

EUROPEAN
EARLY
INNOVATORS
INITIATIVE

Youth for science, youth for business, science for business

BEST PRACTICE IN PROMOTING STEM

- PPP IN GERMANY

2018



www.early-innovators.eu



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City of Vienna

Introduction:

This presentation of Jugend Forscht is elaborated as a component of EEII report “STEM for Business”. The international team of EEII analyzed suitable programs in Germany, Italy and Austria. Current document shows objectives, structure and main procedures of the German best practice model. Major findings will be embedded in future European Early Innovators Program.

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This is not an official document of Jugend Forscht.

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jugend forscht

Wir fördern Talente.

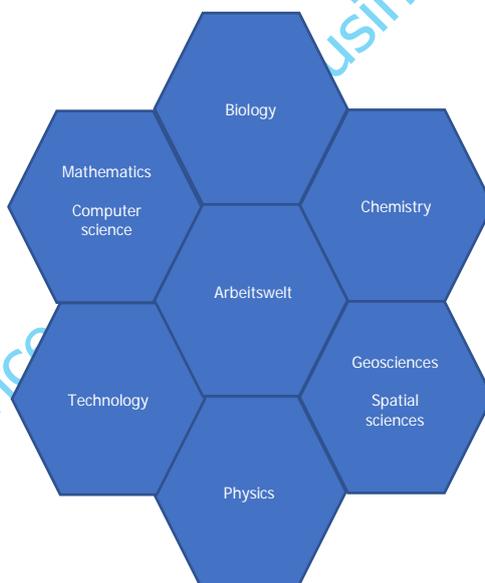
Objectives – Jugend forscht encourages and supports talented achievers in the areas of science, technology, engineering and mathematics (STEM). It seeks to inspire young people to become involved for the long term, and, after the contest, to help them with their careers.

The contest is organized on a decentralized basis and replicates the federal structure of the Federal Republic. It takes place on three levels. In February the participants compete in a regional contest. In March the winners can compete at the state level, and those who come out on top on this occasion qualify for the Federal Contest held in May. All in all there are over 110 contests annually.

It is supported by 5,000 teachers and 3,000 experts from business sector.

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* The range of possible topics at Jugend forscht is virtually unlimited. For example, young researchers can find solutions to problems from their everyday lives. The pupils, trainees and students are required to be creative and to look for an interesting question to which the answer includes work with scientific, technical or mathematical methods.

Projects presented in the competitions are stored in an on-line database which includes also type of prize that was won.

Age divisions:



Jugend forscht:	15 – 21 years
Schuller experimentieren:	4th grade till 14 years

Levels of competition:

FEBRUARY	Regional competition
MARCH/APRIL	Winners of regional competition qualify for state competitions
MAY	National competition (only jugend forscht age divion)

Contest deployment:

Each discipline has its own jury, which consists of experts from science, business and Jugend Forscht alumni. The jurors evaluate the projects consisting in:

Written	Practical	Oral
Description of the project	Design of the exhibition stand	Jury talk (presentation)

The judgment of the jury is binding and can not be revised; the legal process is excluded.

Prizes:

I. For participants to competition:

Well-reputed institutions offer the main prizes for each subject area as it follows:

Arbeitswelt	Federal Ministry of Labor and Social Affairs (BMAS)
Biology	Helmholtz Association of German Research Centers
Chemistry	German Fund for Chemical Industry
Geosciences & spatial sciences	Stern magazine
Mathematics & computer science	Fraunhofer-Gesellschaft for the Promotion of Applied Research e. V.
Physics	Max Planck Society
Technology	Association of German Engineers e. V.

Other prizes consist in:

a. Cash

Regional level	School research	Youth research	National winners
€ 75	€ 150	€ 250	€ 3000

b. Personalized prizes according to the subject of interest (e.g. renewable energies, raw materials);

*these prizes are offered by stakeholders (foundations, research organizations, businessman, etc);

c. Participation to other important international contests:



*most popular are: [EUCYS – EU contest for Young Scientists](#) and [ISEF – Intel International and Science Engineering Fair](#).

- d. Subscriptions to scientific and technical journals;
- e. Internships to several known research institutions.

II. For schools:

€ 1000 – for 3 schools at federal level that have had a special contribution to talent promotion

Ethics conduct (under the responsibility of the Competition Director):

When researching and experimenting - for example, with dangerous chemicals, technical equipment and electricity and laser - the appropriate safety regulations must be observed. In particular, projects which endanger participants or third parties are excluded from the competition. These include experiments with explosives, drugs or radioactive substances as well as self-experiments. In addition, is forbidden work which:

- Glorify violence;
- Develop or improve weapons;
- Deploy or explore military technology;
- involve a risk of injury to participants or third parties;
- is not created independently;
- is mainly based on the statistical evaluation of surveys
- Participation in the competition must not violate applicable law.

Research projects with animals and plants must strictly comply with the animal, nature and species protection laws in force in Germany.

Invitation to competition: If young researchers who are registered do not receive this letter and the invitation to the regional competition, they must immediately report to the competent national competition office of their federal state.

Patents:

Every year, Jugend forscht publishes a series of projects that describe patentable ideas. It is important to apply for a patent in good time prior to participation in the regional competition, as the presentation of a project in the competition is already considered as a publication. There exist guidance for patent application but no direct cost for patent is financed.

Financial support:

Is offered through Sponsorship pool and it is addressed to youth needing support in making the project possible (equipments, books, etc.) and for arranging the stand for contest. After the competition, the goods become school property. Application for sponsorship pool is done by contacting the project supervisor or subject teacher from school who guide the pupil student with application documents.



THE NETWORK: from star action to state action

Founding partners of *Stiftung Jugend forscht e. V.*

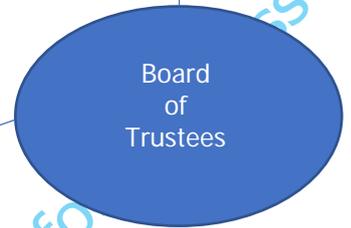
- Federal
- ministry of Education and Research
-

The Federal Government undertook to assume the basic funding of the competition office in the future. The Federal Minister of Education and Research is curator of the *Stiftung Jugend forscht e. V.* In addition, the Federal Chancellor and five other federal ministries donate heavily endowed special prizes at the national competition

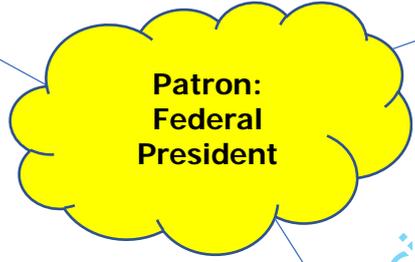
Ministries of Education from the 16 federal states

The standing conference of the Land Ministries of Education as well as the Ministries of the federal states are committed to support youth research. Also the Conference of the Ministries of Culture is committed to the "Jugend Forscht Schule" prize.

Stern magazine:
"We are looking for the scientists of tomorrow"



- Federal Ministry of Education and Research;
- Permanent Conference of the Ministers of Education of the Länder;
- **Stern Magazine;**
- Gruner + Jahr GmbH;
- German Trade Union Confederation;
- Federation of German Industries e. V.;
- German Association for the Promotion of Mathematical and Scientific Education e. V.;
- VDI Association of German Engineers e. V.;
- German Federal Foundation Environment
- one representative each from the Federal jury, the sponsor companies and the competition director.



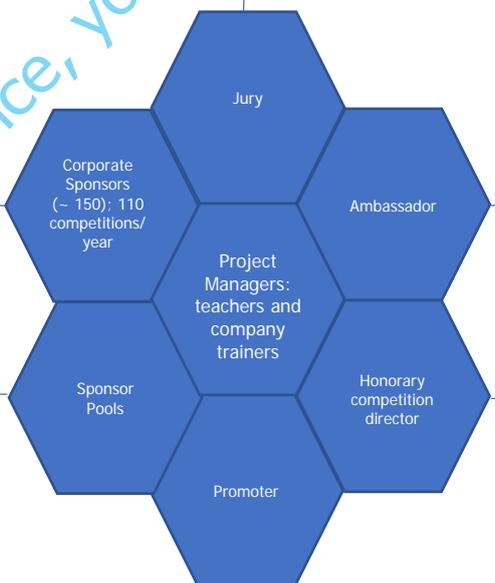
Each competition has its own jury composed from teachers, university professors, professionals from companies or even public institutions, who carry out their volunteer work for a maximum of 10 years. Among the jurors of all levels of competition is a number of former winners.

Companies through their contact person and not only are responsible for the entire organization and financing of their competition: set up the rooms and the stands, accommodation and catering (participants, jurors), organize the award ceremony, press and public relations. They work closely with the honorary leader of its competition, usually a full-time specialist teacher at a secondary school, being funded by the *Stiftung Jugend forscht e. V.*

Supported and appointed by the *Stiftung Jugend forscht e. V.*, ambassadors have gained experience in project management at *Jugend forscht* and are generally working full-time as subject teachers in the field of STEM at a secondary school. They are responsible of promoting the network in general.

Sponsor companies and donors are supervised by a volunteer sponsor pool administrators. After the competition, the subsidized equipment becomes the property of the school so that it can be used for further youth research.

Act like interface between sponsor companies, *Jugend forscht* office and local schools and teachers; lead the jury work; moderate the award ceremony; are contact persons for the press; maintain contact with the project supervisors; maintain relationships with the prize promoters; represent youth research at fairs and exhibitions. They are funded by the *Stiftung Jugend forscht e. V.* and are generally working full-time as subject teachers in the field of STEM at a secondary school.



Are the companies that sponsor at least 3 years the contest. There are 2 categories: premium and main conveyers.

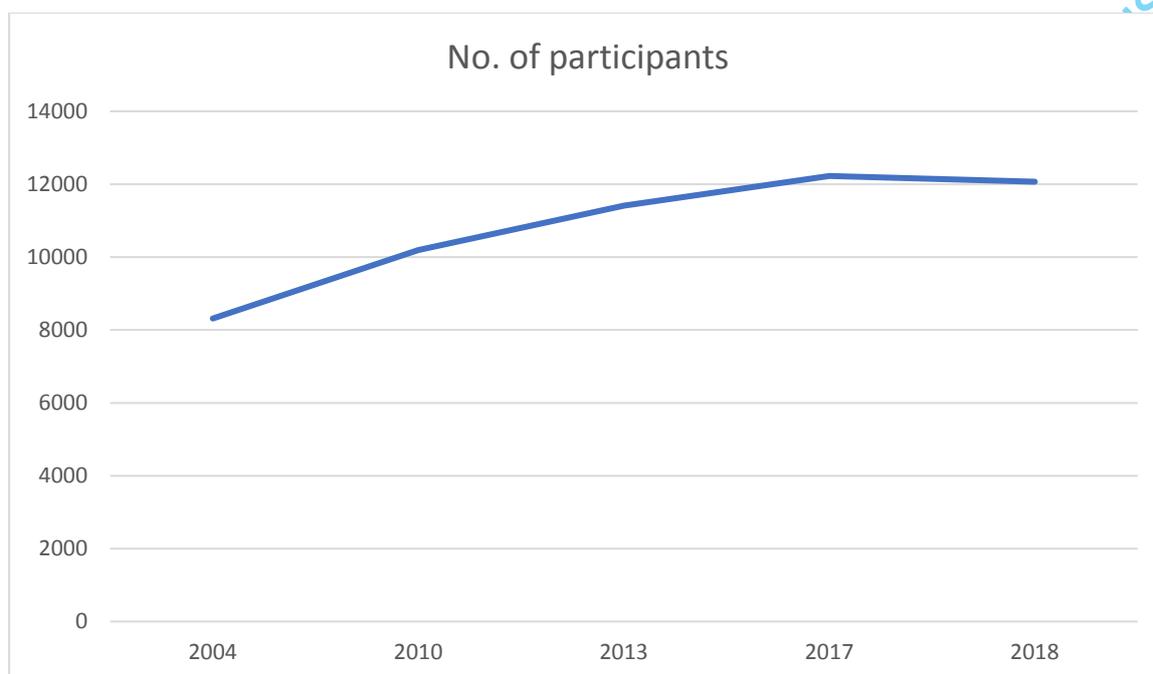


Besides the federal government, 250 partners are involved to:

- sponsor a competition;
- provide goods or services for hosting competitions;
- support selected projects or activities;
- donate prizes and other awards;
- directly promote the creation of competition projects through money or material.

Statistics:

Between 1966 – 2019, the total number of participants in Jugend Forscht: 284 966.



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business

