malandrino, Lev Tankelevitch, Cristiana Vagnoni
Produced by: Future Dog Studio
Running Time: 6:30 min.
Country: United Kingdom
Year: 2017
Age Guideline: University and General Public

Whether cold, hot, smooth, rough, soft or hard, people perceive the environment through feelings. But what exactly are these feelings actually, how do they come about, and how do they make it possible to feel and perceive the outside world? The film explains how the nerves in the human body, on the skin, and in the brain work together and how they translate, for example. the touch of a soft blanket into a perception. Every touch, however small, ensures that a perfectly matched orchestra of communicating neurons becomes active, so that this touch can actually be felt.

Title: Simulados
Category: Non-Verbal & Science Shorts
Director: Guillermo Marin & Fernando Cucchietti
Produced by: Barcelona Supercomputing Center
Running Time: 3:20 min.
Country: Spain
Year: 2016
Age Guideline: University and General Public

This documentary shows the life of a prehistoric virtual family. It can be seen how the family members try to cope and survive under very difficult and partly inhospitable conditions. This situation has not happened by chance: scientists have deliberately created it to use the virtual family as a research object.

Title: What do Scientists do?
Category: Non-Verbal & Science Shorts
Director: Helen Cammack
Produced by: Nash Vracas
Running Time: 5:31 min.
Country: United Kingdom
Year: 2015
Age Guideline: Secondary School (12 - 16)

How do scientists actually work – do they spend the whole day in the laboratory waiting to discover something special? The program presents the day-to-day work of scientists and researchers, and through the discovery of the Higgs Boson elementary particle as example, shows the scientific methodology they use as we learn why scientists are never completely sure.

Title:	WHAT WEEE ARE – WEEEdroponics
Category:	Non-Verbal & Science Shorts
Director:	Alessio De Marchi
Produced by:	Alessio De Marchi
Running Time:	4:43 min.
Country:	Italy
Year:	2016
Age Guideline:	Secondary School (12 - 16).

Technology has become an integral part of life: in every area of human everyday life, one or other kind of technology is present. It determines how people move, how they work, how they meet and communicate, how they love and what they eat. But all the technical innovations and devices do not have advantages only: The more technology is used, the more electronic waste there is. Humanity generates enormous amounts of technological waste.

Title:	Winds, Flying News
Original Title:	¡Vientos!, noticias que vuelan
Category:	Non-Verbal & Science Shorts
Director:	Elke Franke
Produced by:	Vientos TV
Running Time:	3:17 min.
Country:	Mexico
Year:	2016
Age Guideline:	Secondary School (12 - 16)

Even as a little girl, Luisa Fernanda was fascinated by the changes observed in nature, for example, how solids can liquefy. The more she saw, the greater her interest in science and technology became. With her imagination and devotion this young Mexican girl designed different devices and has now become an excellent researcher and advocate for science.

Enclosure No. 3 to DepEd Memorandum No. **176**, s. 2017)

List of Schools Implementing the Special Science Program (RSHS/STE/LSHS/SSES) which are Participating in the 2017 Science Film Festival

Region	**No. of Schools**	**Name of School**	**Division**
NCR	11 Elementary Schools and 29 Secondary Schools	Kalookan City HS	Caloocan City
		Caloocan City Science HS	Caloocan City
		Malabon NHS	Malabon City
		Ramon Magsaysay HS (Cubao)	Quezon City
		Quezon City Science HS (RSHS for NCR)	Quezon City
		Proj. 6 Elementary School	Quezon City
		Manila Science HS	Manila
		Ramon Magsaysay HS (Espana)	Manila
		Fernando Ma. Guerrero Elementary School	Manila
		Rizal HS	Pasig City
		Pasig City Science HS	Pasig City
		Muntinlupa NHS	Muntinlupa City
		Muntinlupa Science HS	Muntinlupa City
		Putatan Elementary School	Muntinlupa City
		Paranaque Science HS	Paranaque City
		Moonwalk National HS	Paranaque City
		San Antonio Elementary School	Paranaque City
		Pasay City West HS	Pasay City
		Pasay City Science HS	Pasay City
		Timoteo Paez Elementary School	Pasay City
		Las Pinas NHS	Las Pinas
		Las Pinas City National Science HS	Las Pinas
		Pitogo NHS	Makati City
		Makati Science HS	Makati City
		Francisco Benitez Elementary School	Makati City
		Neptali Gonzales HS	Mandaluyong City
		City of Mandaluyong Science HS	Mandaluyong City
		Dona Pilar Gonzaga Elementary School	Mandaluyong City
		Valenzuela NHS	Valenzuela City
		Valenzuela City School of Mathematics and Science	Valenzuela City
		Santiago De Guzman Elementary School	Valenzuela City
		Sta. Elena HS	Marikina City
		Marikina Science HS	Marikina City
		Marikina Elementary School	Marikina City
		Taguig Science HS	Taguig City
		Taguig Integrated School	Taguig City
		Taguig Elementary School	Taguig City
		Navotas National Science HS	Navotas
		Navotas Science High School	Navotas
		Bagumbayan Elementary School	Navotas
I	2 Elementary Schools and 3 Secondary Schools	Hilario Valdez Memorial Elementary School	Batac City
		San Fernando South Central Integrated School	San Fernando City
		Manaoag National HS	Pangasinan II
		Lussoc National High School	Ilocos Sur
		Dona Francisca Lacsamana Ortega MNHS (RSHS for Region I)	La Union

II	2 Elementary Schools and 3 Secondary Schools	Enrile North Central School	Cagayan
		Malabbac Elementary School	Cagayan
		Isabela National HS	City of Ilagan
		Nueva Vizcaya General Comprehensive HS	Nueva Vizcaya
		Regional Science High School for Region II	Isabela
III	2 Elementary Schools and 3 Secondary Schools	Engracio Castaneda Elementary School	Tarlac
		Zaragoza Central School	Nueva Ecija
		Angeles City High School	Angeles City
		City of San Jose Del Monte National Science HS	San Jose Del Monte City
		Regional Science High School for Region III	Olongapo City
IV-A	2 Elementary Schools and 3 Secondary Schools	Lemery Pilot Elementary School	Batangas Province
		Calamba Elementary School	Calamba City
		Quezon National High School	Quezon Province
		Pililia National High School	Rizal
		Regional Science High School for Region IV-A	Cavite
IV-B	2 Elementary Schools and 3 Secondary Schools	Alcantara Central Elementary School	Romblon
		Puerto Galera Central School	Oriental Mindoro
		Puerto Princesa City National Science HS	Puerto Princesa City
		Sablayan Comprehansive NHS	Occidental Mindoro
		Bansud National HS (RSHS for Reg. IV-B)	Oriental Mindoro
V	2 Elementary Schools and 3 Secondary Schools	Vinzons Pilot Elementary School	Camarines Norte
		Sorsogon East Central School	Sorsogon City
		Naga City Science High School	Naga City
		Aroroy National High School	Masbate
		Bicol Regional Science HS (RSHS)	Ligao City
VI	2 Elementary Schools and 3 Secondary Schools	Canuto B. Pefianco Sr. Elementary School	Antique
		Pavia Pilot Elementary School	Iloilo
		Tanque National High School	Roxas City
		Cabatuan National Comprehensive High School	Iloilo
		Aklan Science Development NHS (RSHS)	Aklan
VII	2 Elementary Schools and 3 Secondary Schools	Mandaue City Central School	Mandaue City
		North City Central School	Toledo City
		Jovencio N. Masong National High School	Bogo City
		Naga National HS	City of Naga
		Ocana National High School	Carcar City
VIII	2 Elementary Schools and 3 Secondary Schools	Tomas Oppus Central School	Southern Leyte
		Alang-alng I Central School	Leyte
		Calbiga National High School	Samar
		Pambujan National High School	Northern Samar
		Eastern Visayas Regional Science High School (RSHS for Region VIII)	Catbalogan City
IX	2 Elementary Schools and 3 Secondary Schools	Tawagan Norte Central ES	Zamboanga Del Sur
		Dapitan Central School	Dapitan City
		Don Pablo Lorenzo Memorial High School	Zamboanga Sibugay

		Zamboanga Del Norte National High School	Dipolog City
		Regional Science High School for Region IX	Zamboanga City
X	2 Elementary Schools and 3 Secondary Schools	Malingao Central School	Lanao Del Norte
		Iligan City East I Elementary School	Iligan City
		Ozamiz City National High School	Ozamis City
		Tangub City National High School	Tangub City
		Gusa National HS (RSHS for Region X)	Cagayan De Oro City
XI	2 Elementary Schools and 3 Secondary Schools	A. Villarica Central Elementary School	Samal City
		Sta. Ana Central Elementary School	Davao City
		Sto. Tomas National HS	Davao Del Norte
		Tagum City National High School	Tagum City
		Gov. Leopoldo Lopez Memorial SHS (RSHS for Reg. XI)	Mati City
XII	1 Elementary Schools and 4 Secondary Schools	Romana C. Acharon Central ES	Gen. Santos City
		Lebak Legislated National High School	Sultan Kudarat
		Matalam National High School	Cotabato Province
		Malungon National High School	Sarangani
		Alabel National SHS (RSHS for Region XII)	Sarangani City
CARAGA	2 Elementary Schools and 3 Secondary Schools	Agusan Del Sur Pilot Laboratory School	Bayugan City
		Nasipit Central Elementary School	Agusan del Norte
		Don Ruben E. Ecleo, Sr. Memorial National High School	Dinagat Island
		Unidad National High School	Surigao Del Sur
		Caraga Regional Science High School	Surigao City
NIR	2 Elementary Schools and 3 Secondary Schools	Cadiz West II Elementary School	Cadiz City
		Silay South Elementary School	Silay City
		Julio Ledesma National High School	San Carlos City
		Tabao National HS	Negros Occidental
		Ramon Teves Pastor MHS (RSHS for NIR)	Dumaguete City
CAR	2 Elementary Schools and 3 Secondary Schools	Baguio Central School	Baguio City
		Bulanao Central School	Tabuk City
		Mankayan National High School	Benguet
		Lawig National High School	Ifugao
		Cordillera Regional Science High School	Benguet
ARMM	3 Secondary Schools	Boloboc Science and Technology High School	Tawi-tawi
		Sultan Mangalampa Daing National High School	Lanao Del Sur II
		ARMM Regional Science High School-Amir Bera Lidasan National HS	Maguindanao

(Enclosure No. 4 to DepEd Memorandum No. **176**, s. 2017)

List of Schools Participating in the Opening of the 2017 Science Film Festival at 10:00 AM on November 6, 2017, IMAX Thater, SM North EDSA and Possible Schools for School Visit.

Division	**Name of School**	**No. of Students**	**No. of Teachers**	**No. of School Head**
Quezon City	San Francisco High School	37	2	1
Quezon City	Quezon City Science High School (RSHS for NCR)	37	2	1
Quezon City	Judge Juan Luna High School	37	2	1
Quezon City	Ernesto Rondon High School	37	2	1
Quezon City	Bago Bantay Elementary School	37	2	1
Caloocan City	Maria Clara High School	37	2	1
Caloocan City	Morning Breeze Elementary School	37	2	1

(Enclosure No. 5 to DepEd Memorandum No. **176**, s. 2017)

School Visitor Count Form

Date	Title of Science Film Screened	Number of Student-Viewers	Grade Level

(Enclosure No. 6 to DepEd Memorandum No. **176**, s. 2017)

Visitor Count Summary Form

Region: _____

Title of Science Film Screened	Date	Division	Grade Level	Number of Student Viewers