

EUROPEAN SCHOOL  
KARLSRUHE

*Primary & Secondary*

Challenge  
Programme



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And  
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# 1. Framework

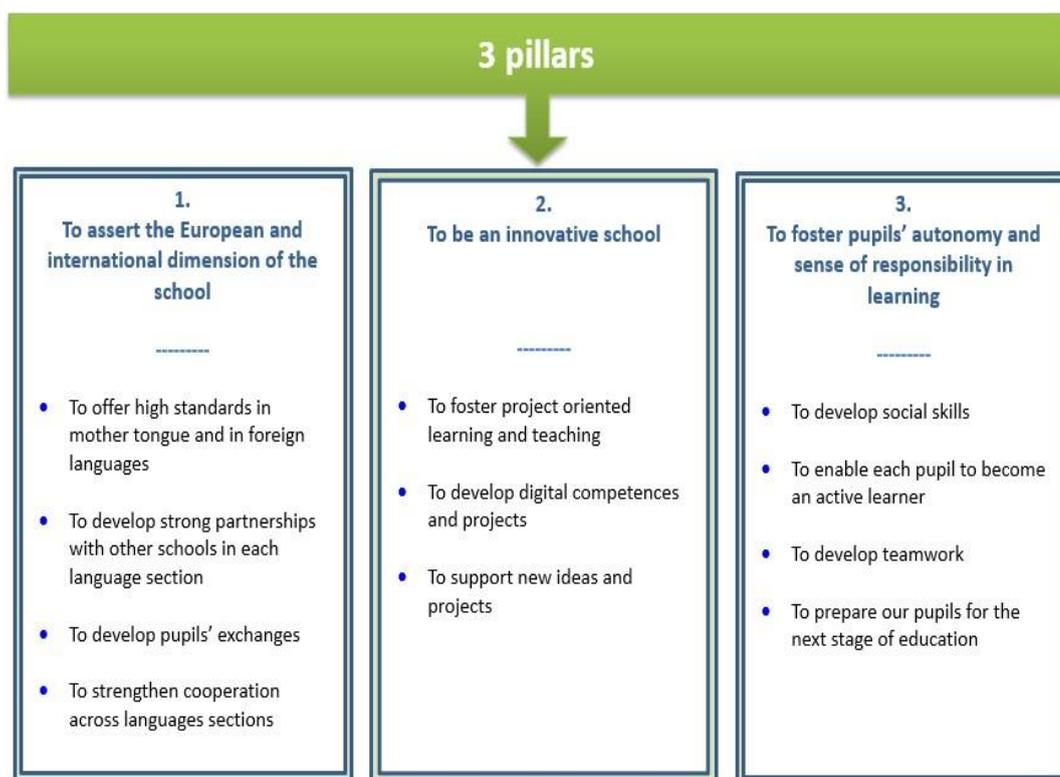
## 1.1. Context

### 1.1.1. Mission of the European School

The mission of the European School Karlsruhe is to provide, in a safe environment, a high-quality multilingual and multicultural education for Nursery, Primary and Secondary level pupils and to give each pupil the best possibilities to develop her/his individual personalities and potential based on key competences. Furthermore, the mission is to let the JRC-Karlsruhe, the Technology Region Karlsruhe and the Land Baden- Württemberg benefit from the presence of ESK.

### 1.1.2. Vision in teaching and learning of the European School Karlsruhe

A common vision in teaching and learning is developed in the School, based on 3 specific pillars (Ref. *Multi-Annual School Development Plan 2019-2021*):



### 1.1.3. Educational Support in the European School

In the European Schools, "different forms and levels of support are provided, designed to ensure appropriate help for pupils experiencing difficulties and having special educational needs at any point in their school career, to allow them to develop and progress according to their potential and to be successfully integrated" (*Policy on the Provision of Educational Support in the European Schools, Ref.: 2012-05-D-14-en-9*).

## 1.2. General aims of the Challenge Programme

Normal daily classroom differentiation should cater for all children, including those of higher ability. The challenge programme is an extension to what is already being provided by the class and subject teachers in our school.

The Challenge Programme is an opportunity for gifted but also talented and motivated pupils to develop their potential, through extra activities and projects. At the European School Karlsruhe, the *Challenge Programme* is a part of and funded by the Educational Support budget.

## 1.3. Organisational Principles

### **Pupil profile to attend the Challenge Programme:**

- Gifted or talented pupils/students
- High achievers
- Highly motivated pupils/students

### **The Challenge Programme consists of 3 Parts:**

- 1) Differentiated activities for these pupils in the classroom during the normal lessons
- 2) The general aims of the programme is to enhance the learning of gifted or talented pupils by developing some of their areas of talent/interest at the same time acknowledging and providing support for the specific areas children may have difficulties with. (social skills/ empathy, life skills/ autonomous learning and the need for ongoing pastoral care)
- 3) Extra lessons in specific areas are provided for the target pupils

### **Procedure:**

- Class teachers recommend pupils for the Challenge Programme extra lessons.
- An advisory group including the support coordinators decides upon the availability and participation. There are a limited number of places available. Available courses may change over time.
- The Director approves the proposal of the advisory group
- When the advisory group have finalised the pupil list, the parents of those children are informed about the opportunity (This is not an afterschool activity like those offered by the Parent's Association where parents register their child themselves)



## 2. Organisation and offer for 2021-2022

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### Differentiation:

Differentiation forms the basis of effective teaching. It is essential for all pupils, including those pupils requiring support. Differentiated teaching aimed at meeting all the pupils' needs is the responsibility of every teacher working in the European Schools and must be common classroom practice. Differentiated teaching ensures that in planning and delivering lessons, teachers are aware of and take into consideration the different learning styles and individual needs of all pupils.

(Ref.: 2012-05-D-14-en-9)

Differentiation is therefore the first and common response to stimulate and nurture talented and motivated pupils in both the primary and the secondary school.

### 2.1. PRIMARY SCHOOL

#### Existing Provision:

- **Visual arts:** Volksbank art competition, art gallery trips, art and drama EU hours groups
- **Music and dance:** High ability children in music and art are recommended to take extra outside lessons. Choir and EU dance groups during EU hours, various performances throughout school year, Christmas, Sommerfest, choir festival, harmonic tower performances
- **Sports:** Kinder marathon, athletics, swimming and basketball competitions
- **Creative and productive thinking/entrepreneurship/leadership:** Film club, newspaper, choir, class representatives
- **Mechanical Ingenuity/Logical Thinking/Maths/Scientific/ICT:** Robotics, film club, JRC Scientists yearly lessons in lab including experiments classes 1-5
- **Kangaroo maths, Matific** for ICT and maths

#### Challenge Programme Provision 2021/2022:

1. Mechanical Ingenuity/Programmation/Robotics/ICT:

The Challenge AG "RobotinX" is a specially designed Robotics program to provide more real-world and mathematical challenges in a fun-filled manner, this helps in accelerated learning and also feeds the curiosity for high-ability kids.

STEM/MINT education plays a key role in staying in-touch with the latest developments in industry. Gifted Education strategies makes a meaningful difference for high-ability kids

The approach:

- Accelerate learning to strengthen basics
- Provide hand-picked challenges to cater to the skill level and interest of children rather than "one-size-fits-all"
- Prepare the children to participate and represent the school at Robotic competition

The programme:

- Start with basics programming concepts and simple challenges
- Maze solving, decision making, recognize patterns in tasks and automate
- Use a simple programmable microcontroller
- Learn about various sensors – light/temperature/gesture/compass
- Use an entry-level Robot kit: DF Robot's Micro: Maqueen Robot
- Learn to handle movement, object/obstacle sensing and avoiding
- Running simulated robotics competitions to gear up to real competitions

Project leaders: Ms. Madappa and Mr Suryanarayana

## 2. MATHEMATICS IS EVERYWHERE:

Objectives:

- Developing a general and specific understanding of mathematical problem-solving strategies - with fun!
- From the concrete to the abstract: We grasp mathematical contexts and reflect on mathematics in contexts.

What do we do?

- Working on mathematical problem areas
- Brainstorming
- Preparation for mathematical competitions
- Mathematical excursions

How do we learn?

- Multimedia learning: With the help of various media such as games, written texts, stationary learning, learning materials and "nature", we act and understand, implement concretely and learn to abstract.

Project leader: Ms. Proppe

## 3. IPADS & NEW TECHNOLOGIES:

In the Challenge AG with the focus on "Discoveries, Inventions", the participating children deal with social, scientific, political, technical and historical phenomena. They research and investigate independently and according to their talents and abilities. In doing so, they use various digital and analogue media, which they are introduced to in a targeted manner. Their own approach and their above-average interest in topics of discovering the world are encouraged and supported. The aim of the workshop is that the course participants deal with themselves (ego presentation) and create a digital presentation of an invention/discovery and present it to a larger audience. From a pedagogical point of view, the development of social, cognitive and digital competence is promoted here.

Methods and resources:

- iMovie
- Cap Cut
- iBook (Book Creator)
- Power Point

Project leader: Ms. Braun



### Considerations:

- To avoid pupils not following the required subjects and lessons laid down in the general rules for the European schools, **the 3 extra lessons are scheduled on Wednesday afternoons.** (Outside of the regular timetabled lessons)
- **The target group are pupils in P3-P5**, but in rare and exceptional cases, pupils from P2 can be recommended by class teachers. The focus of the groups may change and/or additional groups created depending on our findings. A record of pupils participating in the extra lessons on Wednesday will be kept by the support coordinators.

## 2.2. SECONDARY SCHOOL

- **Cross-sectional, cross-disciplinary and age-related**
- **In the secondary school, pupils with special skills or those who are highly motivated can be supported by participating in the Challenge programme.**
- Beside the regular projects offered in the secondary school, such as the [European School Science Symposium](#), [Model European Council](#), [FAME](#), [EUROSPORT](#), [Model of United Nations](#), pupils will be able to participate in specific projects every semester for the Challenge programme. Important people in public life (journalists, artists, politicians, scientists ...) will be invited to our school for this purpose.

### New Provision 2020/2021:

- **Journalists' Club:**  
Students conduct interviews, make coverages, write reports, compile and publish an online school newspaper, produce radio shows.  
Project Leader: Ms. Menu.
- **ESK Podcasts:**  
An interdisciplinary project to create podcasts. Students develop podcasts based on various subjects they are interested in. Teachers can act as consultants for their subjects. The podcasts are published on the school websites and can be presented in lessons covering the topics of interest.  
Project Leader: Mr. Fastner
- **Theatre club for French speakers:**  
"Mise en scène des Fables de La Fontaine"  
Articulation, maîtrise de l'espace, du corps, de la voix, apprentissage d'un texte littéraire. Une représentation théâtrale est prévue en Mars 2022.  
Project Leader: Mr. Chevalier
- **Eine Welt für alle/One World for all, our ideas of a future living together in our one world**  
High-achieving and motivated pupils stand up for their values and develop dialogue about the ecological and social implications of our current lifestyle as well as action initiatives to implement in our school.  
Projects in collaboration with our partner school EPCM in Bujumbura and Gitega (Burundi).  
Project Leader: Ms. Oehm



- **Cuisine Moléculaire:**  
Apprendre à travailler avec rigueur et en équipe. Innover, inventer, imaginer et tester de nouvelles recettes de cuisine moléculaire. Projet multidisciplinaire (chimie, maths, informatique, cuisine...), avec la rédaction d'un livre de recette.  
Project Leader: Ms. Bach
- **Participation à des concours scientifiques:**  
Les élèves se forment à la démarche de projet, scientifique et pluridisciplinaire. Encouragés à se rapprocher des professionnels (scientifiques, ingénieurs, techniciens) les élèves font un premier pas vers les entreprises. Ils préparent poster, présentation orale, et participent à des concours scientifiques, Cgénéal France (Strasbourg) ou autres.  
Project Leader: Ms. Bach
- **Scientific Think Tank and Show:**  
A catalyst for all kinds of scientific interests and skills, with the desire to really dive in and explore a scientific question as starting point. A platform for opportunities such as meeting experts, the study of a topic outside the syllabus and the use of new skills.  
Project Leader: Mr. Muller
- **Fahrradwerkstatt/Bike Workshop:**  
Make a diagnosis and repair bikes, maintain the school bikes and produce a multilanguage handbook about bike maintenance and repair. Presence at Summer party.  
Project Leader: Mr. Viehmann
- **Maths challenge for S5 and S6:**  
Application and problem solving mathematics for those who want to investigate and think at a deeper level. Advanced statistical analysis, higher-level mathematics and more to create a portfolio and present the work to interested parents and staff.  
Project Leader: Mr. Rowlands
- **School Band:**  
Play, practice, record and perform rock songs. Learn about instrumental advanced techniques, sound techniques and the organization and production of professional recording and shows.  
Project Leaders: Mr. Escarate, Mr. Muller

