**Huaxia Gifted and Talented Prep Level 1**

**Aims:** To help students build up critical thinking, cognitive, logical and abstract thinking abilities such as problem solving, classifying and categorizing, recognizing patterns and sequencing, reasoning with shapes and figures, deductive and inductive reasoning, mathematical reasoning. By achieving these abilities, students will not only get well prepared for GT tests in your district, but also build up a solid foundation for academic excellence and success in any assessments.

**Contents:** Houston Huaxia Chinese school 2021 Spring Semester Sunday Gifted and Talented Prep Level 1 course is designed to provide students with the opportunity to study the main contents of a variety of tests used by the Greater Houston area to identify children for GT programs, including but not limited to COGAT, IOWA Assessments, OLSAT, and NNAT. Students will be trained in **Verbal reasoning, Quantitative reasoning and Non-verbal reasoning** which include **Pictorial reasoning (picture analogy, picture classification)** and **Figural reasoning (figure analogy, pattern completion, serial reasoning and spatial visualization)**.

**Students:**
1. K and 1st Graders (5 – 7 years old) who plan to take the screening tests for admission into the Gifted and Talented programs or highly-selective public school in Great Houston area.
2. K and 1st Graders who has already admitted into GT programs but still want to learn and build up strong critical thinking, cognitive, logical and abstract thinking ability.
3. K and 1st Graders who are in private school where no GT tests needed but want to learn and build up strong critical thinking, cognitive, logical and abstract thinking ability.

**Teacher:** Dr. Shu Feng (832-660-1759)  Email: shu.feng@houstonhuaxia.org  **Zoom Class Time:** Sunday 12:00PM -1:00PM, 01-10-2021 - 05-09-2021
Huaxia Gifted and Talented Prep Level -II

Aims: To help students build up critical thinking, cognitive, logical and abstract thinking abilities such as problem solving, classifying and categorizing, recognizing patterns and sequencing, reasoning with shapes and figures, deductive and inductive reasoning, mathematical reasoning. By achieving these abilities, students will not only get well prepared for GT tests in your district, but also build up a solid foundation for academic excellence and success in any assessments.

Contents: Houston Huaxia Chinese school 2021 Spring Semester Sunday Gifted and Talented Prep Level II course is designed to provide students with the opportunity to study the main contents of a variety of tests used by the Greater Houston area to identify children for GT programs, including but not limited to COGAT, IOWA Assessments, OLSAT, and NNAT. Students will be trained in Verbal reasoning, Quantitative reasoning and Non-verbal reasoning which include Pictorial reasoning (picture analogy, picture classification) and Figural reasoning (figure analogy, pattern completion, serial reasoning and spatial visualization).

Students: 1. 2nd and 3rd Graders (7 – 9 years old) who plan to take the GT screening tests for admission into the Gifted and Talented programs or highly-selective public school in Great Houston area.
2. 2nd and 3rd Graders who has already admitted into GT programs but still want to learn and build up strong critical thinking, cognitive, logical and abstract thinking ability.
3. 2nd and 3rd Graders who are in private school where no GT tests needed while want to learn and build up strong critical thinking, cognitive, logical and abstract thinking ability.

Teacher: Dr. Shu Feng (832-660-1759) Email: shu.feng@houstonhuaxia.org Zoom Class Time: Sunday 11:00AM -12:00PM, 01-10-2021 - 05-09-2021
Huaxia Math Enrichment Grade 1

Instructor: 冯树 博士

<table>
<thead>
<tr>
<th>Students</th>
<th>1st Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-requisites</td>
<td>Kindergarten Math</td>
</tr>
<tr>
<td>Prepare for</td>
<td>Huaxia Math Enrichment Grade 2</td>
</tr>
</tbody>
</table>

Huaxia Math Enrichment Grade 1 is designed to teach students mathematics on many fronts, including numbers and number sense, computation (addition, subtraction, multiplication and division), fractions, patterns, geometry shapes, money, measurement, time and simple graphs. Certain GT related content will be introduced to inspire student’s critical thinking. This course will help students to move away from counting objects to doing more mental math, understand math concepts, master basic operations, and develop a positive attitude towards math.

上课时间:
周六 11:00am-12:00pm
周日 1:00pm-2:00pm

- Recognize, describe and compare numbers.
- Develop addition and subtraction concepts and strategies.
- Understand place value.
- Add one and two-digit numbers in columns without and with regrouping.
- Subtract one and two-digit numbers in columns without and with regrouping.
- Solve addition and subtraction word problems.
- Recognize number patterns.
- Develop multiplication and division concepts.
- Measure length weigh with non-standard units and compare objects.
- Identify money and solve simple addition and subtraction problems involving money.
- Recognize time.
- Identify and compare plane and solid shapes.
- Describe fractional parts.
- Organize and represent data.
Huaxia Math Enrichment
2nd Grade

Instructor: 冯树 博士

Students | 2nd Grade
Pre-requisites | 1st Math
Prepare for | Huaxia Math Enrichment Grade 3

Description:

Huaxia Math Enrichment Grade 2 is designed to teach students mathematics on many different areas, including numbers and number sense, arithmetic operations (addition, subtraction, multiplication, and division), fractions, geometry (two-dimensional and three-dimensional shapes), measurement (length, weight, perimeter, area, and capacity), time, and data presentations. Certain GT related content will be involved to inspire student’s critical thinking. This course will help students to not only develop a positive attitude towards mathematics, but also build up a solid math foundation.

- Identify place value and compare numbers.
- Round numbers and define odd and even numbers.
- Add two- and multi-digit numbers without and with regrouping.
- Subtract two- and multi-digit numbers without and with regrouping.
- Apply addition and subtraction concepts and strategies to solve word problems.
- Identify and compare fractions.
- Develop multiplication and division concepts and strategies.
- Apply multiplication and division concepts and strategies to solve word problems.
- Identify patterns
- Tell time and identify relationships of time.
- Determine the value of money and solve word problems involving money.
- Understand Geometry and Spatial reasoning.
- Measure length, perimeter, area, weight, and capacity.
- Organize and use data with graphs.

上课时间：
周六 11:00am-12:00pm
周日 1:00pm-2:00pm
**Introduction of Instructor:** Ms. Li has a master’s degree on education and she is holding two Texas Standard Teaching Certificates, Core Subject (EC-6) and Chinese (EC-12). Ms. Li is very good at combining the American and Chinese pedagogies. Ms. Li has a very high expectation for her students. She loves using strong teaching strategies to engage her students and help them learn critically.

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### Saturday Classes

**Huaxia Math Enrichment 3rd Grade**

<table>
<thead>
<tr>
<th>Time</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00am–12:00pm</td>
<td><strong>Huaxia Math Enrichment 3rd Grade</strong></td>
</tr>
<tr>
<td>Students</td>
<td>3rd Grade</td>
</tr>
<tr>
<td>Pre-requisites</td>
<td>2nd Math</td>
</tr>
<tr>
<td>Prepare for</td>
<td>Huaxia Math Enrichment Grade 4</td>
</tr>
<tr>
<td>Workbooks</td>
<td>Primary Mathematics 3A, 3B</td>
</tr>
</tbody>
</table>

**Content:** Multiplication, division, measuring, fraction/ fraction addition and subtraction, time/ time addition and subtraction, simple geometry.

### Huaxia Math Enrichment 4th Grade

<table>
<thead>
<tr>
<th>Time</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00pm–1:00pm</td>
<td><strong>Huaxia Math Enrichment 4th Grade</strong></td>
</tr>
<tr>
<td>Students</td>
<td>4th Grade</td>
</tr>
<tr>
<td>Pre-requisites</td>
<td>3rd Math</td>
</tr>
<tr>
<td>Prepare for</td>
<td>Huaxia Math Enrichment Grade 5</td>
</tr>
<tr>
<td>Workbooks</td>
<td>Primary Mathematics 4A, 4B</td>
</tr>
</tbody>
</table>

**Content:** Decimal/decimal addition and subtraction, fraction and decimal, angle, decimal/multiplication and division, solid geometry.
Use “Specific Learning Tasks” to introduce basic mathematical Concepts and cultivate students’ ability to learn assessment and consolidation.

- Use “Concrete→Pictorial→Abstract Approach” to guide and develop children’s logical and critical thinking.
- Use “Modeling Method” to visualize and solve mathematic problems quickly and efficiently.

2020 Fall Huaxia Singapore Math Class  (Elementary 3rd, 4th Grade)

Teacher: Ms. Kong Hong

Target Students: 3rd, 4th Grade Elementary or younger

Schedule: Sunday

3rd Grade Class 11:00AM-12:00PM
4th Grade Class 12:00PM-01:00PM
Dr. Liu received her B.S in Physics from Peking University and Ph. D in Electrical Engineering from Duke University. She currently works as an AI engineer.

Instructor: 刘秋华博士

Course Syllabus
Pre-Algebra: Topics include the properties of arithmetic, exponents and exponent laws, primes and prime factorization, fractions, linear equations, inequalities, decimals, ratios, proportions, rates, percents, square roots, basic geometry, statistics, counting and probability.

基础代数，包括小学数学比赛的基本知识点: 四则运算的性质, 指数，分数，小数，百分比的运算和性质，比值问题，质数, 合数，单位换算，线性方程，不等式，平方根，基础几何, 基础统计及概率。

Target Students:
Advanced 4th and 5th grade students who just starts math contest.

开始参加小学数学竞赛的四五年级学生。

Course Descriptions & learning objectives:
This course will be focusing on prealgebra topics that appears in elementary school math contests, including mathleague, MOEMS, and TMSCA.

小学数学竞赛基础代数知识点。

Required Prerequisites
Regular Elementary school math

小学数学基本知识点

Required Text & Resources:
Book: AOPS Pre-Algebra
### 课程/Course: 心算速算

<table>
<thead>
<tr>
<th>学生/Students: Grade 4th-5th</th>
<th>老师/Teacher: 唐军平</th>
</tr>
</thead>
</table>

### 数学预备知识: 熟练记住乘法口诀。

### 课程说明/Course Description:

本课程训练学生将运算技能建立在对运算性质与规律的理解之上，如加法的同一律、交换律、结合律，乘法的交换律、结合律，分配律，括号的运用，从而熟练的掌握运算。特别帮助学生将9x9乘法表扩展到99x99乘法表，使得学生能够对两位数的运算进行心算速算。

### 加法

- 同一律 (Identity law) 及在加法中的运用；
- 互补数 (Complement numbers) 与交换律 (commutative law)；
- 交换律在加法中的运用；
- 数字重组与结合律 (associative law)；
- 结合律在加法中的运用；

#### 加法技能
- Addition skills_ adding complements first;
- Addition skills_ breaking apart a number;
- Addition skills_ picking a point of reference;
- Addition skills_ No carrying;
- Addition skills_ based on patterns;

### 减法

- Subtraction_Skills_0_Turn subtraction to addition;
- Subtraction_Skills_1_No borrowing
- Subtraction_Skills_5_by over-subtracting;
- Subtraction_Skills_6_by under-subtracting;
- Subtraction_Skills_7_subtracting from a power of 10;
- Introduction to 99 x 99 table;
- Multiplying by applying commutative rule;
- Multiplying by applying associative rule;
- Multiplying by applying distributive rule (break apart);
- Multiplying with no carrying;
- Multiplying with factors
- Multiplying by 11, 21, 31...;
- Multiplying by 9, 19, 29....
- Multiplying by multiples of 9
- Multiplying by multiples of 11
- Multiplying number which digits has multiplied relationship
- Multiplying same number (square)_5_Perfect square
- Multiplying same number (square)_6_Perfect square
- Multiplying same number (square)_7_Perfect square
- Multiplying same number (square)_8_Perfect square
- Multiplying same number (square)_9_Perfect square
- Multiplying same number (square) ending with 1
- Multiplying same number (square) ending with 9
- Multiplying numbers just under 100

### 教师介绍/About The Teacher: 唐军平 博士

Dr. Tang has background in Physics, Biophysics. He obtained his Ph. D in engineering from UT Austin。唐老师在华夏任教多年，是华夏基础数学老师。教学中认真负责，帮助孩子们把知识点掌握好，巩固住，为孩子们初中数学课的学习奠定了扎实的数学基础。
HuaXia Math Enrichment 5th Grade

Instructor: 唐军平 博士

Target Students: 5th to 6th grade

Required Prerequisites
Have knowledge of arithmetic operations (addition, subtraction, multiplication, and division) of natural and whole numbers, and some basic knowledge of fractions.

Course Descriptions / Learning Objectives
This course is designed to improve and enhance students’ understanding of signed numbers and fractions through systematic and complete study of relevant materials.

The following concepts and skills will be studied in this course:

1. Integers and number lines: comparison of integers; addition, subtraction of integers; multiplication and division of integers and sign rules.
2. Fractions: equivalent fraction, the simplest form; comparison of fractions; addition of fractions; subtraction of fractions; multiplication of fractions; division of fractions.
3. Concept of complex fractions and their operations.
4. Mixed numbers and concept of improper fractions; operations of mixed numbers.

Saturday、Sunday: 11:00am-12:30pm
Dr. Tang has background in Physics, Biophysics. He obtained his Ph. D in engineering from UT Austin.

Contents

Percents
1) Concept of percents
2) Converting fraction to percents
3) Converting decimals to percents
4) Converting percents to fractions or decimals
5) Operations of percents
   Word problems

Ratio, Rate, and Proportion
1) Concept of ratio
2) Concept of rate
3) Concept of proportion
4) Properties of proportion
Following CBE study guide, this course is designed for current 5th graders who are willing and academically prepared to accept the challenge of accelerating 6th grade math.

The course covers the following objectives.

Objective 1: Number Operations
Objective 2: Fraction and Decimal Operations
Objective 3: Ratios, Rates and Percentages
Objective 4: Integer Operations
Objective 5: Financial Literacy
Objective 6: Expressions, Equations, and Inequalities
Objective 7: Multiple Representations
Objective 8: Two-Dimensional Figures and Measurement
Objective 9: Data and Statistics