# 1y Math

Grades PreK~5 ▶ McGraw-Hill

McGraw-Hill My Math is giving you the rigor, personalization, and student engagement you and your students need to be successful with the Standards- and have fun while achieving that success! This completely re-imagined approach to elementary math learning is fully aligned with Standards and Mathematical Practices, so you can focus on what you love most: inspiring a love of learning.

Challenges and engages your students in a way that inspires them to embrace the power of mathematics through realworld applications and experience just how fun math success can be.





Students communicate mathematically by beginning each chapter with a handson content with visual vocabulary cards, Talk Math opportunities, and Dinah Zike's Foldables right in their own book.



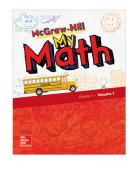
You can optimize, customize, individualize your classroom planning, presentations, and differentiated instruction for every student.



McGraw Hill My Math 系列是一套依據 「重視理解的課程設計 (UbD)」所編寫的課 程,帶給學生嚴謹、個人化以及趣味的豐富 數學課程。全套書籍與美國 CCSS 課綱緊密 連結,從手作活動中尋找數學答案,進而啟 發數字分析能力,培養學員對數學的熱愛。

- ▶ 挑戰與啟發學生:每個單元始於真實生活 中數學應用的挑戰任務,啟發學生對生活 數學的思考及解決問題的能力,並加入專 題式學習法,達到學以致用、快樂中學習 的目標。
- 使用數學概念溝通:以完成專題式學習學 為目標,每個章節都從實務操作開始,利 用單字卡、數學機智問答以及製作折頁卡 (Foldables) 將數學詞彙導入生活用詞, 加強學生對數學的應用。
- 您可以利用數位平台客製化個人教學步驟 以及課堂簡報,搭配教師手冊中完整教學 步驟、以及多樣化的差異性教學資源,為 每個學員打造專屬的學習路徑。

Grade 3 以上級數可與 ALEKS 搭配使用



Student Edition (2 volumes) Geometer's Sketchpad Visual Vocabulary Cards Interactive Guide Student Edition for ELL

- Online Student Edition eBooks
- Lesson Videos eActivities
- eAssessments

For teachers Teacher Edition Problem Solving Readers Interactive Guide for ELL Manipulative Kits Assessment Master

Online Teacher Edition

- eBooks
- Ready-to-go Lesson Plans
- Differentiated Instructions
- I esson videos & ePresentation
- · Hands-on Projects & eActivties
- Hundred of Resources
- · eAssessments &
- Assignments
   Professional Development



More Info

# **Arrive Math Booster**

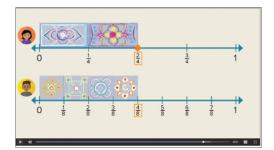
Grades K~8 ▶ McGraw-Hill

The Arrive Math Booster can be flexibly used to target any standard from kindergarten through eighth grade. This supplemental intervention program provides teachers with resources to meet every student at their level and provide the appropriate amount of support or challenge they need to be successful.

▶ With access to multiple grade-level of content in one subscription, teachers can easily integrate Arrive Math with any core program and select appropriate resources to support approaching-level students and extend on-level instruction to challenge gifted and talented students.



Teachers can easily assign a Take Another Look mini-lesson for individual students to complete during independent work time. Each student is supported with a three-part, gradual release activity that mitigates distraction and curbs potential frustration.



▶ Purposeful game play creates memorable learning experiences where students have fun and practice math with their peers. The Games Kit offers 54 unique, board or manipulative-based games that to build fluency of critical math skills.

Arrive Math Booster 是一套主題式數學 輔助教具箱;提供涵蓋 K-8 年級數學主題的 教學資源,供老師們選擇透過影片、線上練 習(可下載 PDF 檔)及桌遊,引發學生興趣、 進而強化數學能力。

- 涵蓋 8 大數學領域內容,方便教師依課綱 所需,進行主題式教學,並可依照學生程 度,分配適合個別學生難易度習題。
- ▶ 教師帳號可依個別學員程度及所需加強主 題,分配學習任務一簡單的 15 分鐘主題 學習,包含影片、習題演練以及遊戲應用, 讓每一位學員擁有個人化學習步調。
- ▶ 教具箱包含多達 54 種數學遊戲、完整的 教師手冊、桌遊和積木…等等,各種不同 玩法的主題任務,讓學生們於玩樂中達成 學習目的,使數學更有記憶點,成為學生 們最愛的科目。



Arrive Math Digital Account

- Lesson Videos
   Hands-on Activities
- eGames

### For teachers

Arrive Math Games Kit Arrive Math Digital Account

- Lessons Videos
   Hands-on Activities
- Printable Resources
- eGames



More Info







## **Reveal Math**

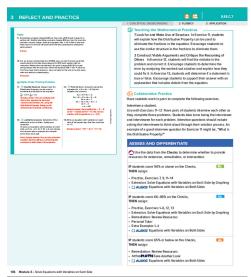
Grades 6~12 ▶ McGraw-Hill

Reveal Math, a G6-12 core program, empowers educators to uncover the mathematician in every student through powerful exploration, rich discourse, and timely insightful differentiation.

Math classes become exciting starting from here! Reveal Math supports both low-tech and high-tech classrooms. The blended print and digital instructional model captures the best of both modalities and brings them together in a seamless experience that makes math meaningful for your students.



In Reveal Math, the Teacher Edition centers around opportunities to promote mathematical discourse, collaboration, and a positive student mindset with student-centered instructional tools.



- Reveal Math empowers teachers with powerful tools to differentiate instruction and English language support, allowing teachers to deliver insightful instruction that reaches every learner.
- With the complete classroo solution of Reveal Math, Arrive Math Boost, and ALEKS, the needs of every student be met with engaging and targeted results.

Reveal Math 提供創新教學現場的可能性, 利用現象式學習法,啟發學生興趣,透過強 大的探索、豐富的論述和及時有見地的差異 化教學,讓數學變得更有趣。

- ▶ 紙本搭配線上平台資源,以達到現象式 學習的完美組合;除了紙本練習題,另有 線上資源,包含 Sketchpad、遊戲模式 和真實生活情境…等等,呈現多元教學, 讓每堂課數學課都充滿意義。
- ▶ 學生導向的教師手冊讓您跟學生有效溝 通,站在學生角度提供詳盡的解題技巧和 多樣化的練習題,協助學員打造正確的數 學觀念。
- 詳細的差異化教案搭配完整的教師資源, 提供老師利用不同的教學模式達到學習 成果。除此之外,教師手冊內的 ELL 的 語言輔助與 Language Development Handbook 讓非母語的學員也能享受數 學的樂趣。
- ▶ Reveal Math 可輕易的融入 ALEKS 和 Arrive Math Boost 兩個適性化資 源。利用同步化功能,將 Reveal Math Boost 的課綱彙整到 ALEKS 內,也可挑 選 Arrive Math 相對應的主題進行輔助 教學。(請詳見第 13、16 頁)



Student Edition (2 volumes) Language Development Handbook Student Edition

Student Digital Center

- Lesson videos • eBooks
- eActivities
- Web Sketchpad
- LearnSmart®(Adaptive Learning Tool)

### For teachers

Teacher Edition (2 volumes) Language Development Handbook Teacher Edition

Teacher Digital Center

- eBooks
- Ready-to-go Lesson Plans
- Differentiated Instructions • Lesson videos &
- ePresentation
- · Hands-on Projects & eActivties
- · Hundred of Resources eAssessments & Assignments
- Robust Reporting System
- Professional Development



More Info

# Glencoe Math

Grades 6~12 ▶ McGraw-Hill

Glencoe Math is a powerful Grades 6-12 math program that makes math real for students. The three components of rigor are supported throughout the program and are embedded in resources, lessons, and practice assessments.

▶ Rigor is built-in and supported throughout the program. The three components of rigor — conceptual understanding, procedural fluency, and application are embedded in resources, lessons, and practice state assessments.



Interactive resources available with every lesson, the tools are used to support instruction, practice concepts, and reinforce learning.



The adaptive learning technology of ALEKS® paired with the rich content of Glencoe Math provides a curriculum solution that is differentiated for every student.

Glencoe Math 改變以往傳統學習的型態, 除了有大量的練習題、更導入紙本與線上平 台共同操作的練習模式,讓學習變得更生動 有趣。

- Olencoe Math 不但內容嚴謹,更重視 實際練習多樣化數學習題,整套教材從理 解為出發點,結合不同模式的練習方法啟 發學員對數學的熱忱,進而達到熟練與專 精。(如下圖)
- ▶ 線上資源改變以往用紙本練習的模式, 包含互動式 eBook 以及 Geometer's Sketchpad 都能讓學員以最有效率的方 法學習數學精華。
- ▶ 可與適性化平台 ALEKS 搭配使用,經由 大數據人工智能分析,針對不同的學生給 予相對應的習題,讓每一位學生都能有自 信的學習。(請詳見第17頁)

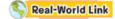
## Conceptual Understanding

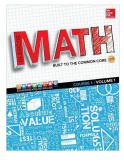


Procedural Skill & Fluency

Independent Practice

Applications





### For students

Student Edition (course 1,2,3) Student Edition (Algebra 1, Algebra 2. Geometry. Pre-calculus)

Geometer's Sketchpad Online Student Edition

- eBooks
- Videos
- eActivities
- Answer keyeAssessments

### For teachers Teacher Edition

Assessment Masters Interactive Guide for ELL

Online Teacher Edition
• Ready-to-go lesson plans

- Robust reporting system
- eBooks
- Differentiated Instructions
- Lesson videos & ePresentation
- Hands-on Projects & eActivties
- Hundred of Resources
- eAssessments &
- Assignments
- Professional Development



More Info

## **ALEKS**

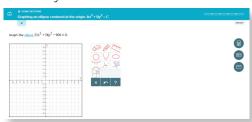
Grades 3~12 ▶ McGraw-Hill

ALEKS is an adaptive, online math program that uses artificial intelligence and open-response questioning to identify precisely what each student knows and doesn't know. Through truly individualized learning and assessment, ALEKS delivers a personalized learning path on the exact topics each student is most ready to learn.

Students begin with an Initial Knowledge Check. The results are summarized in the ALEKS Pie, a tool that provides insight on student knowledge across multiple topics. Within each pie slice (topic area), the colored section shows what a student knows. The gray area shows what the student has left to learn.



As students work through their readyto-learn topics, ALEKS provides them personalized learning with immediate feedback, detailed explanations, definitions, and other tools for building mastery.



- ▶ Real-time reporting allows educators to:
  - Measure progress at the student, class, school, and district levels.
  - ▼ View progress and ready-to-learn topics related to a specific math standard.
  - Gain insight on how students may perform on standardized assessments and remediate potential knowledge gaps.



ALEKS 是一款由 New York University、與 University California of Irvine 共同開發的 適性化線上數學題庫平台,藉由 AI 人工智慧,辨認學習者大腦對於數學已知、未知、 適合學習的領域。透過適性化指導、與主題 式練習,結合 ALEKS 協助每一位學員找到 最適合自己的有效學習方式。



- ▶ 透過僅需 20-30 題、準確度卻高達 97% 的前測,ALEKS 即可辨認學生對各數學領域的掌握度;測驗完後每個學員會擁有屬於自己的圓餅圖,從圖中可清楚掌握對不同數學主題的專精程度。
- 學生可於進行個人化學習的過程中,得 到即時線上回饋,藉由 AI 家教功能、步 驟詳解、專有名詞英文辭典和各種線上工 具,專精該領域主題。
- 可多達 10 種不同模式的數據報告
  - ▼ 查看班級、學生、學校整體進度
  - 主題式進度與課綱進度對照報告
  - ▼ 查看單一學生進度報告,並指派主題式 習題



For students
ALEKS Digital Account

For teachers ALEKS Digital Account



More Info

# Redbird

Grades K~7 ▶ McGraw-Hill

Redbird solutions share the same vision of accelerating learning through personalized instruction, and both draw from pioneering research in adaptive learning technology. Originally developed at Stanford University, together they provide a common set of user experiences and reporting that can help elevate students in Mathematics.

Redbird solutions deliver what each individual student needs to accelerate math or writing skills. More than 25 years of research has led to the Redbird adaptive learning model to achieve personalized learning for everyone!

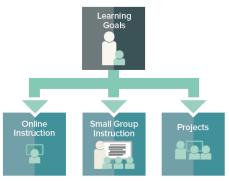


- Empowering educators with data that is easy to understand:
  - ✓ Track progress in one dashboard.
  - Use data to inform their instructional planning.
  - ✓ Share results with parents.

Name	on-level lessons completed	precursor lessons completed	Time spent (hh:mm)	CFA (%)	Lesson Pace	Activity breakdown  instructions practice precursor games projects
Blair Pollock	1	1	3:45	54	1.8	
Caroyin Bankston	2	2	4:57	60	0.5	
Dalton Grubbs	2	0	3:30	71	0.8	0.37 1:59 0:23 0:28 0:00
Eduardo Wilema	4	3	4:47	54	1.5	
Fe Perryman	4	1	2:47	44	0.3	
Iris Partin	0	0	4:50	40	1.0	
Jonah Sapp	10	0	4:39	50	0.8	
Kaitlin Marcum	7	4	2:53	68	0.3	
Mile Cineel	0		2.00	76	22	

Redbird is easy to implement and is adaptive to the needs of any classroom. If you're new to blended learning, consider one of the models here that educators across the country have found to be successful for them. Redbird 由美國史丹佛大學經歷 25 年研發的數學、及語文寫作適性化軟體;個人化的學習、搭配完整的數據分析,協助教師高效率掌握學生學習狀況。

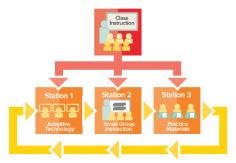
- ▶ Redbird 擁有超過 25 年的大數據資料庫,利用人工智慧,針對個別學員給予個人化指導、搭配 STEM 職涯影片介紹,連結學習目標,最後以生活應用遊戲、或是STEM 互動式任務,呈現學習成果,是適性化學習法結合 STEM 學科最佳典範。
- ▶ Redbird 自動彙整學員使用狀況讓老師 們能:
  - ✓ 追蹤個別學生進度
  - ✔ 根據數據調整課綱
  - ✔ 提供家長具體成果
- ▶ 利用彈性教學方法將學習成果最大化, 教學模式包含:個人獨立使用、分組任務 模式、以及全班線上授課,都是多年研究 實證的成功模式;教師可依以下圖像案 例,選則最適合方案。



**Small Group Station Rotation** 



Whole Class Computer Time



Before or After School



For students Redbird Math Digital Account

For teachers Redbird Math Digital Account



More Info

# enVisionMath 2.0

Grades K~8 ▶ Pearson Education

• enVisionmath 2.0 is a comprehensive K-8 mathematics curriculum offering the flexibility pf print, digital or blended instruction.It provides the focus, coherence, and rigor of the Common Core State Standards. Ensure success at every level with problem-based learning, embedded visual learning, and personalization to empower every teacher and student.

▶ enVisionMath 2.0 提供完整美國 K-8 數學 教材,在教學上是以美國課網 common core standard 來編寫,它可確保在老師及學生能 有規則地在每個年級的數學理念都能夠明白 及對於運用概念解決問題 (problem-solving) 的題型都能應付。本系列以平裝版本設計,課 本及練習合為一,分成上下二冊的設計減輕 學生的負擔.其線上的資源也與課程做結合, 有視覺上引導及練習,讓學習數學不再是困 難的科目。



Realize Digital for 1 Year Additional Practice Workbook

### For teachers

Teacher's Edition 2-Volumes Assessment Sourcebook Teacher's Resource Masters, 2 Volumes Math Practices Classroom Posters Math Diagnosis and Intervention System Today's Challenge Teacher's Manipulative Kits Problem-Solving Leveled Reading Mats



Realize Digital for 1 Year



More Info

## STEP 1

Problem-based Learning

clear, intentional pathway.

students' thinking

understanding.

build confidence.

conversation

Step 2: Visual Learning

Step 1: Problem-Based Learning

Connect important lesson ideas to

All learners participate in rich classroom

Powerful combination of STEP 1 & 2

Focus on each learner with options to

helps students develop deep conceptual

### STEP 2

Visual Learning

Simple Proven Lesson Design provides a

簡單課程設計提供教學者及學習者有清晰的 及目標的步驟

STEP 3

Assess and

Differentiate

- → 步驟 1 每課都將重要的課程構想與學生 的思想連繫起來
- → 步驟 2 所有學習者都能參與各式各樣的 互動課程對話

Problem-based Learning 跟 Visual Learning 二個合併來加深學生對數學概念 的理解及應用

→ 步驟 3 最後會專注在每位學生的能力給 予不同指導並建立自信心態

## Effective

- Focuses on Common Core Math Clusters.

Step 3: Assess and Differentiate

- -Develops in-depth understanding.
- Connects mathematical content and practice standards.

### Efficient

- Upload school-based content and other favorite resources.
- -Customize topics and lessons.
- Assess in the format of the common high-stakes assessments.

## **Engaging**

- Interactive learning aids and video tutorials.
- Personalized practice and immediate feedback.
- Built-in support activities in multiple modalities.

